Abstract

The lwarp package converts LaTeX to HTML by using LaTeX to process the user’s document and directly generate HTML tags. External utility programs are only used for the final conversion of text and images. Math may be represented by svg images or MathJax. Hundreds of LaTeX packages are supported.

Documents may be produced by dvi or pdf LaTeX, LuaLaTeX, XeLaTeX; by several CJK engines, classes, and packages; or by customized systems such as perltex and pythontex. A texlua script automates compilation, index, glossary, and batch image processing, and also supports latexmk. Configuration is semi-automatic at the first manual compile. Support files are self-generated. Print and HTML versions of each document may coexist.

Assistance is provided for HTML import into EPUB conversion software and word processors.

Requirements include the commonly-available POPPLER utilities (included with MiKTeX) and Perl. Detailed installation instructions are included for each of the major operating systems and TeX distributions.

A quick-start tutorial is provided, as well as extensive documentation for special cases, a general index, and a troubleshooting index. Automatic testing of package load order and image generation offers useful advice for resolving errors.

svg math and many other generated images include LaTeX expressions in the alt tags. MathJax may be used with advanced equation numbering under the direct control of lwarp.

Complicated tables are supported, which copy/paste well into LibreOffice Writer.

Supported classes and packages include memoir and koma-script, cleveref, caption, mdframed, siunitx, and many popular packages for tabulars, floats, graphics, theorems, the title page, bibliography, indexing, footnotes, and editorial work.

TeX is a self-modifying tokenized macro-expansion language. Since lwarp is written directly in TeX, it is able to interpret the document’s meaning at a deeper level than external conversions which merely approximate TeX. HTML5 and CSS3 are leveraged to provide advanced features such as booktabs trim, multicolumns, side-by-side minipages, and JavaScript-free navigation.

For a list of supported features, see table 2: Supported packages and features.

To update existing projects, see section 2: Updates.

Lwarp is still in development. Changes are likely.

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1 Support \TeX development

\TeX and related projects:

- are mostly open-sourced and a volunteer effort;
- benefit students, academics, scientists, engineers, and businesses;
- help drive education, public and private research, and commercial activity;
- are used in the fields of mathematics, science, engineering, and humanities;
- are international in reach;
- span decades of development;
- are enduring — many older packages are still actively used and maintained;
- are largely backwards compatible;
- are portable across all the major computing platforms;
- are usable even on older computers and away from internet access;
- are continuing to maintain relevance with modern improvements;
- require no yearly subscription fees;
- and are supported by an active community of knowledgeable volunteers.

Please consider helping by joining and/or contributing to the \TeX Users Group, a United States 501(c)(3) tax-exempt charitable organization. Contributions are accepted by credit card, check, or Pay Pal, via the United Way, or by USA or European bank transfer. Membership in TUG supports the development of \TeXLive, the major \TeX distribution.

Donations may be directed towards individual projects:

**TUG Bursary Fund:** Assistance for attending annual TUG meetings.

**CTAN:** The Comprehensive \TeX Archive Network — Central storage for \TeX.

**TeX Development Fund:** Support for specific projects.

**EduTeX:** Teaching and using \TeX in schools and universities.

**GUST e-foundry fonts:** Enhanced for math and additional language groups.

**LaTeX Project:** Modernizing the \LaTeX core.

**Libre Font Fund:** Fonts, tools (FontForge), and distribution (the Open Font Library).

**LuaTeX:** Combining the pdf\TeX engine and the Lua language.

**MetaPost:** Postscript graphics.

**MacTeX:** \TeX for Mac.

**PDF Accessibility:** Modern PDF standards.

**Other:** Additional projects may be specified.

To make a contribution: [https://www.tug.org/donate.html](https://www.tug.org/donate.html)

For country-specific \TeX users groups: [http://tug.org/usergroups.html](http://tug.org/usergroups.html)

For users of MiKTeX: [https://miktex.org/donations.html](https://miktex.org/donations.html)
# Contents

1 Support \TeX\ development ........................................... 2

List of Figures .................................................................. 54

List of Tables .................................................................... 54

2 Updates ......................................................................... 55

3 Introduction .................................................................. 75

3.1 Typesetting conventions ........................................... 77

3.2 Supported packages and features .............................. 78

4 Alternatives ................................................................. 84

4.1 internet class ........................................................... 84

4.2 \TeX4HT ........................................................................ 84

4.3 Translators ................................................................. 84

4.4 AsciIDOC and AsciIDOCTOR ..................................... 85

4.4.1 AsciIDOCTOR-\LaTeX ........................................... 85

4.5 PANDOC ................................................................. 85

4.6 Word processors ........................................................ 85

4.7 Commercial systems ................................................ 85

4.8 Comparisons ............................................................. 85

5 Installation ................................................................... 87

5.1 Installing the lwarp package ..................................... 89

5.2 Installing the lwarp\texttt{mk} utility ............................. 90

5.2.1 Using a local copy of lwarp\texttt{mk} ......................... 92

5.3 Installing additional utilities ..................................... 92

6 Tutorial ......................................................................... 94

6.1 Starting a new project ............................................... 94

6.2 Compiling the print version with lwarp\texttt{mk} ............. 98

6.3 Compiling the HTML version with lwarp\texttt{mk} .......... 99

6.4 Generating the svg images ....................................... 100

6.5 Using MATH\LaTeX\ for math ..................................... 101

6.6 Changing the css style .............................................. 102

6.7 Customizing the HTML output ................................. 102

6.8 Using latex\texttt{mk} ................................................... 103

6.9 Using X\LaTeX or Lua\LaTeX ........................................ 104

6.10 Using dvi \LaTeX .................................................... 104

6.11 Using a glossary ...................................................... 105

6.11.1 gloss package .................................................... 105

6.11.2 glossaries package ............................................. 105

6.12 Cleaning auxiliary files .......................................... 106

6.13 Cleaning auxiliary and output files ......................... 106

6.14 Cleaning the images from the <project>-images directory .... 106

6.15 Converting PDF or EPS images to SVG .................... 106

6.16 Creating HTML from an incomplete compile ............ 106

6.17 Processing multiple projects in the same directory .... 106

6.18 Using the \texttt{make} utility ..................................... 107
7 Converting an existing document 108

8 Additional details 109
  8.1 Shell escape . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 109
  8.2 Font and utf-8 support . . . . . . . . . . . . . . . . . . . . . . . . . . . . 109
    8.2.1 Indexes, glossaries, and encoding . . . . . . . . . . . . . . . . . . . 110
  8.3 lwarp package loading and options . . . . . . . . . . . . . . . . . . . . . 111
  8.4 Customizing the HTML output . . . . . . . . . . . . . . . . . . . . . . . . 115
    8.4.1 Example HTML file naming . . . . . . . . . . . . . . . . . . . . . . . 120
  8.5 Customizing the CSS . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 121
  8.6 Selecting the operating system . . . . . . . . . . . . . . . . . . . . . . . . 122
  8.7 Selecting actions for print or HTML output . . . . . . . . . . . . . . . . 123
  8.8 Commands to be placed into the warpprint environment . . . . . . . . . 124
  8.9 Title page . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 124
  8.10 HTML page meta descriptions . . . . . . . . . . . . . . . . . . . . . . . 125
  8.11 HTML homepage meta title . . . . . . . . . . . . . . . . . . . . . . . . . 125
  8.12 HTML page meta author . . . . . . . . . . . . . . . . . . . . . . . . . . . 126

9 Special cases and limitations 126
  9.1 Things to avoid . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 126
    9.1.1 Invalid HTML . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 127
  9.2 Formatting . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 127
    9.2.1 Text formatting . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 127
    9.2.2 Horizontal space . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 127
    9.2.3 Text alignment . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 127
    9.2.4 Accents . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 128
    9.2.5 textcomp package . . . . . . . . . . . . . . . . . . . . . . . . . . . . 128
    9.2.6 Superscripts and other non-math uses of math mode . . . . . . . . 128
    9.2.7 Empty \item followed by a new line of text or a nested list: . . . 128
    9.2.8 Filenames and URLs in lists or footnotes . . . . . . . . . . . . . . . 128
    9.2.9 relsize package . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 128
  9.3 Boxes and minipages . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 128
    9.3.1 Marginpars . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 128
    9.3.2 Save Boxes . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 129
    9.3.3 Minipages . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 129
    9.3.4 Side-by-side minipages . . . . . . . . . . . . . . . . . . . . . . . . . 130
    9.3.5 Framed minipages and other environments . . . . . . . . . . . . . . 130
    9.3.6 fancybox package . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 131
    9.3.7 mdframed package . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 132
  9.4 Section names . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 133
  9.5 Cross-references . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 134
    9.5.1 Page references . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 134
    9.5.2 cleveref and varioref packages . . . . . . . . . . . . . . . . . . . . . 134
    9.5.3 Hyperlinks, hyperref, and url . . . . . . . . . . . . . . . . . . . . . . 135
    9.5.4 Footnotes and page notes . . . . . . . . . . . . . . . . . . . . . . . . 135
  9.6 Front and back matter . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 136
    9.6.1 Custom classes with multiple authors and affiliations . . . . . . . 136
    9.6.2 Starred chapters and sections . . . . . . . . . . . . . . . . . . . . . . 137
    9.6.3 abstract package . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 137
    9.6.4 titling and authblk . . . . . . . . . . . . . . . . . . . . . . . . . . . . 137
    9.6.5tocloft package . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 138
9.6.6 appendix package ........................................... 138
9.6.7 pagenote package .......................................... 138
9.6.8 endnotes package ........................................... 138
9.6.9 BibTeX ......................................................... 138
9.6.10 gloss package .............................................. 139
9.6.11 glossaries package ....................................... 139
9.6.12 nomencl package .......................................... 140
9.6.13 Indexing overview ......................................... 140
9.6.14 Indexing with basic \LaTeX and makeidx .................. 140
9.6.15 Indexing with index ....................................... 141
9.6.16 Indexing with splitidx .................................... 142
9.6.17 Indexing with imakeidx ................................... 144
9.6.18 Indexes with memoir ...................................... 147
9.6.19 Using a custom makeindex style file .................... 149
9.6.20 Using a custom xindy style file ........................ 150
9.6.21 Additional indexing limitations .......................... 150
9.6.22 Index positions, toc, tocbind ............................ 151

9.7 Math .......................................................... 152
9.7.1 Math in section names ..................................... 152
9.7.2 Rendering tradeoffs ........................................ 152
9.7.3 \svg option .................................................. 153
9.7.4 \mathjax option ............................................. 153
9.7.5 Customizing \mathjax ........................................ 154
9.7.6 \mathjax limitations ........................................ 154
9.7.7 Catcode changes ............................................ 155
9.7.8 Complicated inline math objects .......................... 155
9.7.9 Complicated display math objects ......................... 155
9.7.10 ntheorem package ........................................ 155
9.7.11 siunitx package ............................................ 156
9.7.12 units and nicefrac packages ............................... 156
9.7.13 newtxmath package ....................................... 156

9.8 Graphics ...................................................... 156
9.8.1 tikz package ................................................ 158
9.8.2 grffile package ............................................. 158
9.8.3 color package ............................................... 158
9.8.4 xcolor package .............................................. 158
9.8.5 epstopdf package ............................................ 159
9.8.6 pstricks package ........................................... 159
9.8.7 pdftricks package .......................................... 159
9.8.8 psfrag package ............................................... 159
9.8.9 pstool package .............................................. 160
9.8.10 asymptote package ........................................ 160
9.8.11 overpic package .......................................... 160

9.9 Tabbing ....................................................... 160
9.10 Tabular ....................................................... 161
9.10.1 tabular environment ...................................... 161
9.10.2 multirow package .......................................... 163
9.10.3 longtable package ......................................... 163
9.10.4 threeparttablex package .................................. 164
9.10.5 supertabular and xtab packages .......................... 164
9.10.6 colortbl package .......................................... 165
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1</td>
<td>Using the lwarp.sty package</td>
<td>188</td>
</tr>
<tr>
<td>14.1.1</td>
<td>Debug tracing output</td>
<td>191</td>
</tr>
<tr>
<td>14.2</td>
<td>Compiling the lwarp.dtx file</td>
<td>191</td>
</tr>
<tr>
<td>15</td>
<td>Trademarks</td>
<td>193</td>
</tr>
<tr>
<td>1</td>
<td>lwarp.sty</td>
<td>194</td>
</tr>
<tr>
<td>16</td>
<td>Implementation</td>
<td>194</td>
</tr>
<tr>
<td>17</td>
<td>Section depths and HTML headings</td>
<td>195</td>
</tr>
<tr>
<td>18</td>
<td>Source code</td>
<td>196</td>
</tr>
<tr>
<td>19</td>
<td>Detecting the \TeX engine — pdflatex, lualatex, xelatex</td>
<td>197</td>
</tr>
<tr>
<td>20</td>
<td>Early package requirements</td>
<td>197</td>
</tr>
<tr>
<td>21</td>
<td>Package load order</td>
<td>197</td>
</tr>
<tr>
<td>21.1</td>
<td>Tests of package load order</td>
<td>198</td>
</tr>
<tr>
<td>21.2</td>
<td>Error for disallowed packages and classes loaded before lwarp</td>
<td>200</td>
</tr>
<tr>
<td>21.3</td>
<td>Enforcing package loading after lwarp</td>
<td>201</td>
</tr>
<tr>
<td>22</td>
<td>MD5 hashing</td>
<td>209</td>
</tr>
<tr>
<td>23</td>
<td>pdfLaTeX T1 and utf-8 encoding</td>
<td>210</td>
</tr>
<tr>
<td>24</td>
<td>Unicode input characters</td>
<td>211</td>
</tr>
<tr>
<td>25</td>
<td>Avoid a bitmapped font</td>
<td>211</td>
</tr>
<tr>
<td>26</td>
<td>Upright quotes</td>
<td>212</td>
</tr>
<tr>
<td>27</td>
<td>Miscellaneous tools</td>
<td>212</td>
</tr>
<tr>
<td>28</td>
<td>Operating-System portability</td>
<td>213</td>
</tr>
<tr>
<td>28.1</td>
<td>Literal characters</td>
<td>213</td>
</tr>
<tr>
<td>28.2</td>
<td>Common portability code</td>
<td>215</td>
</tr>
<tr>
<td>28.3</td>
<td>UNIX, LINUX, and Mac OS</td>
<td>215</td>
</tr>
<tr>
<td>28.4</td>
<td>MS-WINDOWS</td>
<td>215</td>
</tr>
<tr>
<td>29</td>
<td>Package options</td>
<td>216</td>
</tr>
<tr>
<td>29.1</td>
<td>Additional options support</td>
<td>220</td>
</tr>
<tr>
<td>29.2</td>
<td>Conditional compilation</td>
<td>221</td>
</tr>
<tr>
<td>30</td>
<td>Required packages</td>
<td>223</td>
</tr>
<tr>
<td>31</td>
<td>Loading packages</td>
<td>226</td>
</tr>
<tr>
<td>32</td>
<td>Additional required packages</td>
<td>231</td>
</tr>
<tr>
<td>33</td>
<td>File handles</td>
<td>232</td>
</tr>
</tbody>
</table>
34 Include a file 232
35 Copying a file 233
36 Debugging messages 234
37 Defining print and HTML versions of macros and environments 235
38 HTML-conversion output modifications 239
  38.1 User-level controls . . . . . . . . . . . . . . . . . . . . . . . . . . 239
  38.2 Heading adjustments . . . . . . . . . . . . . . . . . . . . . . . . . . 241
39 Remembering original formatting macros 242
40 Accents 244
41 Configuration files 246
  41.1 Decide whether to generate configuration files . . . . . . . . . . . . . 246
  41.2 <project>_html.tex . . . . . . . . . . . . . . . . . . . . . . . . . . . 246
  41.3 lwprompt configuration files . . . . . . . . . . . . . . . . . . . . . . . 247
    41.3.1 Helper macros . . . . . . . . . . . . . . . . . . . . . . . . . . . . 247
    41.3.2 lwprompt.conf . . . . . . . . . . . . . . . . . . . . . . . . . . . . 253
    41.3.3 <project>_lwprompt.conf . . . . . . . . . . . . . . . . . . . . . 253
  41.4 lwprompt.css . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 253
  41.5 lwprompt_sagebrush.css . . . . . . . . . . . . . . . . . . . . . . . . . 282
  41.6 lwprompt_formal.css . . . . . . . . . . . . . . . . . . . . . . . . . . . 286
  41.7 sample_project.css . . . . . . . . . . . . . . . . . . . . . . . . . . . . 290
  41.8 lwprompt.ist . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 291
  41.9 lwprompt.xdy . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 291
  41.10 lwprompt_one_limage.cmd . . . . . . . . . . . . . . . . . . . . . . . 292
  41.11 lwprompt_mathjax.txt . . . . . . . . . . . . . . . . . . . . . . . . . 293
  41.12 lwprompt.lua — lwprompt option . . . . . . . . . . . . . . . . . . 295
42 Stacks 312
  42.1 Assigning depths . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 312
  42.2 Closing actions . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 313
  42.3 Closing depths . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 313
  42.4 Pushing and popping the stack . . . . . . . . . . . . . . . . . . . . . 314
43 Data arrays 315
44 Localizing catcodes 315
45 Localizing dynamic math 316
46 HTML entities 317
47 HTML filename generation 318
48 Homepage link 321
49 \LWRprintStack diagnostic tool 322
50 Closing stack levels 322
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>51 PDF pages and styles</strong></td>
<td>323</td>
</tr>
<tr>
<td><strong>52 HTML tags, spans, divs, elements</strong></td>
<td>324</td>
</tr>
<tr>
<td>52.1 Mapping \LaTeX\ sections to HTML sections</td>
<td>325</td>
</tr>
<tr>
<td>52.2 Babel-French tag modifications</td>
<td>325</td>
</tr>
<tr>
<td>52.3 HTML output formatting</td>
<td>326</td>
</tr>
<tr>
<td>52.4 HTML tags</td>
<td>326</td>
</tr>
<tr>
<td>52.5 Block tags and comments</td>
<td>328</td>
</tr>
<tr>
<td>52.6 Div class and element class</td>
<td>329</td>
</tr>
<tr>
<td>52.7 Single-line elements</td>
<td>330</td>
</tr>
<tr>
<td>52.8 HTML5 semantic elements</td>
<td>331</td>
</tr>
<tr>
<td>52.9 High-level block and inline classes</td>
<td>331</td>
</tr>
<tr>
<td>52.10 Closing HTML tags</td>
<td>333</td>
</tr>
<tr>
<td><strong>53 Paragraph handling</strong></td>
<td>334</td>
</tr>
<tr>
<td><strong>54 Paragraph start/stop handling</strong></td>
<td>337</td>
</tr>
<tr>
<td><strong>55 Indentfirst</strong></td>
<td>340</td>
</tr>
<tr>
<td><strong>56 Page headers and footers</strong></td>
<td>340</td>
</tr>
<tr>
<td><strong>57 CSS</strong></td>
<td>341</td>
</tr>
<tr>
<td><strong>58 MathJax script</strong></td>
<td>341</td>
</tr>
<tr>
<td><strong>59 Title, HTML meta author, HTML meta description</strong></td>
<td>342</td>
</tr>
<tr>
<td><strong>60 Footnotes</strong></td>
<td>343</td>
</tr>
<tr>
<td>60.1 Regular page footnotes</td>
<td>344</td>
</tr>
<tr>
<td>60.2 Minipage footnotes</td>
<td>344</td>
</tr>
<tr>
<td>60.3 Titlepage thanks</td>
<td>344</td>
</tr>
<tr>
<td>60.4 Regular page footnote implementation</td>
<td>344</td>
</tr>
<tr>
<td>60.5 Minipage footnote implementation</td>
<td>347</td>
</tr>
<tr>
<td>60.6 Printing pending footnotes</td>
<td>348</td>
</tr>
<tr>
<td><strong>61 Marginpars</strong></td>
<td>349</td>
</tr>
<tr>
<td><strong>62 Splitting HTML files</strong></td>
<td>350</td>
</tr>
<tr>
<td>62.1 Customizing MathJax</td>
<td>355</td>
</tr>
<tr>
<td><strong>63 Sectioning</strong></td>
<td>360</td>
</tr>
<tr>
<td>63.1 User-level starred section commands</td>
<td>360</td>
</tr>
<tr>
<td>63.2 Book class commands</td>
<td>361</td>
</tr>
<tr>
<td>63.3 Sectioning support macros</td>
<td>361</td>
</tr>
<tr>
<td>63.4 Pre- and post- sectioning names</td>
<td>368</td>
</tr>
<tr>
<td>63.5 \section and friends</td>
<td>369</td>
</tr>
<tr>
<td><strong>64 Starting a new file</strong></td>
<td>371</td>
</tr>
<tr>
<td><strong>65 Starting HTML output</strong></td>
<td>375</td>
</tr>
<tr>
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<td>377</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
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<tr>
<td>67 Title page</td>
<td>379</td>
</tr>
<tr>
<td>67.1 Setting the title, etc.</td>
<td>380</td>
</tr>
<tr>
<td>67.2 \if@titlepage</td>
<td>381</td>
</tr>
<tr>
<td>67.3 Changes for affiliation</td>
<td>381</td>
</tr>
<tr>
<td>67.4 Printing the thanks</td>
<td>382</td>
</tr>
<tr>
<td>67.5 Printing the title, etc. in html</td>
<td>382</td>
</tr>
<tr>
<td>67.6 Printing the title, etc. in print form</td>
<td>384</td>
</tr>
<tr>
<td>67.7 \maketitle for html output</td>
<td>384</td>
</tr>
<tr>
<td>67.8 \published and \subtitle</td>
<td>387</td>
</tr>
<tr>
<td>68 Abstract</td>
<td>388</td>
</tr>
<tr>
<td>69 Quote and verse</td>
<td>389</td>
</tr>
<tr>
<td>69.1 Attributions</td>
<td>389</td>
</tr>
<tr>
<td>69.2 Quotes, quotations</td>
<td>389</td>
</tr>
<tr>
<td>69.3 Verse</td>
<td>390</td>
</tr>
<tr>
<td>69.3.1 \LaTeX core verse environment</td>
<td>390</td>
</tr>
<tr>
<td>69.3.2 verse and memoir</td>
<td>391</td>
</tr>
<tr>
<td>70 Verbatim and tabbing</td>
<td>391</td>
</tr>
<tr>
<td>71 Theorems</td>
<td>394</td>
</tr>
<tr>
<td>72 Lists</td>
<td>395</td>
</tr>
<tr>
<td>72.1 List environment</td>
<td>395</td>
</tr>
<tr>
<td>72.2 Itemize</td>
<td>399</td>
</tr>
<tr>
<td>72.3 Enumerate</td>
<td>399</td>
</tr>
<tr>
<td>72.4 Description</td>
<td>400</td>
</tr>
<tr>
<td>72.5 Patching the lists</td>
<td>400</td>
</tr>
<tr>
<td>73 Tabular</td>
<td>402</td>
</tr>
<tr>
<td>73.1 Limitations</td>
<td>402</td>
</tr>
<tr>
<td>73.2 Temporary package-related macros</td>
<td>404</td>
</tr>
<tr>
<td>73.2.1 \arydshln</td>
<td>404</td>
</tr>
<tr>
<td>73.3 Token lookahead</td>
<td>404</td>
</tr>
<tr>
<td>73.4 Tabular variables</td>
<td>405</td>
</tr>
<tr>
<td>73.5 Handling &amp;, @, !, and bar</td>
<td>407</td>
</tr>
<tr>
<td>73.5.1 Handling &amp;</td>
<td>407</td>
</tr>
<tr>
<td>73.5.2 Filling an unfinished row</td>
<td>410</td>
</tr>
</tbody>
</table>
| 73.6 Handling \\
| 73.7 Looking ahead in the column specifications | 413  |
| 73.8 Parsing @, >, <, !, bar columns | 413  |
| 73.9 Parsing 't', 'c', or 'r' columns | 417  |
| 73.10 Parsing 'p', 'm', or 'b' columns | 417  |
| 73.11 Parsing 'w' columns | 418  |
| 73.12 Parsing '*' columns | 418  |
| 73.13 Parsing 'D' columns | 418  |
| 73.14 Parsing the column specifications | 419  |
| 73.15 colortbl and xparse tabular color support | 423  |
| 73.16 Starting a new row | 425  |
| 73.17 Printing vertical bar tags | 425  |
| 73.18 Printing at or bang tags | 426  |
96  Loading KOMA-SCRIPT class patches  
97  Loading MEMOIR class patches  
98  ut* class patches  
99  CT\TeX{} patches  
100  kotexutf patches  

2  lwarp-2in1.sty  
101  2in1  

3  lwarp-2up.sty  
102  2up  

4  lwarp-a4.sty  
103  a4  

5  lwarp-a4wide.sty  
104  a4wide  

6  lwarp-a5comb.sty  
105  a5comb  

7  lwarp-abstract.sty  
106  abstract  

8  lwarp-academicons.sty  
107  academicons  

9  lwarp-accsupp.sty  
108  accsupp  

10  lwarp-acro.sty  
109  acro
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</tr>
<tr>
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<td>lwarp-afterpage.sty</td>
<td>588</td>
</tr>
<tr>
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<td>afterpage</td>
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<td>lwarp-booklet.sty</td>
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</tbody>
</table>
55  lwarp-bytefield.sty  628
154  bytefield  628

56  lwarp-cancel.sty  628
155  cancel  628

57  lwarp-canoniclayout.sty  629
156  canoniclayout  629

58  lwarp-caption.sty  629
157  caption  629

59  lwarp-cases.sty  632
158  cases  632

60  lwarp-changebar.sty  633
159  changebar  633

61  lwarp-changelayout.sty  633
160  changelayout  633

62  lwarp-changepage.sty  634
161  changepage  634

63  lwarp-changes.sty  634
162  changes  634

64  lwarp-chappg.sty  637
163  chappg  637

65  lwarp-chapterbib.sty  637
164  chapterbib  637
<table>
<thead>
<tr>
<th>Page</th>
<th>File Name</th>
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<td>lwarp-chemmacros.sty</td>
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<td>Loading modules</td>
<td>644</td>
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<tr>
<td>168.4</td>
<td>New environments</td>
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</tr>
<tr>
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<td>Acid-base</td>
<td>645</td>
</tr>
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<td>168.6</td>
<td>Charges</td>
<td>647</td>
</tr>
<tr>
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<td>Nomenclature</td>
<td>647</td>
</tr>
<tr>
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<td>Particles</td>
<td>649</td>
</tr>
<tr>
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<td>Phases</td>
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<td>Mechanisms</td>
<td>651</td>
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</tr>
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<td>Orbital</td>
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<tr>
<td>168.13</td>
<td>Reactions</td>
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</tr>
<tr>
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<tr>
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</tbody>
</table>
73  lwarp-cite.sty  663
172  cite  663

74  lwarp-CJK.sty  663
173  CJK  663

75  lwarp-CJKutf8.sty  663
174  CJKutf8  663

76  lwarp-clrdblpg.sty  664
175  clrdblpg  664

77  lwarp-cmdtrack.sty  664
176  cmdtrack  664

78  lwarp-color.sty  664
177  color  664

79  lwarp-colortbl.sty  664
178  colortbl  664

80  lwarp-continue.sty  666
179  continue  666

81  lwarp-copyrightbox.sty  666
180  copyrightbox  666

82  lwarp-crop.sty  667
181  crop  667

83  lwarp-ctable.sty  667
182  ctable  667
<p>| | |</p>
<table>
<thead>
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</tr>
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</table>
95  lwarp-easy-todo.sty  676
194  easy-todo  676

96  lwarp-ebook.sty  677
195  ebook  677

97  lwarp-ed.sty  677
196  ed  677

98  lwarp-ellipsis.sty  678
197  ellipsis  678

99  lwarp-embrac.sty  678
198  embrac  678

100  lwarp-emptypage.sty  679
199  emptypage  679

101  lwarp-endfloat.sty  679
200  endfloat  679

102  lwarp-endheads.sty  680
201  endheads  680

103  lwarp-endnotes.sty  680
202  endnotes  680

104  lwarp-enumerate.sty  681
203  enumerate  681

105  lwarp-enumitem.sty  681
204  enumitem  681
<table>
<thead>
<tr>
<th></th>
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<tr>
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</tr>
</tbody>
</table>
128  lwarp-fixmetodonotes.sty  706
   fixmetodonotes  706

129  lwarp-flafter.sty  706
   flafter  706

130  lwarp-flippdf.sty  706
   flippdf  706

131  lwarp-float.sty  707
   float  707

132  lwarp-floatflt.sty  708
   floatflt  708

133  lwarp-floatpag.sty  709
   floatpag  709

134  lwarp-floatrow.sty  709
   floatrow  709

135  lwarp-fltrace.sty  714
   fltrace  714

136  lwarp-flushend.sty  715
   flushend  715

137  lwarp-fnbreak.sty  715
   fnbreak  715

138  lwarp-fncychap.sty  715
   fncychap  715
150 lwp-footnpag.sty 722
249 footnpag 722

151 lwp-foreign.sty 722
250 foreign 722

152 lwp-forest.sty 722
251 forest 722

153 lwp-framed.sty 723
252 framed 723

154 lwp-ftcap.sty 725
253 ftcap 725

155 lwp-ftnright.sty 726
254 ftnright 726

156 lwp-fullminipage.sty 726
255 fullminipage 726

157 lwp-fullpage.sty 726
256 fullpage 726

158 lwp-fullwidth.sty 726
257 fullwidth 726

159 lwp-fwlw.sty 727
258 fwlw 727

160 lwp-gentombow.sty 727
259 gentombow 727
<table>
<thead>
<tr>
<th>161</th>
<th>lwarp-geometry.sty</th>
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</tr>
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<td>geometry</td>
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<td>lwarp-gmeometric.sty</td>
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<td>264.1 Graphics extensions</td>
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<td></td>
<td>264.2 Length conversions and graphics options</td>
<td>732</td>
</tr>
<tr>
<td></td>
<td>264.3 Printing \texttt{html} styles</td>
<td>734</td>
</tr>
<tr>
<td></td>
<td>264.4 \texttt{\includegraphics}</td>
<td>735</td>
</tr>
<tr>
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<td>264.5 Boxes</td>
<td>740</td>
</tr>
<tr>
<td>166</td>
<td>lwarp-graphicx.sty</td>
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</table>
182  lwarp-index.sty     759
281   index             759

183  lwarp-inputtrc.sty  761
282   inputtrc           761

184  lwarp-intopdf.sty   761
283   intopdf            761

185  lwarp-karnaugh-map.sty  762
284   karnaugh-map       762

186  lwarp-keyfloat.sty  765
285   keyfloat           765

187  lwarp-layaureo.sty  770
286   layaureo          770

188  lwarp-layout.sty    771
287   layout             771

189  lwarp-layouts.sty   771
288   layouts            771

190  lwarp-leading.sty   774
289   leading            774

191  lwarp-letterspace.sty  774
290   letterspace        774

192  lwarp-lettrine.sty  774
291   lettrine           774
193  lwarp-lineno.sty  
    775
292  linenon  
    775

194  lwarp-lips.sty  
    777
293  lips  
    777

195  lwarp-listings.sty  
    778
294  listings  
    778

196  lwarp-listliketab.sty  
    782
295  listliketab  
    782

197  lwarp-ltjtex.sty  
    782
296  ljtjtex  
    782

198  lwarp-longtable.sty  
    783
297  longtable  
    783

199  lwarp-lscape.sty  
    786
298  lescape  
    786

200  lwarp-ltablex.sty  
    786
299  ltablex  
    786

201  lwarp-ltcaption.sty  
    787
300  ltcaption  
    787

202  lwarp-ltxgrid.sty  
    787
301  ltxgrid  
    787

203  lwarp-ltxtable.sty  
    788
302  ltxtable  
    788
204 lwarp-lua-check-hyphen.sty 788
303 lua-check-hyphen 788

205 lwarp-lua-visual-debug.sty 788
304 lua-visual-debug 788

206 lwarp-luacolor.sty 788
305 luacolor 788

207 lwarp-luatodonotes.sty 789
306 luatodonotes 789

208 lwarp-magaz.sty 791
307 magaz 791

209 lwarp-makeidx.sty 791
308 makeidx 791

210 lwarp-manyfoot.sty 792
309 manyfoot 792

211 lwarp-marginal.sty 794
310 marginal 794

212 lwarp-marginfit.sty 794
311 marginfit 794

213 lwarp-marginfix.sty 794
312 marginfix 794

214 lwarp-marginnote.sty 795
313 marginnote 795
### lwarp

<table>
<thead>
<tr>
<th>Section</th>
<th>Name</th>
<th>Page</th>
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<tr>
<td></td>
<td>317.1 Limitations</td>
<td>797</td>
</tr>
<tr>
<td></td>
<td>317.2 Package loading</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>317.3 Patches</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>317.4 Initial setup</td>
<td>798</td>
</tr>
<tr>
<td></td>
<td>317.5 Color and length HTML conversion</td>
<td>799</td>
</tr>
<tr>
<td></td>
<td>317.6 Environment encapsulation</td>
<td>799</td>
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<td>317.7 Mdframed environment</td>
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<td>317.8 Titles and subtitles</td>
<td>801</td>
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<tr>
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<td>317.9 New environments</td>
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224  lwarp-midfloat.sty  810
323  midfloat  810

225  lwarp-midpage.sty  810
324  midpage  810

226  lwarp-minitoc.sty  810
325  minitoc  810

227  lwarp-morefloats.sty  811
326  morefloats  811

228  lwarp-moreverb.sty  811
327  moreverb  811

229  lwarp-mparhack.sty  812
328  mparhack  812

230  lwarp-multicap.sty  812
329  multicap  812

231  lwarp-multicol.sty  813
330  multicol  813

232  lwarp-multicolrule.sty  814
331  multicolrule  814

233  lwarp-multirow.sty  814
332  multirow  814
332.1  Multirow  ......................... 815
332.2  Combined multicolumn and multirow  ......................... 817

234  lwarp-multitoc.sty  818
333  multitoc  818

235  lwp-musicography.sty  818
334  musicography  818

236  lwp-nameauth.sty  820
335  nameauth  820

237  lwp-nameref.sty  821
336  nameref  821

238  lwp-natbib.sty  821
337  natbib  821

239  lwp-nccfancyhdr.sty  822
338  nccfancyhdr  822

240  lwp-needspace.sty  823
339  needspace  823

241  lwp-nextpage.sty  823
340  nextpage  823

242  lwp-nicefrac.sty  824
341  nicefrac  824

243  lwp-niceframe.sty  824
342  niceframe  824

244  lwp-nomencl.sty  825
343  nomencl  825
245 lwarp-nonfloat.sty 825
344 nonfloat 825

246 lwarp-nonumonpart.sty 826
345 nonumonpart 826

247 lwarp-nopageno.sty 826
346 nopageno 826

248 lwarp-notes.sty 826
347 notes 826

249 lwarp-notespages.sty 827
348 notespages 827

250 lwarp-nowidow.sty 827
349 nowidow 827

251 lwarp-ntheorem.sty 828
350 ntheorem 828
350.1 Limitations 828
350.2 Options 828
350.3 Remembering the theorem style 829
350.4 HTML cross-referencing 832
350.5 \newtheoremstyle 832
350.6 Standard styles 832
350.7 Additional objects 834
350.8 Renewed standard configuration 834
350.9 amsthm option 835
350.10 Ending a theorem 837
350.11 \NoEndMark 838
350.12 List-of 838
350.13 Symbols 838
350.14 Cross-referencing 839

252 lwarp-octave.sty 839
351 octave 839
<table>
<thead>
<tr>
<th>Code</th>
<th>Package</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>253</td>
<td><code>lwp-overpic.sty</code></td>
<td>840</td>
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<td><code>lwp-pagegrid.sty</code></td>
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<td><code>lwp-pagenote.sty</code></td>
<td>841</td>
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<td><code>lwp-pagesel.sty</code></td>
<td>841</td>
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<tr>
<td>257</td>
<td><code>lwp-paralist.sty</code></td>
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<td><code>lwp-parnotes.sty</code></td>
<td>842</td>
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<td><code>lwp-parskip.sty</code></td>
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</tr>
<tr>
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<td><code>lwp-pbox.sty</code></td>
<td>843</td>
</tr>
<tr>
<td>261</td>
<td><code>lwp-pdfcomment.sty</code></td>
<td>844</td>
</tr>
<tr>
<td>262</td>
<td><code>lwp-pdflandscape.sty</code></td>
<td>844</td>
</tr>
<tr>
<td>263</td>
<td><code>lwp-pdfmarginpar.sty</code></td>
<td>844</td>
</tr>
</tbody>
</table>
275 lwarp-plarydshln.sty 852
374 plarydshln 852

276 lwarp-plext.sty 852
375 plex 852

277 lwarp-plextarydshln.sty 853
376 plexarydshln 853

278 lwarp-plextcolortbl.sty 853
377 plexcolortbl 853

279 lwarp-prelim2e.sty 853
378 prelim2e 853

280 lwarp-prettyref.sty 854
379 prettyref 854

281 lwarp-preview.sty 854
380 preview 854

282 lwarp-psfrag.sty 854
381 psfrag 854

283 lwarp-psfragx.sty 855
382 psfragx 855

284 lwarp-pst-eps.sty 855
383 pst-eps 855

285 lwarp-pstool.sty 856
384 pstool 856
286 lwarp-pstricks.sty 857
385 pstricks 857

287 lwarp-pxatbegshi.sty 857
386 pxatbegshi 857

288 lwarp-pxeveryshi.sty 857
387 pxeveryshi 857

289 lwarp-pxftnright.sty 857
388 pxftnright 857

290 lwarp-pxjahyper.sty 858
389 pxjahyper 858

291 lwarp-quotchap.sty 858
390 quotchap 858

292 lwarp-quoting.sty 859
391 quoting 859

293 lwarp-ragged2e.sty 859
392 ragged2e 859

294 lwarp-realscripts.sty 860
393 realscripts 860

295 lwarp-refcheck.sty 861
394 refcheck 861

296 lwarp-register.sty 861
395 register 861
<p>| | |</p>
<table>
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<tr>
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<th></th>
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<tbody>
<tr>
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</table>
319  lwarp-setspace.sty  878
   setspace  878

320  lwarp-shadow.sty  879
   shadow  879

321  lwarp-showidx.sty  879
   showidx  879

322  lwarp-showkeys.sty  879
   showkeys  879

323  lwarp-showtags.sty  880
   showtags  880

324  lwarp-sidecap.sty  880
   sidecap  880

325  lwarp-sidenotes.sty  881
   sidenotes  881

326  lwarp-SIunits.sty  882
   SIunits  882

327  lwarp-siunitx.sty  883
   siunitx  883

328  lwarp-soul.sty  888
   soul  888

329  lwarp-soulpos.sty  889
   soulpos  889
<table>
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<td>lwarp-stabular.sty</td>
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<tr>
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<td>lwarp-stfloats.sty</td>
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<td>340</td>
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<td>900</td>
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</tbody>
</table>
449  textpos 909

351  lwarp-theorem.sty 910
   450  theorem 910
   450.1  Remembering the theorem style 910
   450.2  css patches 912

352  lwarp-thinsp.sty 914
   451  thinsp 914

353  lwarp-threadcol.sty 914
   452  threadcol 914

354  lwarp-threeparttable.sty 914
   453  threeparttable 914

355  lwarp-threeparttablex.sty 915
   454  threeparttablex 915

356  lwarp-thumb.sty 916
   455  thumb 916

357  lwarp-thumbs.sty 916
   456  thumbs 916

358  lwarp-tikz.sty 917
   457  tikz 917

359  lwarp-titleps.sty 918
   458  titleps 918

360  lwarp-titleref.sty 921
   459  titleref 921
361 lwarp-titlesec.sty 921
  titlesec 921

362 lwarp-titletoc.sty 923
  titletoc 923

363 lwarp-titling.sty 925
  titling 925

364 lwarp-tocbasic.sty 929
  tocbasic 929

365 lwarp-tocbibind.sty 930
  tocbibind 930

366 lwarp-tocdata.sty 931
  tocdata 931

367 lwarp-toccenter.sty 933
  tocenter 933

368 lwarp-tocloft.sty 933
  tocloft 933

369 lwarp-tocstyle.sty 939
  tocrstyle 939

370 lwarp-todo.sty 939
  todo 939

371 lwarp-todonotes.sty 940
  todonotes 940
475.1 Combining \newfloat, \trivfloat, and algorithmicx  . . . . . . . . . 944
481  ulen

383  lwarp-umoline.sty
482  umoline

384  lwarp-underscore.sty
483  underscore

385  lwarp-units.sty
484  units

386  lwarp-unitsdef.sty
485  unitsdef

387  lwarp-upref.sty
486  upref

388  lwarp-url.sty
487  url

389  lwarp-uspace.sty
488  uspace

390  lwarp-verse.sty
489  verse

391  lwarp-vironotes.sty
490  versonotes

392  lwarp-vertbars.sty
491  vertbars

393  lwarp-vmargin.sty
492 vmargin 954

394 lwpvowel.sty 955
493 vowel 955

395 lwpvpe.sty 955
494 vpe 955

396 lwpvwc.sty 956
495 vwcol 956

397 lwpwall.sty 958
496 wallpaper 958

398 lwpwmk.sty 958
497 watermark 958

399 lwpwoe.sty 959
498 widows-and-orphans 959

400 lwpwfig.sty 959
499 wrapfig 959

401 lwpxbmk.sty 960
500 xbmks 960

402 lwpxcol.sty 960
501 xcolor 960
  501.1 Limitations .................................................. 961
  501.2 xcolor definitions: location and timing .................. 961
  501.3 Package loading ............................................. 963
  501.4 Remembering and restoring original definitions ........ 963
  501.5 HTML color style .......................................... 963
  501.6 HTML border ............................................... 964
  501.7 High-level macros ......................................... 965
501.8 Row colors .................................................. 969

403 lwarp-xexchangebar.sty 971
502 xexchangebar 971

404 lwarp-xellipsis.sty 971
503 xellipsis 971

405 lwarp-xetexko-vertical.sty 972
504 xetexko-vertical 972

406 lwarp-xfakebold.sty 972
505 xfakebold 972

407 lwarp-xfrac.sty 972
506 xfrac 972

408 lwarp-xltabular.sty 975
507 xltabular 975

409 lwarp-xltxtra.sty 975
508 xltxtra 975

410 lwarp-xmpincl.sty 976
509 xmpincl 976

411 lwarp-xpiano.sty 976
510 xpiano 976

412 lwarp-xpinyin.sty 977
511 xpinyin 977
Packages

519.1 Packages .......................................................... 985
519.2 Preliminary setup ................................................ 986
519.3 Laying out the page .............................................. 987
519.4 Text and fonts .................................................... 989
519.5 Titles ................................................................. 990
519.6 Abstracts ........................................................... 990
519.7 Document divisions ............................................. 990
519.8 Pagination and headers ....................................... 993
519.9 Paragraphs and lists ......................................... 994
519.10 Contents lists .................................................. 995
519.11 Floats and captions ........................................... 999
519.12 Page notes .......................................................1002
519.13 Decorative text ...............................................1003
519.14 Poetry .............................................................1003
519.15 Boxes, verbatims and files .................................1004
519.16 Cross referencing .................................. 1005
519.17 Back matter ........................................ 1005
519.18 Miscellaneous ................................... 1007
519.19 caption emulation ............................... 1007
519.20 Final patchwork ................................. 1009

**Change History**

520 Chg Hist ............................................. 1010

**Index of Objects** ..................................... 1037

**General Index** ....................................... 1057

**Troubleshooting Index** ............................. 1061

**Index of Indexes** .................................... 1066
List of Figures

1 tutorial.tex listing ..................................................... 95

List of Tables

1 Typesetting conventions ............................................. 77
2 \LaTeX\ lwarp package — Supported features .................... 78
3 Required software programs ......................................... 88
4 Configuration files created by print version .................... 97
5 lwarp package options ............................................. 112
6 HTML settings ....................................................... 116
7 Literal character macros ............................................ 173
8 Section HTML headings for word-processor conversion ........ 181
9 Section depths and HTML headings .............................. 195
10 Tabular baseline ..................................................... 419
11 Tabular HTML column conversions ............................... 420
12 Cross-referencing data structures ............................... 463
13 Float data structures .............................................. 473
14 amsthm package — css styling of theorems and proofs ...... 597
15 Ntheorem package — css styling of theorems and proofs ...... 828
16 Theorem package — css styling of theorems and proofs ...... 910
2 Updates

The following is a summary of updates to lwarp, highlighting new features and any special changes which must be made due to improvements or modifications in lwarp itself.

For a detailed list of the most recent changes, see the end of the Change History on page 1036.

v0.70: Error handling, MathJax, mathtools.

- Error handling for “Label(s) changed.” Refuse to lwarp mk images until recompile first.
- Fix: If Computer Modern font is used, ensures cm-super or lmmodern is used.
- Fixes for \makebox.
- Fixes for \parbox inside a <span>.
- MathJax: Updated to v2.7.5. Loads the autoload-all.js extension. Added \MathJaxFilename to select custom scripts.
- packages
  - \textcomp, xunicode: Fix for \textinterrobang.
  - changes: Updated to v3.1.2.
  - Added autonum, changelayout, inputtrc, mathtools, metalogox.

v0.69: Error handling, many fixes, improved keyfloat/tocdata.

- Fix for HTML corruption of lateximage displays.
- \makebox, \framebox: Fix for (width,height) arguments.
- \fminipage: Honors \minpagefullwidth.
- packages
  - \array, \longtable: Fix for \tabularnewline.
  - \tabularx, \tabulary: Fix to require the \array package.
  - \supertabular, \xtab: Fix to clear caption after use.
  - \graphics: Added a warning if used the \includegraphics scale option.
  - \multirow: Added an error if didn't use \mrowcell or \mcolrowcell when using \mutilrow or \multicolumnrow.
  - keyfloat: Updated for v2.00, additional improvements.
  - Added ctable, eqlist, eqparbox, ftcap, listliketab, minitoc, tocdata, topcapt.

v0.68: Error handling, tabulars, footnotes.

- lwarp mk: Improved error handling for image generation if compile was incomplete.
- tabular: Fix for \warpprintonly.
- packages
  - \longtable: Improved flexibility for \endhead, etc. Improved error reporting if \endhead, etc. incorrect for lwarp.
• **threeparttable**: Fix for caption type.
• **hyperref**: Fix for options with braces.
• **morefloats**: Fix to be loaded early for print output.
• **listings**: Updated for v1.7.
• Added bigfoot, fnpara, footnotebackref, manyfoot, tablefootnote, threeparttablex.
• Added layouts, niceframe, perpage, showtags.
• Prevented alg, algorithmic, pdfcprot, fncylab.

**v0.67**: Filename generation, symbol fonts.

**docs**
- Documentation fix for `<project>-images`, `<project>-images.txt`.
- Added discussion regarding section names. See section 9.4.

**filenames**
- Added \FilenameNullify and \FilenameSimplify for filename generation. See section 9.4.
- Core, textcomp, xunicode: Nullified additional symbols during filename generation.

**packages**
- color: Fix for version number warnings.
- Added academicons, bbding, dingbat, eurosym, fontawesome, fontawesome5, marvosym, pifont, typicons.
- Added changes, easyReview, fitbox, foreign, gloss, karnaugh-map, multicap, nomencl, notes, struktex, umoline, xfakebold.
- Tested to work as-is with askmaps, curves, euro, karnaughmap, tikz-karnaugh.

**v0.66**: xr, multiple projects, image names/directory, HTML formatting

⚠️ **Reset the configuration**
- Due to changes in lwarp, recompile any existing project a single time using `pdflatex filename.tex` or similar, after which lwarp may then be used with the new configuration files.

**lateximage**
- Adds options ImagesDirectory and ImagesName to assign directory and name prefixes for lateximage images. The new defaults include the job-name, allowing the image directories for multiple projects to coexist.

⚠️ **existing projects**
- To reuse existing lateximage directories, add `lwarp` options

```latex
\usepackage[
    ImagesDirectory={lateximages},
    ImagesName={lateximage-}
]{lwarp}
```

If not reused, the existing lateximages directory and lateximages.txt file may be removed.

**filenames**
- Added \FilenameLimit to control the maximum length of the filenames generated by lwarp.

⚠️ **Possible filename changes**
- Improved filename generation when special characters or macros are used in section names.

**WINDOWS**
- Fix for `lwarp cleanimages` with WINDOWS.

**floats**
- Fixes for floats in the home page.

**lists, table notes**
- Improved css for definition lists, table notes.
tabular
- tabular: Fixes for \par in column specifier, minipage inside tabular.

indexing
- Indexing: Fix for a long line of multiple entries.

minipage
- \minipagewidth: Fix for global changes.
  - Added \UseMinipagewidths and \IgnoreMinipagewidths. See section 9.3.3.

colors
- Improved \fbox, \fboxBlock, \fminipage to use current text color.

HTML docs
- Added discussion regarding invalid HTML. See section 9.1.1.
  - Added discussion regarding math in section names, \imagegraphics scale option. See section 7.
  - Added discussion regarding international languages in section names. See section 9.14.

packages caption
- Fix for options clash.

xr, xr-hyper: Now compatible.

subcaption: Improved horizontal spacing.

multicol: Fix for minipage inside multicol.

multicolrule: Updated for v1.2.

tocbasic: Minor update.

 acronym: Fix for acronym in float caption.

kotexutf: Patch with pdflatex and new lwar labels.

extramarks, fancyhdr: Updated for v3.10.


zref: No longer required.

 Added ar, ed, indentfirst, nameauth, truncate.

Verified to work as-is with changelog.

Prevented colortab, epsf, hyper, picinpar, picins, sistyle, ucs.

v0.65: css layout, alt tags, Japanese.

page layout
- Moved the sideroc to the left side, allowing improved css for margin notes.

image alt tags
- graphicx \includegraphics: Added the alt key to assign an alt tag to an image. Default is "(image)", assigned to pass validation.

duplicate HTML files
- Detects and causes an error if duplicate HTML file names are generated, caused by identical or similar sectioning names.

fixes
- Fix for tabular*.

Japanese
- Added \textsi and \sishape.

packages
- Added support for fontspec \textsi and \sishape.

- Added multicol's \doco/l.Varaction.

- Added embrac, footnoterange, multicolrule, versonotes.
**v0.64:** Koma-Script, Japanese, Chinese.

- **Japanese**
  - Added `utarticle` and related classes.
  - Improved `ujarticle` and related classes.

- **Chinese**
  - Fix for `biblatex` with CTEx and other classes.

- **Koma-Script packages**
  - Fixes for `scrlayer`, `scrlayer-scrpage`.
  - `addlines`: Updated to v0.3.
  - Added `bsheaders`, `gmeometric`, `marginal`, `rmpage`, `scrpage2`.

**v0.63:** mdframed, Chinese, Japanese, Korean

- **localization**
  - Added \linkhomename: A user-definable name for the Home link.
  - Documented \sidetocname: A user-definable name for the sideroc.

- **fixes**
  - Fix: \LinkHome for print output.

- **optimizations**
  - Moved package load checks to the \larp core to reduce the number of \larp-* files.

- **packages**
  - `mdframed`: Fix with amsthm, improved titles and font control. Improved rule widths.

- **Chinese**
  - Fixes for xeCJK.
  - Added `xpinyin`, `zhlineskip`.
  - Verified to work with cjkpunct, upzhkinsoku, zhspacing.

- **Japanese**
  - Verified to work with `zxjatype`, `luatexja`, `luatexja-fontspec`.
  - Added `bxjsarticle` and related classes.
  - Added `ltjsarticle` and related classes.
  - Added `pLATEX`, `upLATEX`, `ujarticle` and related classes.
  - Prevented `utarticle` and related classes.
  - Prevented `bxcjkatype`.

- **Korean**
  - Verified to work with kotex, xetexko, luatexko.

**v0.62:** MiKTeX docs, HTML title, CTEx, xeCJK, bitpattern.

- **docs**
  - Docs: Setting a UTF-8 locale. See section 10.8.

- **MiKTeX**
  - MiKTeX: Docs for \MiKTeX\ Console and miktex-poppler-bin.

- **HTML <title>**
  - HTML subpage titles: Added `\HTMLTitleBeforeSection` and `\HTMLTitleAfterSection` to select whether the HTML `<title>` displays the website name before or after the section name. See section 8.4.

- **fixes**
  - Fix for package options handling.
  - Fixes for horizontal white space between `fminipage`, `fcolorminipage`, `colorboxBlock`, `fcolorboxBlock`.
  - Logos: Fix for `Xe\TeX` logo, improved css, made robust, improved search-engine optimization.
  - `\[[\$1]]`: Additional HTML `<br>` if `$1 > 0$ pt.
  - Fixes for `\includelgraphics` filename, and with FormatWP.
  - Fix: css for `\textup`.
• Fix: Added `\slshape`.

Chinese packages
• Added `ctex` package and related classes, xeCJK.
• Prevented CJK, CJKutf8 unless xeCJK, ctext are used.

• `chemfig`: Docs for new macro `\polymerdelim`.
• `asymptote`: Docs for compilation.
• `changepage`: Fix to load `lstrap-page-changepage`.
• `algorithm2e`: Fix with non-book classes.
• `register`: Updated to v1.8.
• `nicefrac`: Improved font control and css, honors nice and ugly.
• `units`: Improved font control and css, honors tight and loose.
• `xfrac`: Improved css.
• `textcomp` and `unicode`: Fix conflicts with `\textcircled{}`.
• `ulem`: Improved compatibility with CJKulem, lateximage.
• `MathJax` and `siunitx`: Removed inoperable extension.
• Added `bitpattern`, `pdacomment`, `pdfmarginpar`, `tram`, `unitsdef`, `xchangebar`.
• Added musicography, octave, semantic-markup.
• Added `2in1`, `flippdf`, `notespages`, `rviewport`, `twoup`.

v0.61: Custom compilation, `eps`-related packages, documentation, indexes.

docs
• Split index into multiple indexes. See page 1066.
• Improved documentation regarding font selection. See section 8.2.
• Added documentation regarding debugging options. See section 36.
• Added documentation regarding HTML entities inside program listings. See section 9.2.1.

custom compiling
• Added options to specify the shell commands to execute for `lstrap-mk print` and `lstrap-mk html`, allowing the use of `lstrap` with `perltex`, `pythontex`, etc.
If not specified, these are set automatically depending on the `\LaTeX` engine, `--shell-escape`, and `lstrap` options. See section 10.

⚠️ changed names
• Changed macro names to match `\displaymathother`, `\displaymathnormal`:

<table>
<thead>
<tr>
<th></th>
<th>Old</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>\StartDynamicMath</code></td>
<td><code>\inlinemathother</code></td>
<td><code>\StopDynamicMath</code></td>
</tr>
</tbody>
</table>

fixes
• Fix: Paragraph tags in a tabular.
• Fix: `supertabular` and `xtab` captions.
• Fix: `\includegraphics` `eps` images.
• Fix: `newfloat` lists.
• Fix: css footnotes text align, minipage tabular and footnote margins.

packages
• Added `epsfig`, `psfrag`, `psfragx`, `pctool`.
• Added `copyrightbox`, `pdfprivacy`, `thinspace`, `threadcol`, `uspace`.
• Added `chkfloat`, `cmdtrack`, `dprogress`, `lua-visual-debug`, `refcheck`, `srctex`, `srctex`, `vpe`, `xbmks`.
v0.60: Fixes for longtable, listings.

- longtable, etc.: Fixes for slowdown and memory management for very long tables.
- listings: Fix for HTML entities, and also when used inside a list.
- diagbox: Fix for incorrect HTML par tags.

packages
- Added 2up, booklet.
- Added bophook, draftfigure, fullminipage, grid-system, layaureo.
- Added leading, widows-and-orphans.
- Added fancytabs, thumb, thumbs.

v0.59: dvi latex, MathJAX, asymptote, pdfticks and pstricks, epstopdf, breqn.

⚠️ Reset the configuration
- Due to changes in lwarp mk, recompile any existing project a single time using pdflatex filename.tex or similar, after which lwarp mk may then be used with the new configuration files.

lwarp mk
- Added an error if lwarp mk.conf’s format has changed and the document must be recompiled.
- Added a warning if the lwarp mk.conf configuration file appears to be for the wrong operating system, in case files are transferred between systems.
- Added lwarp mk epstopdf <list-of-eps-files>

  to quickly convert a document’s eps images to pdf or svg. See section 9.8.

\section*{dvi latex}
- Added support for dvi latex. See section 8.3.

latex mk
- Fix for --shell-escape with latex mk.

math
- Updated MathJax script to v2.7.4.
- Fix: Mathjax chapter number removed from non-numeric tagged equations.
- Added MathJax support for nicefrac, units.
- Fix for \[ and \] with displaymathnormal.

images
- Fix for \includegraphics filename expansion.
- \includegraphics now works with .pdf and .eps filename extensions.

packages
- Moved amsmath out of the lwarp core.
- Fix for chemformula \NMR.
- Added asymptote, pdfticks, pstricks, pst-eps.
- Added breqn, Slunits.
- Added bxpapersize, canoniclayout, draftcopy, fnbreak, nccfancyhdr.
- Added accsupp, axessibility.
- Added xunicode.
- Improved and now supports epstopdf.
- Tested to work as-is: eepic, sefootnotes.

docs
- Added information about setting up a development version of lwarp.
v0.58: Extensive improvements in indexing, glossaries. Adds PDF-inclusion packages.

△ Reset the configuration

- Due to changes in \texttt{lwarpmk}, recompile any existing project a single time using \texttt{pdflatex filename.tex} or similar, after which \texttt{lwarpmk} may then be used with the new configuration files.

\texttt{lwarpmk}:

- Added the \texttt{-p} option to specify the project name.

\texttt{glossaries}:

- Now uses \texttt{makeglossaries} for glossary generation, allowing the processing of multiple glossaries at once.

- Added \texttt{l warp option GlossaryCmd} to specify the shell command used by \texttt{lwarpmk printglossary} and \texttt{lwarpmk htmlglossary}. Defaults to \texttt{makeglossaries}.

\texttt{-index and glossary-}


- Added support for \texttt{makeindex}. (Previously supported only \texttt{xindy}.) Also added indexing packages listed below.

- Added \texttt{l warp options PrintIndexCmd, HTMLIndexCmd, and LatexmkIndexCmd} to specify shell commands used by \texttt{lwarpmk printindex}, \texttt{lwarpmk htmlindex}, and \texttt{latexmk}. May be preset with the makeindex or xindy \texttt{l warp options}. See section 8.3.

- Added \texttt{l warp options makeindex and xindy to set PrintIndexCmd, HTMLIndexCmd, and LatexmkIndexCmd} to sensible values for a typical single index. See section 8.3.

- Added \texttt{l warp option makeindexStyle} to tell \texttt{lwarpmk} to use a custom style instead of \texttt{l warp.ist}. See section 9.6.19.

- Fix for index entries with \texttt{	extbackslash see, \textbackslash seealso, \textbackslash emph, \textbackslash textbf}, etc.

\texttt{-misc. fixes-}

- Replaced each \texttt{	extbackslash csuse with 	extbackslash@nameuse} for improved error detection.

- Additional internal \texttt{print/HTML} macro selection improvements.

- Fix: \texttt{printindex} finishes pending \texttt{index} writes first.

\texttt{-packages-}

- Fixes for \texttt{memoir: makeidx, ccaption, multiple indexes, \textbackslash specialindex}.

- Fixes for \texttt{komascript: Indexing improvements}.

- Added \texttt{imakeidx, index, repeatindex, splitidx}.

- Added \texttt{attachfile, attachfile2, intopdf, pdfpages, pdfx}.

- Added \texttt{cases}.

- Tested to work as-is: \texttt{notes2bib, hvindex}.

v0.57: \texttt{algorithm2e, float styles, tabular packages, internal improvements}.

\texttt{-MathJax-}

- Added support for MathJax equations with \texttt{footnote, footnotemark}.

\texttt{-math macros-}

- Added \texttt{\StartDefiningMath and \StopDefiningMath} for use when defining macros in the preamble which contain $. See section 9.7.7.

\texttt{-dynamic math-}

- Added \texttt{\inlinemathother and \inlinemathnormal} to delimit math expressions which depend on a variable condition such as a counter. Such expressions will not be hashed for reuse, and will be converted to svg math images even when MathJax is enabled. See section 9.7.8.

△ new name

- Renamed \texttt{\EndDefiningTabulars to \StopDefiningTabulars}.
lateximage alt tags

- Improved localization for lateximage HTML alt tags. For svg math images, the alt tag under some conditions will be set to \mathimagnamename, which defaults to "math image". For packages, the alt tag is set using the package name followed by \packagediagramname, which defaults to "diagram". Ex:
  (-xy- diagram)
  See section 8.4.

misc. fixes

- Fix: Improved print/HTML macro selection.
- Fix: \href text catcodes.
- Fix: \subref text.
- Fixes: Colored \rule and \boxframe.

packages

- float, rotfloat: Adds support for float styles ruled and boxed.
- float: Fix: Do not create \@<type> until \listof is used.
- marginnote: Fix: Long optional argument.
- ellipsis: Adds \midwordellipsis.
- breakurl: Fix for text catcodes.
- Added algorithm2e, register, ltablex, xltabular, xellipsis, trimclip, errata, vowel, xpiano.
- Prevents glossary.
- Tested to work as-is with gauss, phonrule, piano, Slunits, tikzcodeblocks.

v0.56: Shell escape, tabular packages.

lwrmpk

- Added
  lwrmpk pdftosvg <list-of-PDF-files>
  to quickly convert a document's PDF images to SVG, for use with HTML. See section 9.8.
- Added support for --shell-escape. See section 8.1.

tabular

- Added support for array w and W columns.
- Fix: \multicolumn parameter handling.
- Added support for double \hlines, \midrules, and vertical rules.
- Added support for arydshln dashed lines with HTML tabular, but reverts to plain rules for lateximage and svg math array.

misc. fixes

- Fix: \thinspace.
- Fix: paralist compact environments.

packages

- Added parnnotes, quoting, lua-check-hyphen, tocenter, underscore.
- Tested to work as-is with babelbib, bibunits, bodegraph, fast-diagram, nicematrix, structmech.

v0.55: Various fixes.

misc fixes

- Fix: Extraneous space in file links, which also prevented Calibre EPUB conversions.
- Fix: Float optional argument regression.
- Fix: \ForceHTMLTOC with \phantomsection.
- Fix: Overfull boxes in \lateximage.
- Fix: QED symbols in \lateximage.

**packages**

- \texttt{koma-script}: Fix: Figure with \texttt{\centering}, etc.
- Added \texttt{clrdblpg}.

**v0.54:** Float \texttt{\centering}, improved image checks.

⚠️ **Reset the configuration**

- Due to changes in \texttt{lwarpmk}, recompile any existing project a single time using \texttt{pdflatex filename.tex} or similar, after which \texttt{lwarpmk} may then be used with the new configuration files.

**lwarpmk**

- \texttt{lwarpmk} images checks for the presence of the \texttt{HTML} version of the document and valid image references before attempting to create the \lateximages.
- \texttt{lwarpmk}: Improved error message if configuration file does not exist.

**\texttt{BibTeX}**

- Added documentation for avoiding error with \texttt{BibTeX} and \texttt{\texttt{\et al}\char}.
  See section 9.6.9.

**polyglossia**

- Added documentation regarding \texttt{polyglossia}.
  See section 9.15.4.

**macros in section names**

- Added documentation regarding the use of macros in section names.
  See section 9.1.

**document encoding**

- Renamed and added package options:

<table>
<thead>
<tr>
<th>Old Package Option</th>
<th>New Package Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>\texttt{xdyFilename}</td>
<td>\texttt{xindyStyle}</td>
</tr>
<tr>
<td>\texttt{IndexLanguage}</td>
<td>\texttt{xindyLanguage}</td>
</tr>
<tr>
<td>\texttt{---}</td>
<td>\texttt{xindyCodepage}</td>
</tr>
<tr>
<td>\texttt{---}</td>
<td>\texttt{pdftotextEnc}</td>
</tr>
</tbody>
</table>

  Use these options along with \texttt{inputenc} or \texttt{inputenx} to process documents in an encoding other than UTF-8. See section 8.2.

**floats with \texttt{\centering}, etc.**

- Floats now honor \texttt{\centering}, \texttt{\raggedright}, \texttt{\raggedleft}, and their \texttt{ragged2e} equivalents, when placed directly after:

  \begin{verbatim}
  \begin{floattype} \centering
  \end{verbatim}

**misc. fixes**

- \texttt{tikz}: \texttt{\pgfpicture}, \texttt{fit}, \texttt{align}, \texttt{font}.
- \texttt{ragged2e}: \texttt{\centering} etc.
- \texttt{hyperref}: \texttt{\hypertarget} was creating duplicate of \texttt{\label}.
- \texttt{hyperref}: Active chars inside \texttt{\hyperref}, \texttt{\hyperlink}.
- \texttt{hyperref}: \texttt{\ref} inside \texttt{\hyperlink} caused a nested \texttt{HTML} link.
- \texttt{glossaries}: Fix when not using \texttt{babel} or \texttt{polyglossia}.
- \texttt{textcomp}: \texttt{\textperthousand}.
- \texttt{\LaTeX} core \texttt{verse} environment: line spacing.

⚠️ **Removed \texttt{\citetitle}, adjusted \texttt{\attribution}.

**packages**

- \texttt{memoir}: Minor update for v3.7g.
- Added \texttt{inputenx}, \texttt{bibunits}, \texttt{chngpage}, \texttt{forest}, \texttt{magaz}, \texttt{gridset}.
- Prevents loading \texttt{ae}, \texttt{aecc}, \texttt{t1enc}, and \texttt{wasysym}.
v0.53: Improved image checks.

lwarp

• lwarp: Added a warning about corrupted images due to the need to 
recompile the document one more time.
• lwarp: Added the lwarp cleanimages command.
• Added documentation for lwarp cleanimages and lwarp pdftohtml.

v0.52: Improved footnotes, svg math.

documentation

• Improved install instructions regarding lwarp baseline_marker.png.
• Added documentation regarding footnotes in section headings, and foot-
notes with \VerbatimFootnotes from fancybox, fancyvrb. See section 9.5.4.
• Added documentation regarding font selection when using X\LaTeX or 
Lua\LaTeX with fontspec and traditional font packages. See section 8.2.

SVG math

• Fix: Limit the number of background tasks when generating lateximages.
• Added user-adjustable svg math font scaling. See section 81.3.
• Added warnings if lwarp baseline_marker.png is not present, or if graphicx or 
graphics is not loaded.
• Improved \ensuremath hashing expansion.
• Fix: equation* with split.
• tabbing now works inside a lateximage. Use for math in tabbing.

MathJax

• Fix: MathJax script was not executing in some conditions.
• Added \CustomizeMathJax to add custom functions. See section 9.7.

footnotes

• Fix: Footnote numbering when using HTMLDebugComments.
• Fix: Footnote paragraph tags.
• Fix: FootnoteDepth defaults to \subsection.

misc. fixes

• Fix: \kill in a lateximage.
• Fix: \FileDepth, misc. others, when input encoding is not utf8.
• Fix: \textorpdfstring in a section name.

packages

• hyperref emulation: Fix for #, %, &, _ characters in urls.
• fancybox, fancyvrb: Initial support for \VerbatimFootnotes.
• nicefrac: Added with fix for \ensuremath.
• graphicx: Fix for option defaults. Added v1.1a/b options.
• endfloat: Updated for v2.6.
• url: Fixes for active characters.

v0.51: Improved svg math, added numerous chemistry packages.

documentation

• Docs: Added Things to avoid.
• Docs: Added to Converting an existing document.
• Docs: Multiple authors and affiliations with custom classes. See sec-
tion 9.6.1.
• Docs: tikz with matrices. See section 9.8.1.
| SVG math       | • Improved svg math baseline. |
|               | • Improved svg math font and color. |
|               | • Faster svg math rendering. |
|               | • Improved support for display math containing complicated math objects, such as \texttt{tikz-cd}. See section 9.7.9. |
|               | • Fix: \texttt{\addcontentsline} inside svg math. |
|               | • Fix: SVG math containing an embedded \texttt{lateximage}. |
| MathJax       | • MathJax now handles \texttt{\ensuremath} in expressions. |
| misc. fixes   | • Fix: Added alignat environment. |
|               | • Fix: \texttt{afterpackage} no longer required, which conflicted with \texttt{scrlfile}. |
|               | • Fix: \texttt{titling} \texttt{\thanks} mark. |
|               | • Fix: fancybox improvements. |
|               | • Fix: tikz \texttt{\texttt{tikz}} macro. (Previously only the \texttt{tikzpicture} environment worked.) |
|               | • Fix: tikz with optional argument. |
| packages      | • Added \texttt{mhchem}, \texttt{chemfig}, \texttt{chemformula}, \texttt{chmmacros}, \texttt{chemnum}, \texttt{chemgreek}, \texttt{epstopdf-base}, \texttt{grid}, \texttt{ltxgrid}. |

**v0.50**: Improved svg math.

| svg math       | • svg math and other \texttt{lateximages} now are converted to svg using parallel background tasks, utilizing all available \texttt{CPU} cores. |
|               | • Inline svg math image file names now are MD5 hashes made from their source \LaTeX{} code. Identical inline math expressions, such as multiple instance of $x$, now share a single image file. This reduces the number of images to store, transmit, process, and display. Each image file is only converted to svg a single time, and reused if it already exists. Display math and other forms of svg image such as \texttt{picture} and Ti\texttt{kz} still use individual image files which are recreated each time \texttt{lwrpmk images} is run. |
|               | • Fixes: SVG math and/or \texttt{\underline{\texttt{\ul}}} in a sectioning file name. |
|               | • Improved svg display math and tags. |
|               | • Improved svg math and \texttt{siunitx} \texttt{alt} tags. |
|               | • Improved \texttt{siunitx} units. |
|               | • Fix: \texttt{\ensuremath} with MathJax now creates a \texttt{lateximage}. |
|               | • Fix: \texttt{\centering}, etc. in svg math, \texttt{lateximage}, \texttt{Tikz}. |
| misc. fixes   | • Fix: Made various macros robust, additionally fixing \texttt{authblk}. |
|               | • Fix: \texttt{nthm} if neither \texttt{standard} nor \texttt{amsthm} selected. |
|               | • Fix: \texttt{listings}: Improved column alignment. |
|               | • Fix: Load \texttt{fontspec} if necessary. |
| packages      | • Added \texttt{xy}, \texttt{epstopdf}, \texttt{diagbox}, \texttt{pbox}, \texttt{bytefield}, \texttt{axodraw2}, \texttt{phfqi}, \texttt{schmeta}, \texttt{dblfloatfix}, \texttt{nonfloat}, \texttt{morefloats}. |
v0.49:

- **tabular**: Added \color \rowcolors.
- Fix: \noalign inside a tabular.
- **math**: Fix: \eqref in a caption.
- **misc fixes**: Fix: Incorrect PDF font size changes caused occasional HTML corruption.
- **packages**: Fix: printlen changes are now grouped for HTML output.
- **misc fixes**: Added vwcol, vertbars, hyphenat, lineno, fnlineno, figsize, hypdestopt, pagegrid, pdfrender, luacolor, resizegather.

v0.48:

- **documentation**: Added some documentation regarding converting an existing document. See section 7.
- **cleveref**: Updated compatibility for new cleveref v0.21.
- **tabular**: Fix: Ignores optional tabular column arguments.
- **minor updates**: Added \leftline, \centerline, \rightline.
- **misc. fixes**: Lists have improved font control via \makelabel.
- **math**: Print-mode \lateximage now boxed to the natural width of its multiline contents.
- **misc. fixes**: Abstract now allows an optional name, as required by some classes.
- **math**: Fix: Improved spacing, \hbox, and font sizes with svg math, Tikz.
- **misc. fixes**: Siunitx: Improved svg math, fraction compatibility, color output.
- **packages**: Fix: LOF/LOT links.
- **misc. fixes**: Fix: Virtual page size grouping caused excessive PDF page breaks.
- **math**: Fix: Parsing similar package names in a single \usepackage.
- **misc. fixes**: Fix: Adapts to classes without \part.
- **math**: Fix: \newline in \title was causing \textless br \textgreater in window title.
- **packages**: Fix: \maketitle with \cr, \crcr, \noalign, for IEEEtran class.
- **misc. fixes**: Fix: xfrac neutralized BlockClass and others.
- **packages**: Fix: todonotes and luatodonotes: Improved \todotoc.
- **packages**: Added colortbl, chapterbib, acro, acronym, hypernat, hypcap, stfloats, vmargin, fancyheadings.
- **misc. fixes**: Now directly supported.

v0.47:

- **math**: Improved svg math baseline and sizing.
- **packages**: Fixes: \svgmath in captions, subcaptions, \nameref.
- **packages**: Fixes: Line wrap at hyphen in HTML output.
- **packages**: Added endheads, multitoc, sectionbreak, blowup, xurl.
v0.46:

⚠️ name change
- \PrintStack changed to \LWRPrintStack.

misc. fixes
- Fix: Empty lines between tabular rows.
- Fix: Stack unnesting.
- Fix: SVG math and \lateximages in numerous situations.
- Fix: Spaces in \usepackage.
- Fix: Now allows MATHJAX inside verse.

v0.45:

documentation
- Improved MiKTeX install instructions.
- Improved graphics and epstopdf instructions.
- Updates to the Introduction.

memoir

cross-references
- Fix: Now allows underscores in labels.
- Fix: \_ and \langle{blank}\rangle in section/file names.

math
- Fix: Now allows MATHJAX inside tabbing.

bibliography
- Fix: Bibliography \em names.
- Added cite, natbib, backref. (Also works as-is with biblatex.)

misc. fixes
- Fix: Empty lines between tabular rows.
- Fix: “Improper \prevdepth” with minipages, lists.
- Fix: Incorrect svg math and \lateximages with subfig.
- Fix: Lateximages from incorrect pages with Mathjax.
- Fix: Missing sidetoc if using listings.
- Fix: Added an array emulation package.

packages
- Added subfigure, prettyref, hanging, midpage, flafter, fltrace, changebar, endfloat, continue, fwlw, turnthePage, footpag, pagesel, textit, titleref.

v0.44:

koma-script
- Added koma-script classes (except scrlltr2, scrjura).
- Added scrextend, scrlayer, scrlayer-notecolumn, scrlayer-scrpage, scrhack, tocstyle, tocbasic.

html title and author
- Added \HTMLTitle. Fixed web page title if \HTMLTitle empty and no \title given and not using titling package.
- Fixed web page author if \HTMLauthor is empty and \author is not given.

encodings
- If using pdflatex, automatically loads T1 and utf-8 encodings. (Additional fontenc encodings may be loaded after lwrap.)

lists
- Added list and trivlist environments, hang.

tabular
- Fix: \multicolumn alignment if formatting for a word processor.
- Added \tcttable.

math
- Fix: MATHJAX combined with \lateximages.
• algorithmicx: Improved comment symbol and floating.

packages
• Completed todonotes and luatodonotes.
• Added todo, easy-todo, fixmetodonotes, fixme.
• Added soulutf8, soulpos, cancel.
• Added section, fancyref, ifoddpage.
• Added preview, atbegshi, watermark.
• Improved toloft \newlistof and \newlistentry.

v0.43:
• Docs: Reorganized HTML customization, added an HTML settings table. See section 8.4.

footnotes
• Added FootnoteDepth to control the placement of pending footnotes before section breaks. By default, pending footnotes are printed before each \subparagraph or higher.

sectioning
• Fix: Expansion in section name.

tabular
• Fix: Ignore spaces in tabular column specification.
• Fix: Tabular rules at bottom or when finishing incomplete rows.
• Fix: \multicolumn at/bang/before/after specifications, trim, and vertical rules.
• Fix: supertabular and xtab column misalignment.

math
• Fix: equation*.
• Fix: svg math in a section name.
• Fix: ref and \eqref in svg math.

packages
• Added todonotes and luatodonotes (but only disabled).
• Added breakurl.
• hyperref: Fix: Several macros were made robust, \Gauge added.

v0.42:
Support TEX!
word-processor conversion
• Added \TeX development support page, Support \TeX development.
• Improved assistance for word-processor conversions when boolean FormatWP is set true. See section 12.

△ name change
– The boolean FormatWordProcessor has been renamed FormatWP.
△ name change
– The boolean HTMLMarkFloats has been renamed WPMarkFloats.
– New booleans control whether to place additional marks around minipages, at the table of contents, at the \LOF and \LOT, and whether to print math as \LATEX source for copy/paste into the LibreOffice Writer TeXMaths extension.
– Improved formatting for numerous objects. See section 12.

tabbing
• Add: tabbing environment.

overpic
• Add: overpic package. See section 352.

math
• Fix: Text copy/paste of \AMS math environment numbers and names.
• Improved \ensuremath.
- **MathJax** with siunitx: Updated script and documentation.
- **symbols**
  - textcomp: Improved `\textinterrobangdown`.
  - realscripts: Fix for subscripts in a `lateximage`.
- **load order**
  - morewrites: Enforces loading before lwarp.

**v0.41:**

- **tabular**
  - Added tabular vertical rules, subject to some limitations. See the rules section of section 9.10.1.
  - Improved booktabs: Width and trim are honored.
- **\textinterrobangdown**
  - Added `\mcolrowcell` for empty cells inside a `\multicolumnrow`. Use `\mcolrowcell` instead of `\rowcell` for two-dimensional cells created by `\multicolumnrow`. Continue to use `\rowcell` for empty cells in a `\multirow`. See section 332.2 on page 817.
  - Fix: Unfinished tabular rows are automatically filled.
  - Fix for tabular column specifiers while using babel-french. (`\NoAutoSpacing` is activated then nullified inside the tabular, due to a conflict with the tabular column parsing code.)

**v0.40:**

- **graphics, graphicx**
  - graphics and graphicx have been moved from the lwarp core, and are only loaded if requested with `\usepackage`.
- **\includegraphics path**
  - Improved `\graphics \graphicspath` support. Multiple image directories may now be used. Refer to `.pdf files without a file extension` to allow the HTML version to use a `.svg`, `.png`, `.jpg`, or `.gif` version instead. See section 9.8.
- **image file extensions**
  - `\ Griffine` is now directly supported instead of emulated.
- **bigdelim**
  - Fix for bigdelim, and improved documentation. See section 139.
- **symbols**
  - Improved \LaTeX and textcomp symbols.
- **\LaTeX symbols**
  - Improved `\LaTeX` logos and `\textcomp` symbols.
  - Fix for `\LaTeX` logos and `\textcomp` symbols.
  - Fix for `\xltxtex` with `\XeLaTeX`.
  - Fix for `\xtxtr` with `\XeLaTeX`.
  - Fixes for `\mathrowcell` and `\nullfonts` with older versions of `\multirow` and `xparse`.
  - Added `\undercell`.
- **margins**
  - Added `\adjmulticol`.
- **columns**
  - Added `\cuted`, `\midfloat`.
- **footnotes**
  - Added `\pfnote`, `\fnpnos`, `\dbfnote`.
- **\textinterrobangdown**
  - Added `\stabular`, `\tabs`.
- **sectioning**
  - Added `\sectsty`, `\anonchap`, `\quotchap`. 
v0.39:

- Improved the titlepage HTML code, `\thanks` notes, and `\maketitle`. `\titling` is no longer required, but is still supported. The `\published` and `\subtitle` fields are no longer provided, but `\AddSubtitle\Published` replicates them using `\titling`. See section 67.8. `authblk` is added, and should be loaded before `\titling`. See section 67.

- `\multirow` now supports the new optional `vpos` argument.

- Added `\multicolumn\row` for combined `\multicolumn` and `\multirow`. See section 332.2.

- Tabular special cases:
  - Added `\TabularMacro` to mark custom macros inside tabular data cells, avoiding row corruption. See section 9.10.1.
  - Added `\ResumeTabular` for use when a `\tabular` environment is defined inside another environment. See section 9.10.1.

- Added `\supertabular`, `\xtab`, `\bigstrut`, `\bigdelim`.

- Added `\fullwidth`, `\margins`.

- Added `\addlines`, `\anysize`, `\a4`, `\a4wide`, `\a5comb`, `\textarea`, `\zwpagelayout`, `\typearea`, `\ebook`.

v0.38:

- Added `\lwarpmk` `\print1` and `\lwarpmk` `\html1` actions to force a compile of the project a single time. Useful when multiple passes are not needed, or changes were not detected.

- Added `\ForceHTMLPage` and `\ForceHTMLTOC` to force a starred sectional unit onto its own HTML page and with its own TOC entry. See section 9.6.2.

- Modified the tutorial to use the new `\ForceHTMLPage` and `\ForceHTMLTOC` macros.

- Added `\appendix`, `\tocbibind`, `\fncychap`, `\twocolumn`.

- Added `\relsize`, `\scalefnt`.

- Added `\realscripts`, `\metalogo`, `\xltt`.

- Added `\grffile`, `\romanbar`.

- Added `\arabicfront`, `\chappg`, `\nonumonpart`, `\nopageno`, `\romanbarpagename`.


- Fix: `\color` requests `\xcolor`.

- Fix: `\part` for `\article` class.

v0.37:

- `\include` now maintains independent `.aux` files for HTML versions.

- `\latexmk` `\comment`, used by `\lwarp`, now maintains independent cut files for print and HTML versions, helping `\latexmk` to better know whether to recompile.

- Improved support for E\TeX\ accents, `textcomp`, `siunitx` symbols.

- Improved `\lwarp` handling for load order and `-tilde`. 
v0.36:

- Recorganized the documentation section regarding special cases and limitations. (Section 9)
- Improved source formatting.
- \fbox and related now use \fboxsep and \fboxrule.
- \makebox and \framebox now use width and position.
- \colorbox and related now work inside a lateximage.

boxes and frames

- \fbox and related now use \fboxsep and \fboxrule.
- \makebox and \framebox now use width and position.
- \colorbox and related now work inside a lateximage.

babel-french

- babel-french: Improvements for French variants, load order, footnotes, ellipses.

footnotes

- Improved footnote numbering. lateximage footnotes now appear as regular footnotes to match the numbering of the print version. Also fixed a regression with \textit{MATHJAX}.

siunitx

- Improved siunitx units.
- Fix for filenames while using \textit{MATHJAX}.
- Fix for \texttt{\color} when \texttt{xcolor} is not loaded.
- Added \texttt{transparent}, \texttt{upref}.

v0.35: Fix: \texttt{\textbf} and related.

v0.34:

⚠️ Optional arguments

- BlockClass's optional argument has been moved in front of the mandatory argument:
  \begin{verbatim}
  BlockClass[style]{class} \textit{NEW}
  \end{verbatim}
- Instead of:
  \begin{verbatim}
  BlockClass{class}[style] \textit{OLD}
  \end{verbatim}
- This change makes it more consistent with \LaTeX\ standards, and avoids problems with space between arguments.

⚠️ Optional arguments

- Likewise, InlineClass's optional argument now comes before the mandatory arguments:
  \begin{verbatim}
  InlineClass[style]{class}{text}
  \end{verbatim}

spans with minipages

- Improved compatibility between spans, minipages, lists, frames, and math.
  Handles minipages and lists inside an HTML span, such as an \fbox containing a minipage, although with minimal HTML formatting. See section 9.3.3.

framing minipages

- \fboxBlock is added to frame minipages, tables, and lists with full HTML formatting but no longer inline, and behaves as \fbox for print output. The \texttt{\minipage} environment is added for framed minipages, as an environment with full HTML formatting, and draws a framed minipage in print output. See section 9.3.5. \fbox and minipages now often work in \texttt{svg} math and lateximages. \textit{MATHJAX} supports \fbox, but not \fboxBlock nor \minipage.

lateximage, svg math, tabular

- Improved compatibility between lateximage and minipage, \texttt{parbox}, \texttt{makebox}, \fbox, \framebox, \raisebox, \scalebox, \reflectbox, tabular, booktabs.

eqnarray

- Improved font control for lateximages and svg math.

verbatim packages

- \texttt{fancyvrb} is no longer required (preloaded), but is still supported.
• Added verbatim and moreverb.

framing packages
• Added fancybox, boxedminipage2e and shadow.

list packages
• enumitem is no longer required, but is still supported.

babel-french
• Added enumerate and paralist.
• titleps is no longer required, but is still supported.
• Added crop.
• Added rotfloat, marginfit, and several minor packages; see the change log.

v0.33:
• Tabular @ and ! columns now have their own HTML columns.

• & catcode changes are localized, perhaps causing errors about the tab alignment character &; so any definitions of macros or environments which themselves contain tabular and & must be enclosed within \StartDefiningTabulars
and \StopDefiningTabulars (previously called \EndDefiningTabulars. See section 44. This change is not required for the routine use of tables, but only when a table is defined inside another macro or environment, and while also using the & character inside the definition. This may include the use inside conditional expressions.

• Several math environments were incorrectly placed inline. Also, for amsmath with svg math, the fleqn option has been removed, resulting in improved spacing for aligned equations.

• Bug fixes; see the changelog.

v0.32: Bug fixes; no source changes needed:

• lwarpmk has been adjusted to work with the latest lualatex.
• Spaces in the \usepackage and \RequirePackage package lists are now accepted and ignored.

• Fix for the glossaries package and \glo@name.

v0.31: Bug fix; no source changes needed:

• Improved compatibility with keyfloat, including the new keywrap environment.

v0.30:

⚠️ lwarp-newproject
• lwarp-newproject has been removed, and its functions have been combined with lwarp.
To modify existing documents, remove from the document source:
\usepackage{lwarp-newproject}

The lwarp package now produces the configuration files during print output, and also accepts the option lwarpmk if desired.

⚠️ HTML setup changes.
• A number of macros related to HTML settings have been converted to options, and other macros and options have been renamed to create a consistent syntax:
• Per the above changes, in existing documents, modify the package load of \lwarp, such as:

\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={},
  xindyLanguage=english
]{\lwarp}

• The file \lwarp_html.xdy has been renamed \lwarp.xdy. To update each document’s project:
  1. Make the changes shown above.
  2. Recompile the document in print mode. This updates the project’s configuration files, and also generates the new file \lwarp.xdy.
  3. The old file \lwarp_html.xdy may be deleted.

• The new \lwarp package option xindyStyle may be used to tell \lwarp to use a custom .xdy file instead of \lwarp.xdy. See section 9.6.20.

• Improvements in index processing:
  – \xindy’s language is now used for index processing as well as glossary.
  – Print mode without latexmk now uses \xindy instead of makeindex.
  – texindy/xindy usage depends on pdflatex vs xelatex, lualatex.
  – For pdflatex and texindy, the \texttt{-C utf8} option is used. This is supported in modern distributions, but a customized \lwarp\texttt{.lua} may need to be created for use with older distributions.

v0.29:

• Add: \lwarp\texttt{mklang} option for \lwarp-newproject and \lwarp. Sets the language to use while processing the glossary. (As of v0.30, this has been changed to the IndexLanguage option.) (As of v0.54, this has been changed to the xindyLanguage option.)
• Fix: \includegraphics when no optional arguments.

v0.28:

• \HTMLAuthor {⟨name⟩} assigns HTML meta author if non-empty. Defaults to \theauthor.

• Boolean HTMLDebugComments controls whether HTML comments are added for closing <div>s, opening and closing sections, etc.

• Boolean FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

• Boolean FormatWordProcessor changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Name changed to FormatWP as of v0.42.

• Boolean HTMLMarkFloats adds text marks around floats only if the boolean FormatWordProcessor is true. These make it easier to identify float boundaries, which are to be manually converted to word-processor frames. Name changed to WPMarkFloats as of v0.42.

• Updated for the new MATHJAX CDN repository.

• Adds tabular.

• Supports the options syntax for graphics.

• Improved index references, now pointing exactly to their target.

• Adds glossaries. \lwarpmk is modified to add \printglossary and \htmlglossary actions.
3 Introduction

The lwarp project aims to allow a rich \LaTeX document to be converted to a reasonable HTML5 interpretation, with only minor intervention on the user's part. No attempt has been made to force \LaTeX to provide for every HTML-related possibility, and HTML cannot exactly render every possible \LaTeX concept. Where compromise is necessary, it is desirable to allow the print output to remain typographically rich, and compromise only in the HTML conversion.

Several “modern” features of HTML5, CSS3, and SVG are employed to allow a fairly feature-rich document without relying on the use of JAVASCRIPT. Limited testing on older browsers shows that these new features degrade gracefully.

lwarp is a native \LaTeX package, and operates by either patching or emulating various functions. Source-level compatibility is a major goal, but occasional user intervention is required in certain cases.

As a package running directly in \LaTeX, lwarp has some advantages over other methods of HTML conversion. \TeX itself is still used, allowing a wider range of \TeX trickery to be understood. Lua expressions are still available with Lua\TeX. Entire categories of \LaTeX packages work as-is when used with lwarp: definitions, file handling, utilities, internal data structures and calculations, specialized math-mode typesetting for various fields of science and engineering, and anything generating plain-text output. Blocks of PDF output may be automatically converted to SVG images while using the same font and spacing as the original print document, directly supporting \LaTeX.Tikz and \LaTeX picture. Numerous packages are easily adapted for HTML versions, either by loading and patching the originals, or by creating nullified or emulated replacements, and all without resorting to external programming. As a result, several hundred packages have already been adapted (table 2), and an uncounted number more work as-is.

Packages have been selected according to several criteria: perceived importance, popularity lists, recent CTAN updates, CTAN topics, mention in other packages, support by other HTML conversion methods, and from sample documents taken from public archives. These include some “obsolete” packages as well.1

Assistance is also provided for modifying the HTML output to suit the creation of EPUB documents, and for modifying the HTML output to ease import into a word processor.

\texttt{pdflatex}, \texttt{xelatex}, or \texttt{lualatex} may be used, allowing lwarp to process the usual image formats. While generating HTML output, SVG files are used in place of PDF. Other formats such as PNG and JPG are used as-is.

1 An amazing number of decades-old packages are still in use today.
SVG images may be used for math, and are also used for picture, Tikz, and similar environments. The svg format has better browser and e-book support than MathML (as of this writing), while still allowing for high-quality display and printing of images (again, subject to potentially bug-ridden\(^2\) browser support).

Furthermore, svg images allow math to be presented with the same precise formatting as in the print version. Math is accompanied by \texttt{\textless alt\textgreater} tags holding the \LaTeX source for the expression, allowing it to be copy/pasted into other documents.\(^3\) Custom \LaTeX macros may be used as-is in math expressions, since the math is evaluated entirely inside \LaTeX. An MD5 hash is used to combine multiple instances of the same inline math expression into a single image file, which then needs to be converted to svg only a single time.

The MathJax JavaScript display engine may be selected for math display instead of using svg images. Subject to browser support and Internet access, MathJax allows an HTML page to display math without relying on a large number of external image files.\(^4\) lwarp maintains \LaTeX control for cross-referencing and equation numbering, and attempts to force MathJax to tag equations accordingly.

---

A \texttt{texlua} program called \textit{lwarpmk} is used to process either the print or HTML version of the document. A few external utility programs are used to finish the conversion from a \LaTeX-generated PDF file which happens to have HTML5 tags, to a number of HTML5 plain-text files and accompanying images.

\texttt{lwarp} automatically generates the extra files necessary for the HTML conversion, such as CSS and .xdy files, and configuration files for the utility \textit{lwarpmk}. Also included is a parallel version of the user's source document, \texttt{\$\textless$\textit{source}\$\textgreater$.html}$\_$.tex$, which selects HTML output and then inputs the user's own source. This process allows both the printed and HTML versions to co-exist side-by-side, each with their own auxiliary files.

When requesting packages during HTML conversion, \texttt{lwarp} first looks to see if it has its own modified version to use instead of the standard \LaTeX version. These \texttt{lwarp-packagename$\_$.sty} files contain code used to emulate or replace functions for HTML output.

\(^2\)Firefox has had an on-again/off-again bug for quite some time regarding printing svgs at high resolution.

\(^3\)There seems to be some debate as to whether MathML is actually an improvement over \LaTeX for sharing math. The author has no particular opinion on the matter, except to say that in this case \LaTeX is much easier to implement!

\(^4\)One svg image file per math expression, except that duplicate inline math expressions are combined into a single file according to the MD5 hash function of its contents. A common scientific paper can easily include several thousand files, and in one case the MD5 hash cut the number of files in half and the rendering time by 30%.
3.1 Typesetting conventions

Font weight, family, and style are used to indicate various objects:

Table 1: Typesetting conventions

<table>
<thead>
<tr>
<th>Object</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>package</strong></td>
<td>\LaTeX\ package.</td>
</tr>
<tr>
<td><strong>program</strong></td>
<td>Program's executable name.</td>
</tr>
<tr>
<td><strong>option</strong></td>
<td>Program or package option.</td>
</tr>
<tr>
<td><strong>filename</strong></td>
<td>File name in the operating system.</td>
</tr>
<tr>
<td><strong>BRAND NAME</strong></td>
<td>Proper name for a program, operating system, etc.</td>
</tr>
<tr>
<td><strong>commands</strong></td>
<td>Commands to be entered by the user.</td>
</tr>
<tr>
<td><strong>code</strong></td>
<td>Program code.</td>
</tr>
<tr>
<td><strong>\macroname</strong></td>
<td>\LaTeX\ macro.</td>
</tr>
<tr>
<td><strong>environment</strong></td>
<td>\LaTeX\ environment.</td>
</tr>
<tr>
<td><strong>counter</strong></td>
<td>\LaTeX\ counter.</td>
</tr>
<tr>
<td><strong>boolean</strong></td>
<td>\LaTeX\ boolean.</td>
</tr>
<tr>
<td><strong>&lt;element&gt;</strong></td>
<td>HTML element.</td>
</tr>
<tr>
<td><strong>attribute</strong></td>
<td>HTML attribute.</td>
</tr>
<tr>
<td><strong>User Interface</strong></td>
<td>A user-interface item.</td>
</tr>
<tr>
<td><strong>ACRO</strong></td>
<td>Acronym.</td>
</tr>
</tbody>
</table>
### 3.2 Supported packages and features

Table 2 lists some of the various \LaTeX features and packages which may be used. Many are tested to work as-is, some are patches for the original packages, and some are emulations written for source-level compatibility. Many are nullified as being irrelevant to HTML output.

<table>
<thead>
<tr>
<th>Category</th>
<th>Status and supported features.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engines:</td>
<td>DVI \LaTeX, pdflatex, XeLaTeX, LuaLaTeX, upLATEX</td>
</tr>
<tr>
<td>Compiling:</td>
<td>latexmk, perltext, pythontex, make, etc.</td>
</tr>
<tr>
<td>Classes:</td>
<td>article, book, report, scrartcl, scrbook, scrireprt, memoir, CJK-related as listed below.</td>
</tr>
<tr>
<td>Koma-script:</td>
<td>scrextend, scrhack, scrlayer. Others as listed below.</td>
</tr>
<tr>
<td>Memoir:</td>
<td>memhfixc</td>
</tr>
<tr>
<td>Languages:</td>
<td>babel, polyglossia, cjkpunct, xeCJK.</td>
</tr>
<tr>
<td>Chinese:</td>
<td>CTEX, ctex, upzhkinsoku, xypinyin, zhlineskip, zhspacing.</td>
</tr>
<tr>
<td>Japanese:</td>
<td>upLATEX, LuaLaTeX-ja, gentombow, lltjext, plarray, plarydshln, plautopatch, plex, plexarray,</td>
</tr>
<tr>
<td></td>
<td>plextarydshln, plexcolorctl, plexdelarray, pxatbegshi, pxeverysli, pxftnright, pxgentombow,</td>
</tr>
<tr>
<td></td>
<td>pxjahyper, pxpdfpages, pxxpgfrcs, pxpgfmark, tasmac, zxjatype, bxjsarticle and related,</td>
</tr>
<tr>
<td></td>
<td>ltjsarticle and related, luatexja, luatexja-fontspec, ujarticle and related, utarticle and</td>
</tr>
<tr>
<td></td>
<td>related.</td>
</tr>
<tr>
<td>Korean:</td>
<td>kotex, luatexko, xetexko.</td>
</tr>
</tbody>
</table>
## lwarp Supported Functions — continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page layout:</td>
<td>2in1, 2up, a4, a4wide, a5comb, addlines, anysize, atbegshi, blowup, booklet, bophook, bounddvi, bxpapersize, canoniclayout, changelayout, changepage, chngpage, clrdblpg, continue, draftcopy, draftfigure, draftwatermark, ebook, everyshi, fancyhdr, fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system, gridset, layaureo, layout, layouts, leading, ltxgrid, nccfancyhdr, notespages, nowidow, pagegrid, pdfprivacy, pagesel, preview, rmpage, scrlayer-scrpage, scrpage2, textarea, threadcol, thumb, thumbs, titleps, tocenter, turnthepage, twoup, typearea, vmargin, watermark, widows-and-orphans, zwpagelayout. Tested to work as-is: underlin.</td>
</tr>
<tr>
<td>Sectioning:</td>
<td>Adds FileDepth for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the filenames. anonchap, bsheaders, fncychap, indentfirst, quotchap, section, sectionbreak, sectsty, titlesec. Tested to work as-is: secdot.</td>
</tr>
<tr>
<td>Table of contents, figures,</td>
<td>Supported, with hyperlinks. minitoc, multitoc, shorttoc, titletoc, tocbasic, tocbibind, tocdata, tocloft, tocstyle.</td>
</tr>
<tr>
<td>tables:</td>
<td></td>
</tr>
<tr>
<td>Title page:</td>
<td>\maketitle, titlepage, authblk, titling.</td>
</tr>
<tr>
<td>Front &amp; back matter:</td>
<td>abstract, appendix.</td>
</tr>
<tr>
<td>Indexing:</td>
<td>\makeindex and \xindy are supported, with hyperlinks. idxlayout, imakeidx, index, makeidx, repeatindex, splitidx. Tested to work as-is: hvindex.</td>
</tr>
<tr>
<td>Glossary:</td>
<td>gloss, glossaries and \xindy, nomencl.</td>
</tr>
<tr>
<td>Bibliography:</td>
<td>babelbib, backref, biblatex, bibunits, chapterbib, cite, hypernat, natbib, showtags. Tested to work as-is: notes2bib.</td>
</tr>
<tr>
<td>Cross-references:</td>
<td>bookmark, breakurl, cleveref, fancyref, hypdestopt, hyperref, perpage, prettyref, titleref, url, varioref, xr, \texttt{xr-hyper}, xurl.</td>
</tr>
<tr>
<td>Category</td>
<td>Status</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Margin notes:</td>
<td>marginal, marginfit, marginfix, scrlayer-notecolumn, versionotes.</td>
</tr>
<tr>
<td>Footnotes:</td>
<td>Adds FootnoteDepth to print footnotes at section breaks. bigfoot, dblnote, endheads, endnotes, fnbreak, fnpara, fnpos, footmisc, footnote, footnotebackref, footnoterange, footnpag, manyfoot, marginnote, pagenote, parnotes, pfnote, sidenote, tablefootnote. Tested to work as-is: fixfoot, nccfoots, sepfootnotes.</td>
</tr>
<tr>
<td>Math:</td>
<td>Converted to svg images with HTML &lt;alt&gt; tags containing the \LaTeX source for the math expression. MathJax supported as an alternative. amsmath: \AMS environments are supported. User-defined macros are available during conversion, due to native \LaTeX processing.</td>
</tr>
<tr>
<td>Theorems:</td>
<td>Native \LaTeX theorems, amsthm, ntheorem, theorem.</td>
</tr>
<tr>
<td>Additional math:</td>
<td>Math fonts via svg images, breqn, cases, mathtools, resizegather, autonum (ignored), xfakebold, xy. Tested to work as-is: amscd, bm, braket, delarray, guess, nicematrix, pb-diagram, tikz-cd, etc.</td>
</tr>
<tr>
<td>Display math with \displaymathother:</td>
<td>Complicated math objects in display math, such as tikz-cd, etc.</td>
</tr>
<tr>
<td>Units and fractions:</td>
<td>nicefrac, Slunits, siunitx, units, unitsdef, xfrac. Tested to work as-is: Slunits.</td>
</tr>
<tr>
<td>Floats:</td>
<td>Appear where declared. capt-of, caption, cutwin, dblnote, endfloat, fix2col, flafter, float, floatfit, floatrow, fitrace, ftcap, hypcap, keyfloat, morefloats, multicap, newfloat, nonfloat, placeins, rotfloat, stfloats, subcaption, subfig, subfigure, subfloat, topcapt, trivfloat, wrapfig.</td>
</tr>
<tr>
<td>Tabular:</td>
<td>tabular environment, array, arydshln, bigdelim, booktabs, colortbl, ctable, diagbox, longtable, ltablex, ltxtable, multirow, supertabular, tabularx, tabulary, threeparttable, threeparttablex, xltabular, xtab.</td>
</tr>
</tbody>
</table>
lwarp

lwarp Supported Functions — continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Graphics:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>graphics</strong></td>
<td></td>
</tr>
<tr>
<td><strong>graphicx</strong></td>
<td></td>
</tr>
<tr>
<td>\includegraphics supports width, height, origin, angle, and scale tags, and adds class. References to PDF files are changed to SVG, other image types are accepted as well. \rotatebox and \scalebox are supported as well as HTML can handle. Rotating is emulated but all objects are unrotated. picture, tikz, and xy are converted to an SVG image. asymptote, epsfig, epstopdf, figsize, fitbox, grffile, overpic, psfrag, psfragx, pst-eps, pstool, pstricks, rviewport. Tested to work as-is: curves, eepic, tikz-3dplot.</td>
<td></td>
</tr>
<tr>
<td><strong>xcolor:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Full package color names</strong>, any color models, and mixing. \textcolor, \colorbox, \fcolorbox. Enhanced for \html compatibility.</td>
<td></td>
</tr>
<tr>
<td><strong>Lists:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standard \LaTeX environments</strong>, enumerate, enumitem, eqlist, hang, listliketab, paralist.</td>
<td></td>
</tr>
<tr>
<td><strong>Environments:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standard \LaTeX environments.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>minipage, \parbox:</strong></td>
<td></td>
</tr>
<tr>
<td>Some HTML5-imposed limitations. Nested minipages are supported. eqparbox, pbox.</td>
<td></td>
</tr>
<tr>
<td><strong>Quotations:</strong></td>
<td></td>
</tr>
<tr>
<td>copyrightbox, csquotes, epigraph, quoting, verse.</td>
<td></td>
</tr>
<tr>
<td><strong>Verbatim:</strong></td>
<td></td>
</tr>
<tr>
<td>fancyvrb, moreverb, shortvrb, verbatim.</td>
<td></td>
</tr>
<tr>
<td><strong>Frames:</strong></td>
<td></td>
</tr>
<tr>
<td>boxedminipage2e, fancybox, framed, mdframed, niceframe, shadow, vertbars.</td>
<td></td>
</tr>
<tr>
<td><strong>Multi-columns:</strong></td>
<td></td>
</tr>
<tr>
<td>adjmulticol, multicol, multicolrule, vwcol.</td>
<td></td>
</tr>
<tr>
<td><strong>Margins:</strong></td>
<td></td>
</tr>
<tr>
<td>fullwidth, hanging, midpage.</td>
<td></td>
</tr>
<tr>
<td><strong>Line numbering:</strong></td>
<td></td>
</tr>
<tr>
<td>fnlineno, lineno.</td>
<td></td>
</tr>
<tr>
<td><strong>Direct formatting:</strong></td>
<td></td>
</tr>
<tr>
<td>\textit, \textsuperscript, \textbf, etc are supported. \bfseries, etc. are only supported in some cases. cancel, ellipsis, embrac, enparen, hyphenat, lettrine, lips, lua-check-hyphen, luacolor, magaz, pdfrender, realscripts, relsize, scalefont, soul, soulpos, soulutf8, textfit, thinspace, trimclip, truncate, ulem, umoline, underscores, uspace, xellipsis.</td>
<td></td>
</tr>
<tr>
<td><strong>Acronyms:</strong></td>
<td></td>
</tr>
<tr>
<td>acro, acronym.</td>
<td></td>
</tr>
<tr>
<td><strong>Ordinals:</strong></td>
<td></td>
</tr>
<tr>
<td>engord, fmtcount, nth.</td>
<td></td>
</tr>
</tbody>
</table>
**Iwarp Supported Functions — continued**

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text ligatures:</td>
<td>Ligatures for symbols are supported. Ligatures for f, q, t are intentionally turned off because many simpler browsers do not display them correctly. Modern full-featured browsers re-create these ligatures on-the-fly.</td>
</tr>
<tr>
<td>Horizontal space:</td>
<td>HTML output for thin-unbreakable, unbreakable, \enskip, \quad, \qquad, \hspace.</td>
</tr>
<tr>
<td>Rules:</td>
<td>\rule with width, height, raise, text color.</td>
</tr>
<tr>
<td>HTML reserved characters:</td>
<td>&amp;, \textless, and \textgreater are converted to HTML entities.</td>
</tr>
<tr>
<td>Fonts:</td>
<td>Used as-is. Appear in svg math expressions or embedded image environments.</td>
</tr>
<tr>
<td>Symbols:</td>
<td>Native \LaTeX diacriticals, academicons, bbding, chemgreek, dingbat, eurosym, fontawesome, fontawesome5, marvosym, metalogo, metalogox, pifont, textalpha, textcomp, textgreek, typicons, unicode. Tested to work as-is: euro, gensymb.</td>
</tr>
<tr>
<td>Files:</td>
<td>attachfile, attachfile2, hyperxmp, inputtrc, intopdf, pdfpages, pdfx, xmpincl.</td>
</tr>
<tr>
<td>Science and engineering:</td>
<td>algorithm2e, algorithmicx, ar, axodraw2, bitpattern, bytefield, chemfig, chemformula, chemgreek, chemmacros, chemnum, karnaugh-map, listings, mhchem, phfqt, register, struktex. Tested to work as-is: askmaps, blochsphere, bodegraph, bohr, circuitikz, elements, englcl, fast-diagram, hepnicenames, heppenames, karnaughmap, linop, pgfgraph, physics, simpler-wick, slashed, structmech, tikz-karnaugh, tikzcodeblocks.</td>
</tr>
<tr>
<td>Arts and humanities:</td>
<td>foreign, forest, musicography, nameauth, octave, schemata, semantic-markup, vowel, xpiano. Tested to work as-is: phonrule, piano, tikz-dependency.</td>
</tr>
<tr>
<td>Admonitions:</td>
<td>notes.</td>
</tr>
<tr>
<td>Editorial:</td>
<td>changebar, changes, easy-todo, ed, errata, fixme, fixmetodonotes, pdfcomment, pdfmarginpar, todo, todonotes, tram, xechangebar. Tested to work as-is: changelog, easyReview.</td>
</tr>
</tbody>
</table>
## Iwarp Supported Functions — continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility:</td>
<td>accsupp, axessibility.</td>
</tr>
<tr>
<td>Debug:</td>
<td>chkfloat, cmdtrack, dprogress, lua-visual-debug, refcheck, srcitx, srcitx, vpe, xbmks.</td>
</tr>
<tr>
<td>Working as-is:</td>
<td>Various utility, calculation, file, and text-only packages, such as calc, fileerr, somedefs, trace, xspace. Also, most math-only packages, including specialized typesetting for various fields of science and engineering.</td>
</tr>
</tbody>
</table>
4 Alternatives

Summarized below are several other ways to convert a \LaTeX{} or other document to HTML. Where an existing \LaTeX{} document is to be converted to HTML, \texttt{lwarp} may be a good choice. For new projects with a large number of documents, it may be worth investigating the alternatives before decided which path to take.

4.1 \texttt{internet} class

\texttt{internet} The closest to \texttt{lwarp} in design principle is the \texttt{internet} class by Andrew Stacey — an interesting project which directly produces several versions of markdown, and also HTML and EPUB. \url{https://github.com/loopspace/latex-to-internet}

4.2 \texttt{TeX4ht}

\texttt{TeX4ht} \url{http://tug.org/tex4ht/}

This system uses native \LaTeX{} processing to produce a \texttt{dvi} file containing special commands, and then uses additional post-processing for the HTML conversion by way of numerous configuration files. In some cases \texttt{lwarp} provides a better HTML conversion, and it supports a different set of packages. \texttt{TeX4ht} produces several other forms of output beyond HTML, including ODT and a direct path to EPUB, and is still being developed.

4.3 Translators

These systems use external programs to translate a subset of \LaTeX{} syntax into HTML. Search for each on CTAN (\url{http://ctan.org}).

\texttt{Hevea} \url{http://hevea.inria.fr/} (not on CTAN)

\texttt{TtH} \url{http://hutchinson.belmont.ma.us/tth/}

\texttt{GELLMU} \url{http://www.albany.edu/~hammond/gellmu/}

\texttt{LaTeXML} \url{http://dlmf.nist.gov/LaTeXML/}

\texttt{PlasTeX} \url{https://github.com/tiarno/plasTeX}

\texttt{LaTeX2HTML} \url{http://www.latex2html.org/}

\texttt{TeX2page} \url{http://ds26gte.github.io/tex2page/index.html}

Finally, \texttt{GladTeX} may used to directly insert \LaTeX{} math into HTML:

\texttt{GladTeX} \url{http://humenda.github.io/GladTeX/}
4.4 **AsciiDoc and Asciidoctor**

AsciiDoc is one of the most capable markup languages, providing enough features to produce the typical technical-writing document with cross-references, and it writes \LaTeX{} and HTML.

*Prog* Asciidoctor: http://asciidoc.org/ (More active.)

*Prog* Asciidoc: http://asciidoc.org/ (The original project.)

4.4.1 **Asciidoctor-\LaTeX{}**

The Asciidoctor-LaTeX project is developing additional \LaTeX{}-related features.

Asciidoctor-LaTeX:

- https://github.com/asciidoc/asciidoc-asciidoc-latex

4.5 **Pandoc**

A markup system which also reads and writes \LaTeX{} and HTML.

Pandoc: http://pandoc.org/

(Watch for improvements in cross-references to figures and tables.)

4.6 **Word processors**

It should be noted that the popular word processors have advanced through the years in their abilities to represent math with a \LaTeX{}-ish input syntax, unicode math fonts, and high-quality output, and also generate HTML with varying success. See recent developments in **Microsoft® Word®** and **LibreOffice™ Writer**.

4.7 **Commercial systems**

Likewise, several professional systems exist whose abilities have been advancing in the areas of typesetting, cross-referencing, and HTML generation. See **Adobe® FrameMaker®, Adobe® InDesign®,** and **MadCap Flare™**.

4.8 **Comparisons**

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to
require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, $\LaTeX$ spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that $\LaTeX$ is comparably easy to learn, while $\LaTeX$ provides many more advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

Text-based document-markup systems share some of the advantages of $\LaTeX$ vs. a typical word processor. Documents formats are stable. The documents themselves are portable, work well with revision control, do not crash or become corrupted, and are easily generated under program control. Formatting commands are visible, cross-referencing is automatic, and editing is responsive. Search/replace with regular expressions provides a powerful tool for the manipulation of both document contents and structure. Markup systems and some commercial systems allow printed output through a $\LaTeX$ back end, yielding high-quality results especially when the $\LaTeX$ template is adjusted, but they lose the ability to use $\LaTeX$ macros and other $\LaTeX$ source-document features.

The effort required to customize the output of each markup system varies. For print output, $\LaTeX$ configuration files are usually used. For HTML output, a css file will be available, but additional configuration may require editing some form of control file with a different syntax, such as XML. In the case of lwarp, css is used, and much HTML output is adjusted through the usual $\LaTeX$ optional macro parameters, but further customization may require patching $\LaTeX$ code.

The popular word processors and professional document systems each has a large base of after-market support including pre-designed styles and templates, and often include content-management systems for topic reuse.
5 Installation

Table 3 shows the tools which are used for the \LaTeX to HTML conversion. In most cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.
Table 3: Required software programs

Provided by your \LaTeX{} distribution:

From \TeX{}Live: \url{http://tug.org/texlive/}.

\LaTeX{}: \textit{pdflatex, xelatex, or lualatex}.

The \texttt{lwpark} package: This package.

The \texttt{lwparkmk} utility: Provided along with this package. This should be an operating-system executable in the same way that \texttt{pdflatex or latexmk} is. It is possible to have the \texttt{lwpark} package generate a local copy of \texttt{lwparkmk} called \texttt{lwparkmk.lua}. See table 4.

\texttt{luatex}: Used by the \texttt{lwparkmk} program to simplify and automate document generation.

\texttt{xindy}: The \texttt{xindy} program is used by \texttt{lwpark} to create indexes. On a MiKTeX system this may have to be acquired separately, but it is part of the regular installer as of mid 2015.

\texttt{latexmk}: Optionally used by \texttt{lwparkmk} to compile \LaTeX{} code. On a MiKTeX system, \texttt{Perl} may need to be installed first.

\texttt{pdffcrop}: Used to pull images out of the \LaTeX{} PDF.

\texttt{Poppler PDF utilities}:

\texttt{pdftotext}: Used to convert PDF to text.

\texttt{pdfseparate}: Used to pull images out of the \LaTeX{} PDF.

\texttt{pdftocairo}: Used to convert images to \texttt{svg}.

These might be provided by your operating-system package manager, and MiKTeX provides \texttt{miktex-poppler-bin-*} packages.

From \texttt{Poppler}: \url{poppler.freedesktop.org}.

For MacOS®, see \url{https://brew.sh/}, install \textit{Homebrew}, then

\begin{verbatim}
  Enter ⇒ brew install poppler
\end{verbatim}

For Windows, see \texttt{MiKTeX miktex-poppler-bin-*}, or:

\url{https://sourceforge.net/projects/poppler-win32/} and:

\url{http://blog.alivate.com.au/poppler-windows/}

\texttt{Perl}:

This may be provided by your operating-system package manager, and may be required for some of the \texttt{Poppler PDF} utilities.

\texttt{strawberryperl.com} (recommended), \url{perl.org}

\texttt{Automatically downloaded from the internet as required}:

\texttt{MathJax}: Optionally used to display math. From: \url{mathjax.org}
5.1 Installing the lwarp package

There are several ways to install lwarp. These are listed here with the preferred methods listed first:

**Pre-installed:** Try entering into a command line:

Enter ⇒ kpsewhich lwarp.sty

If a path to lwarp.sty is shown, then lwarp is already installed and you may skip to the next section.

**TeX Live:** If using a TeX Live distribution, try installing via tlmgr:

Enter ⇒ tlmgr install lwarp

**MiKTeX:**

1. For newer versions of MiKTeX, install or update lwarp using the MiKTeX Console program.
2. For older versions of MiKTeX, to install lwarp the first time, use the MiKTeX Package Manager (Admin). To update lwarp, use MiKTeX Update (Admin).
3. Either way, also update the package miktex-misc, which will install and update the lwarpmk executable.

**Operating-system package:** The operating-system package manager may already have lwarp, perhaps as part of a set of TeX-related packages.

**CTAN TDS archive:** lwarp may be downloaded from the Comprehensive TeX Archive:

2. Download the tds archive: lwarp.tds.zip
3. Find the TeX local directory:

   **TeX Live:**

   Enter ⇒ kpsewhich \-var\-value TEXMFLOCAL

   **MiKTeX:**

   In the Settings window, Roots tab, look for a local tds root.

   This should be something like:

   /usr/local/texlive/texmf-local/

   4. Unpack the archive in the tds local directory.
5. Renew the cache:

   Enter ⇒ mktexlsr

   or

   Enter ⇒ texhash

   Or, for Windows MiKTeX, start the program called MiKTeX Settings (Admin) and click on the button called Refresh FNDB.

**CTAN .dtx and .ins files:** Another form of TeX package is .dtx and .ins source files. These files are used to create the documentation and .sty files.
2. Download the zip archive lwarp.zip into your own lwarp directory.
4. Locate the contents lwarp.dtx and lwarp.ins
5. Create the .sty files:
   Enter ⇒ \texttt{pdflatex lwarp.ins}
6. Create the documentation:

   \begin{verbatim}
   pdflatex lwarp.dtx \ (several times)
   makeindex -s gglo.ist -o lwarp.gls lwarp.glo
   makeindex -s gind.ist lwarp.idx
   pdflatex lwarp.dtx \ (several times)
   \end{verbatim}
7. Copy the .sty files somewhere such as the \TeX{} Live local tree found in the previous \texttt{CTAN TDS} section, under the subdirectory:
   \texttt{<texlocal>/tex/latex/local/lwarp}
8. Copy \texttt{lwarp_baseline_marker.png} and \texttt{lwarp_baseline_marker.eps} to the same place as the .sty files.
9. Copy the documentation \texttt{lwarp.pdf} to a source directory in the local tree, such as:
   \texttt{<texlocal>/doc/local/lwarp}
10. Renew the cache:
    Enter ⇒ \texttt{mktexlsr}
    — or —
    Enter ⇒ \texttt{texhash}
    Or, for Windows MiK\TeX{}, start the program called \texttt{MiKTeX Settings (Admin)} and click on the button called \texttt{Refresh FNDB}.
11. See section 5.2.1 to generate your local copy of \texttt{lwarpmk}.
12. Once the local version of \texttt{lwarpmk.lua} is installed, it may be made available system-wide as per section 5.2.

**Project-local CTAN .dtx and .ins files:** The .dtx and .ins files may be downloaded to a project directory, then compiled right there, alongside the document source files. The resultant *.sty and *lwarpmk.lua files may be used as-is, so long as they are in the same directory as the document source. The files \texttt{lwarp_baseline_marker.png} and \texttt{lwarp_baseline_marker.eps} must also be copied as well. This approach is especially useful if you would like to temporarily test \texttt{lwarp} before deciding whether to permanently install it.

### 5.2 Installing the \texttt{lwarpmk} utility

(Note: If \texttt{lwarpmk} is not already installed, it is easiest to use a local copy instead of installing it system-wide. See section 5.2.1.)

After the \texttt{lwarp} package is installed, you may need to setup the \texttt{lwarpmk} utility:
1. At a command line, try executing `lwarpmk`. If the `lwarpmk` help message appears, then `lwarpmk` is already set up. If not, it is easiest to generate and use a local copy. See section 5.2.1.

2. For MiKTeX, try updating the `miktex-misc` package. This may install the `lwarpmk` executable for you.

   Otherwise, continue with the following:

3. Locate the file `lwarpmk.lua`, which should be in the `scripts` directory of the `tex` tree. On a TeX Live or MiKTeX system you may use

   ```
   Enter ⇒ kpsewhich lwarpmk.lua
   ```

   (If the file is not found, you may also generate a local copy and use it instead. See section 5.2.1.)

4. Create `lwarpmk`:

   **Unix:** Create a symbolic link and make it executable:

   ```
   (a) Locate the TeX Live binaries:
   Enter ⇒ kpsewhich --var-value TEXMFROOT
   ```

   This will be something like:

   ```
   /usr/local/texlive/<year>
   ```

   The binaries are then located in the `bin/<arch>` directory under the root:

   ```
   /usr/local/texlive/<year>/bin/<architecture>/
   ```

   In this directory you will find programs such as `pdflatex` and `makeindex`.

   (b) In the binaries directory, create a new symbolic link from the binaries directory to `lwarpmk.lua`:

   ```
   Enter ⇒ ln -s <pathtolwarpmk.lua> lwarpmk
   ```

   (c) Make the link executable:

   ```
   Enter ⇒ chmod 0755 lwarpmk
   ```

   **Windows TeX Live:** Create a new `lwarpmk.exe` file:

   ```
   (a) Locate the TeX Live binaries as shown above for Unix.
   (b) In the binaries directory, make a copy of `runscript.exe` and call it `lwarpmk.exe` This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.
   ```

   **Windows MiKTeX:** Create a new `lwarpmk.bat` file:

   ```
   (a) Locate the MiKTeX binaries. These will be in a directory such as:
   ```
   C:\Program Files\MiKTeX 2.9\miktex\bin\x64
   ```

   In this directory you will find programs such as `pdflatex.exe` and `makeindex.exe`.

   (b) Create a new file named `lwarpmk.bat` containing:

   ```
   texlua "C:\Program Files\MiKTeX 2.9\scripts\larp\larp.lua" %*
   ```

   This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.
5.2.1 Using a local copy of \texttt{lwarpmk}

It is also possible to use a local version of \texttt{lwarpmk}:

1. When compiling the tutorial in section 6, use the \texttt{lwarpmk} option for the \texttt{lwarp} package:
   \begin{verbatim}
   \usepackage[lwarpmk]{lwarpmk}
   \end{verbatim}

2. When the tutorial is compiled with \texttt{pdflatex}, the file \texttt{lwarpmk.lua} will be generated along with the other configuration files.

3. \texttt{lwarpmk.lua} may be used for this project:
   \begin{verbatim}
   Unix:  
   (a) Make \texttt{lwarpmk.lua} executable:
        Enter ⇒ \texttt{chmod 0755 lwarpmk.lua}
   (b) Compile documents with
        Enter ⇒ \texttt{./lwarpmk.lua html}
        Enter ⇒ \texttt{./lwarpmk.lua print}
        etc.
   (c) It may be useful to rename or link to a version without the .lua suffix.
   Windows:  
   Compile documents with either of the following, depending on which command shell is being used:
        Enter ⇒ \texttt{texlua lwarpmk.lua html}
        Enter ⇒ \texttt{texlua lwarpmk.lua print}
        etc.
   Or:
        Enter ⇒ \texttt{lwarpmk html}
        Enter ⇒ \texttt{lwarpmk print}
        etc.
   \end{verbatim}

5.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each programs' version is displayed, then that utility is already installed. See table 3 on page 88.

\begin{verbatim}
Enter ⇒ \texttt{lualatex --version}
Enter ⇒ \texttt{xindy --version}
Enter ⇒ \texttt{latexmk --version}
Enter ⇒ \texttt{perl --version}
Enter ⇒ \texttt{pdfcrop --version}
Enter ⇒ \texttt{pdftotext -v}
Enter ⇒ \texttt{pdfseparate --version}
Enter ⇒ \texttt{pdfcairo -v}
\end{verbatim}
To install `xindy`, `latexmk`, and `pdfcrop`:

The \TeX\ utilities `xindy`, `latexmk`, and `pdfcrop` may be installed in \TeX\ Live with `tlmgr`, installed by \MiKTeX, provided by your operating system's package manager, or downloaded from the CTAN archive:

- http://ctan.org/pkg/xindy
- http://ctan.org/pkg/latexmk
- http://ctan.org/pkg/pdfcrop

To install the Poppler utilities to a Unix/Linux system:

The tools from the Poppler project should be provided by your operating system's package manager.

To install the Poppler utilities to a Mac OS machine:

1. Install Homebrew from https://brew.sh/:

   ```shell
   /usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
   ```

2. Install the Poppler utilities:

   Enter ⇒ `brew install poppler`

To install the Perl utilities to a Windows machine:

If using \MiKTeX, install a miktex-poppler-bin-* package. Otherwise:

1. See table 3 on page 88.
2. Download and extract the Poppler utilities `pdftotext`, `pdfseparate`, and `pdfseparate` to a directory, such as Poppler.
3. In the Start window, type "Path" to search for results related to Path. Or, open the control panel and search for "Path".
4. Choose Edit the system environment variables in the control panel.
5. Choose the Environment Variables button.
6. Choose the Path variable, then the Edit button.
7. Choose the New button to make an additional entry.
8. Enter the `bin` directory of the Poppler utilities, such as:

   ```shell
   C:\Users\<myname>\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin
   ```

   Be sure to include `\bin`.

9. Click Ok when done.

To install Perl to a Windows machine:

1. Download and install a version of Perl, such as Strawbery Perl, to a directory without a space in its name, such as C:\Strawberry.
2. Edit the Path as seen above for the Poppler utilities.
3. Enter the bin directory of the perl utility, such as:

   ```shell
   C:\Strawberry\perl\bin
   ```

   Be sure to include `\bin`.

4. Click Ok when done.

Any utilities installed by hand must be added to the PATH.
6 Tutorial

This section shows an example of how to create an lwarp document.

See the General Index for “how-to”, and the Troubleshooting Index if something doesn't work. The Index of Objects contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A Troubleshooting section is also available.

6.1 Starting a new project

1. Create a new project directory called tutorial.

2. Inside the tutorial directory, create a new file called tutorial.tex. This may be done several ways:

   Copy from the documentation PDF:
   A listing is in fig. 1, which may be copied/pasted from the figure directly into your own editor, depending on the quality of the pdf viewer and editor, or:

   Copy from the lwarp documentation directory:
   Enter ⇒ texdoc -l lwarp_tutorial.txt
   This should be in the doc/latex/lwarp/ directory along with this pdf documentation. Copy lwarp_tutorial.txt directly into your tutorial directory, renamed as tutorial.tex.

   Note: .txt suffix!

   Bad formatting!

   When using Windows, use an editor other than Notepad, since Notepad does not accept the end-of-line from a UNIX text file.

3. Compile the project:
   Enter ⇒ pdflatex tutorial.tex
   (several times)

   (xelatex or lualatex may be used as well. lwarp also supports dvi latex for use with .eps images.)

4. View the resulting tutorial.pdf with a PDF viewer.

A number of new files are created when tutorial.tex is compiled, as shown in table 4. These files are created by the lwarp package.

(Two of the new files are configuration files for the helper program lwarpmk. Whenever a print version of the document is created, the configuration files for lwarpmk are updated to record the operating system, \LaTeXX engine (latex, pdflatex, xelatex, or lualatex), the filenames of the source code and html output, and whether the additional helper program latexmk will be used to compile the document.)
% Save this as tutorial.tex for the lwarp package tutorial.
\documentclass{book}
\usepackage{iftex}
% --- LOAD FONT SELECTION AND ENCODING BEFORE LOADING LWARP ---
\ifPDFTeX
\usepackage{lmodern} % pdflatex or dvi latex
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\else
\usepackage{fontspec} % XeLaTeX or LuaLaTeX
\fi
% --- LWARP IS LOADED NEXT ---
\usepackage
% HomeHTMLFilename=index, % Filename of the homepage.
% HTMLFilename=(node-), % Filename prefix of other pages.
% IndexLanguage=english, % Language for xindy index, glossary.
% latexmk, % Use latexmk to compile.
% OSWindows, % Force Windows. (Usually automatic.)
% mathjax, % Use MathJax to display math.
\{lwarp\}
% \boolfalse(FileSectionNames) % If false, numbers the files.
% --- LOAD PDFTEX MATH FONTS HERE ---
% --- OTHER PACKAGES ARE LOADED AFTER LWARP ---
\usepackage\{makeidx\} \makeindex
\usepackage\{xcolor\} % (Demonstration purposes only.)
\usepackage\{hyperref,cleveref\} % LOAD THESE LAST!
% --- LATEX AND HTML CUSTOMIZATION ---
\title{The Lwarp Tutorial}
\author{Some Author}
\setcounter{tocdepth}{2} % Include subsections in the \TOC.
\setcounter{secnumdepth}{2} % Number down to subsections.
\setcounter{FileDepth}{1} % Split HTML\ files at sections
\booltrue{CombineHigherDepths} % Combine parts/chapters/sections
\setcounter{SideTOCDepth}{1} % Include subsections in the side\TOC
\HTMLTitle{Webpage Title} %Overrides \title for the web page.
\HTMLAuthor{Some Author} % Sets the HTML meta author tag.
\HTMLLanguage{en-US} % Sets the HTML meta language.
\HTMLDescription{A description.}% Sets the HTML meta description.
\HTMLFirstPageTop{\textbf{Name and }\fbox{HOMEPAGE LOGO}}
\HTMLPageTop{\fbox{LOGO}}
\HTMLPageBottom{Contact Information and Copyright}
\CSSFilename{lwp_sagebrush.css}
\begin{document}
\maketitle % Or titlepage/titlingpage environment.

% An article abstract would go here.
\tableofcontents % MUST BE BEFORE THE FIRST SECTION BREAK!
\listoffigures

\chapter{First chapter}
\section{A section}
This is some text which is indexed.\index{Some text.}
\subsection{A subsection}
See \cref{fig:withtext}.
\begin{figure}
\begin{center}
\fbox{\textcolor{blue!50!green}{Text in a figure.}}
\caption{A figure with text\label{fig:withtext}}
\end{center}
\end{figure}
\section{Some math}
Inline math: $r = r_0 + vt - \frac{1}{2}at^2$
followed by display math:
\begin{equation}
a^2 + b^2 = c^2
\end{equation}

\begin{warpprint} % For print output ...
\cleardoublepage % ... a common method to place index entry into TOC.
\phantomsection
\addcontentsline{toc}{chapter}\indexname
\end{warpprint}
\ForceHTMLPage % HTML index will be on its own page.
\ForceHTMLTOC % HTML index will have its own toc entry.
\printindex

\end{document}
Table 4: Configuration files created by print version

**tutorial.pdf**: The **PDF** output from **LATEX**. The print version of the document.

**tutorial_html.tex**: A small .tex file used to create a parallel **HTML** version of the document, which co-exists with usual the **PDF** version, and which will have its own auxiliary files. In this way, both **PDF** and **HTML** documents may co-exist side-by-side.

**Auxiliary files**: The usual **LATEX** files .aux, .log, .out, .toc, .lof, .idx. When an **HTML** version of the document is created, _html versions of the auxiliary files will also be generated.

**lwarpmk.conf**: A configuration file for **lwarpmk**, which is used to automate the compilation of **PDF** or **HTML** versions of the document.

**tutorial.lwarpmkconf**: Another configuration file used by **lwarpmk**, which is only useful if you wish to have several projects residing in the same directory.

**.css files**: **lwarp.css**, **lwarp_formal.css**, **lwarp_sagebrush.css** These files are standard for **lwarp**, and are not meant to be modified by the user.

**sample_project.css**: An example of a user-customized css file, which may be used for project-specific changes to the **lwarp** defaults.

**lwarp.ist**: Used by **lwarp** while creating an index using **makeindex**. This file should not be modified by the user. A custom file may be used instead, if necessary.

**lwarp.xdy**: Used by **lwarp** while creating an index using **xindy**. This file should not be modified by the user. A custom file may be used instead, if necessary.

**lwarp_one_limage.txt**: For **WINDOWS** only. Used to process svg images in the background. Copied to **lwarp_one_limage.cmd** when images are generated.

**lwarp_mathjax.txt**: Inserted into the **HTML** files when **MATHJAX** is used to display math. This file should not be modified by the user.

**comment.cut**: A temporary file used by **lwarp** to conditionally process blocks of text. This file may be ignored.

When the **lwarpmk** option is given to the **lwarp** package:

**lwarpmk.lua**: A local copy of the **lwarpmk** utility.

  On **UNIX**-related operating systems this file must be made executable:

  ```
  chmod u+x lwarpmk.lua
  ```

  This may be useful to have to archive with a project for future use.
6.2 Compiling the print version with \texttt{lwpmk}

The \texttt{lwpmk} utility program is used to compile either the printed or the HTML version of the document.

\texttt{lwpmk print} is used to recompile a printed version of the document.

1. Re-compile the print version:

   Enter ⇒ \texttt{lwpmk print}

   \texttt{lwpmk} prints an introduction then checks to see if the document must be recompiled. If it seems that the files are up-to-date, then \texttt{lwpmk} informs you of that fact and then exits.

2. Make a small change in the original document, such as adding a space character.

3. Recompile again.

   Enter ⇒ \texttt{lwpmk print}

   The document is recompiled when a change is seen in the source. Several compilations may be necessary to resolve cross-references.

4. Force a recompile to occur.

   Enter ⇒ \texttt{lwpmk again}
   Enter ⇒ \texttt{lwpmk print}

   \texttt{lwpmk again} updates the date code for the file, triggering a recompile the next time the document is made.\footnote{Although, when using the utility \texttt{latexmk} (introduced later), the changed date is ignored and an actual change in contents must occur to cause a recompile.}

5. Process the index.\footnote{The command \texttt{lwpmk printglossary} is also available to process a glossary produced with the \texttt{glossaries} package. See section 9.6.11.} \footnote{Also see section 9.6.14 for index options.}

   Enter ⇒ \texttt{lwpmk printindex}

6. Recompile again to include the index.

   Enter ⇒ \texttt{lwpmk print}

7. To force a single recompile when needed, even if no changes were detected:

   Enter ⇒ \texttt{lwpmk print!}

Note that the HTML customization commands are ignored while making the print version.
6.3 Compiling the HTML version with \texttt{lwpark}

\texttt{lwpark html} is used to recompile an HTML version of the document.

1. Compile the HTML version:

   Enter $\Rightarrow$ \texttt{lwpark html}

   (a) \texttt{lwpark} uses \LaTeX{} to process \texttt{tutorial.html.tex} to create \texttt{tutorial.html.pdf}.

   (b) \texttt{pdftotext} is then used to convert to the file \texttt{tutorial.html.html}. This file is a plain-text file containing HTML tags and content for the entire document.

   (c) \texttt{lwpark} manually splits \texttt{tutorial.html.html} into individual HTML files according to the HTML settings. For this tutorial, the result is \texttt{tutorial.html} (the home page), along with \texttt{First-chapter.html}, \texttt{Some-math.html}, and the document's index in \texttt{_Index.html}.

2. View the HTML page in a web browser.

   Open the file \texttt{tutorial.html} in a web browser.

   Note that math is still displayed as its alt tag, which is the plain-text \LaTeX{} source, until the images of the math expressions have been generated. Math may be displayed as svg images or by a \texttt{MATHJAX} script, as seen in sections 6.4 and 6.5.

3. Force a recompile:

   Enter $\Rightarrow$ \texttt{lwpark again}

   Enter $\Rightarrow$ \texttt{lwpark html}

   Enter $\Rightarrow$ \texttt{lwpark print}

4. Process the HTML index and recompile:

   Enter $\Rightarrow$ \texttt{lwpark htmlindex}

   Enter $\Rightarrow$ \texttt{lwpark html}

   \texttt{_Index.html} is updated for the new \LaTeX{} index.

5. Reload the web page to see the added index.

6. To force a single recompile when needed, even if no changes were detected:

   Enter $\Rightarrow$ \texttt{lwpark html}

---

\footnote{\texttt{First-chapter.html} also contains the first section, even though the second section is its own HTML page. This behavior is controlled by the boolean CombineHigherDepths.}

\footnote{\texttt{Index.html} is commonly used as a homepage, so the document index is in \texttt{_Index.html}.}

\footnote{The command \texttt{lwpark htmlindex} is also available to process a glossary produced with the \texttt{glossaries} package. See section 9.6.11.}

\footnote{Also see section 9.6.14 for index options.}
6.4 Generating the svg images

**math as svg images** By default lwarp represents math as svg images, with the \LaTeX source included in alt attributes. In this way, the math is displayed as it was drawn by \LaTeX, and the \LaTeX source may be copied and pasted into other documents.

**picture and Tikz** lwarp uses the same mechanism for picture and Tikz environments.

1. Create the svg images:
   
   Enter ⇒ `lwarpmk images`
   Enter ⇒ `lwarpmk html`

2. Move to the tutorial’s HTML math page and reload the document in the browser.

3. The math images are displayed using the same font and formatting as the printed version.

4. Copy/paste a math expression into a text editor to see the \LaTeX source.

⚠️ **adding/removing** When a math expression, picture, or Tikz environment is added or removed, the svg images must be re-created by entering `lwarpmk images` to maintain the proper image-file associations. Inline svg math may be hashed and thus not need to be recreated, but display math and objects such as Tikz may move to new image numbers when the document is changed.

⚠️ **recompile first** Before attempting to create the svg image files, lwarp verifies that the HTML version of the document exists and has correct internal image references. If it is necessary to recompile the document’s HTML version one more time, lwarp usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the \LaTeX recompile warnings.

⚠️ **HTML instead of images** If HTML appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

⚠️ **page counter** Incorrect svg images will also occur if the document changes the page counter:

```
\setcounter{page}{<value>}
```

The page counter must *not* be adjusted by the user.

Expressing math as svg images has the advantage of representing the math exactly as \LaTeX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, lwarp uses an MD5 hash on its \LaTeX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as picture and Tikz require one image file each. For a document with a large amount of math, see section 6.5 to use MathJax instead.

⚠️ **Lots of files!** This becomes important when dealing with a document containing thousands of images.
6.5 Using MathJax for math

**Math with MathJax**  Math may also be represented using the MathJax JavaScript project.

1. In the tutorial’s source code, uncomment the mathjax package option for lwarp:
   
   ```latex
   mathjax, % Use MathJax to display math.
   ```

2. Recompile
   
   Enter ⇒ `lwp:mk html`

3. Reload the math page.

**MathJax requirements**  MathJax requires web access unless a local copy of MathJax is available, and it also requires that JavaScript is enabled for the web page. The math is rendered by MathJax. Right-click on math to see several options for rendering, and for copying the \LaTeX source.

While using MathJax has many advantages, it may not be able to represent complex expressions or spacing adjustments as well as \LaTeX, and it may not support some math-related packages.
6.6 Changing the css style

For a formal css style, add to the preamble:

\usepackage{l warp}
\ ...
\CSSFile{l warp_formal.css}
\ ...
\begin{document}

For a modern css style, l warp_sagebrush.css is also provided:

\CSSFile{l warp_sagebrush.css}

See section 8.5 for more information about modifying the css styling of the document.

6.7 Customizing the HTML output

A number of settings may be made to control the HTML output, including filename generation, automatic compilation, math output, document splitting, meta data, and page headers and footers.

See section 8.4 for more information.
6.8 Using \textit{latexmk}

\textit{latexmk} is a \LaTeX{} utility used to monitor changes in source files and recompile as needed.

1. In the tutorial’s source code uncomment the \texttt{latexmk} option for the \texttt{lwp} package:

   \begin{verbatim}
   latexmk, \% Use latexmk to compile.
   \end{verbatim}

2. Recompile the printed version of the document.

   \texttt{latexmk} sets its own configuration files (\texttt{lwpmk.conf} and \texttt{tutorial.lwpmkconf}) whenever the printed version of the document is compiled. These configuration files remember that \texttt{lwp} should use \texttt{latexmk} to compile the document.

3. Recompile the document.

   \begin{verbatim}
   latexmk print
   \end{verbatim}

   \texttt{lwp} updates its own configuration files (\texttt{lwpmk.conf} and \texttt{tutorial.lwpmkconf}) whenever the printed version of the document is compiled. These configuration files remember that \texttt{lwp} should use \texttt{latexmk} to compile the document.

Changes are detected by comparing checksums rather than modification times, so \texttt{lwp} again will not trigger a recompile, but \texttt{latexmk} has a much better awareness of changes than the \texttt{lwp} utility does and it is likely to correctly know when to recompile. A recompile may be forced by making a small change to the source, and a single recompile may be forced with:

\begin{verbatim}
latexmk print1
\end{verbatim}

and/or

\begin{verbatim}
latexmk html1
\end{verbatim}
6.9 Using X\LaTeX or Lua\LaTeX

\LaTeX may be used instead of \LaTeX.

1. Remove the auxiliary files for the project:
   \texttt{\textasciitilde lwp\textasciitilde mk cleanall}
2. Use \texttt{xelatex} or \texttt{lualatex} to compile the printed version a single time.
   \texttt{\textasciitilde xelatex tutorial.tex}
   \textit{-or-}
   \texttt{\textasciitilde lualatex tutorial.tex}
   When the compile occurs, the configuration files for \texttt{lwp\textasciitilde mk} are modified to remember which \TeX engine was used. X\LaTeX or Lua\LaTeX will be used for future runs of \texttt{lwp\textasciitilde mk}.

3. To recompile the document:
   \texttt{\textasciitilde lwp\textasciitilde mk print}
   \textit{-and-}
   \texttt{\textasciitilde lwp\textasciitilde mk html}
4. Also remember to update the indexes and recompile again:
   \texttt{\textasciitilde lwp\textasciitilde mk htmlindex}
   \texttt{\textasciitilde lwp\textasciitilde mk html}
   \texttt{\textasciitilde lwp\textasciitilde mk printindex}
   \texttt{\textasciitilde lwp\textasciitilde mk print}

6.10 Using DVI \LaTeX

Traditional DVI LaTeX may also be used along with .eps image files. An svg version of each image must also be provided. \texttt{lwp\textasciitilde mk} may be used to convert image formats.

To convert eps files to PDF:
   \texttt{\textasciitilde lwp\textasciitilde mk epstopdf *.eps \ (or a list of files)}
To convert PDF files to SVG:
   \texttt{\textasciitilde lwp\textasciitilde mk pdftosvg *.pdf \ (or a list of files)}

\textbf{bitmapped fonts} \ See section \texttt{8.2} regarding font selection to avoid the use of bitmapped fonts.
6.11  Using a glossary

lwp supports the gloss and glossaries packages, although this tutorial does not supply an example.

6.11.1  gloss package

See section 9.6.10.

6.11.2  glossaries package

To process the glossary for the print version:

   Enter ⇒  lwpmk printglossary

⚠️ (If makeglossaries is not found, see section 9.6.11.)

To process the glossary for the HTML version:

   Enter ⇒  lwpmk htmlglossary

In each case, the document will have to be recompiled afterwards:

   Enter ⇒  lwpmk html1
   Enter ⇒  lwpmk html
   Enter ⇒  lwpmk print1
   Enter ⇒  lwpmk print

See section 9.6.11 to set options for processing glossaries.
6.12 Cleaning auxiliary files

To remove the auxiliary files `.aux`, `.toc`, `.lof`, `.lot`, `.idx`, `.ind`, `.log`, and `.gl*`:

`Enter ⇒ lwarpmk clean`

6.13 Cleaning auxiliary and output files

To remove the auxiliary files, and also remove the `.pdf` and `.html` files:

`Enter ⇒ lwarpmk cleanall`

6.14 Cleaning the images from the `<project>-images` directory

The `<project>-images` directory contains `svg` images automatically generated for inline and display math, `tikz`, etc. To remove all the images from the `lateximages` directory:

`Enter ⇒ lwarpmk cleanimages`

6.15 Converting PDF or EPS images to SVG

`HTML` cannot display `PDF` or `EPS` images, so any external `PDF` graphics images must be converted to `SVG` format. `pdftocairo` and `epstopdf` may be used one image at a time, but `lwarpmk` also provides a way to convert `PDF` or `EPS` images in bulk:

`Enter ⇒ lwarpmk epstopdf *.eps` (or a list of files)

`Enter ⇒ lwarpmk pdftosvg *.pdf` (or a list of files)

Be sure to always provide `SVG` files for `HTML` output.

6.16 Creating HTML from an incomplete compile

During testing it may be useful to finish the `HTML` conversion even when the document had errors and did not compile successfully. To attempt an `HTML` conversion of an incomplete document:

`Enter ⇒ lwarpmk pdftohtml [-p project]`

6.17 Processing multiple projects in the same directory

It is possible to have several projects in the same directory. `lwarpmk` has an optional parameter which is the document to compile.
To create each project:

Enter ⇒ \texttt{pdflatex project\_a}

Enter ⇒ \texttt{pdflatex project\_b}

Each project is given its own configuration file:

\texttt{project\_a.l\textbackslash{}warpmkconf, project\_b.l\textbackslash{}warpmkconf}

To compile each project with \texttt{l\textbackslash{}warpmk}:

Enter ⇒ \texttt{l\textbackslash{}warpmk print -p project\_a}

Enter ⇒ \texttt{l\textbackslash{}warpmk html -p project\_b}

### 6.18 Using the \texttt{make} utility

\texttt{l\textbackslash{}warpmk} has an action which may be useful for integration with the common \texttt{make} utility:

\texttt{l\textbackslash{}warpmk pdftohtml \[-p project\]}

\texttt{make} may be used to compile the code to PDF with HTML tags (\texttt{project\_html.pdf}), then \texttt{l\textbackslash{}warpmk} may be used to convert each target to HTML files.
7 Converting an existing document

To convert an existing document for use with \texttt{l\_warp}: 

1. Arrange the document in the following order:
   (a) Declare the \texttt{documentclass}.
   (b) Load text fonts.
   (c) Load \texttt{inputenc} or \texttt{inputenx}, \texttt{fontenc}, and/or \texttt{fontspec}.
   (d) Load \texttt{l\_warp}.
   (e) Load remaining packages.

2. Modify the document:
   (a) If using named \texttt{/H.sc/T.sc/M.sc/L.sc} files, in section names use paren math \(x+y\) instead of dollar math $x+y$. (Dollar math works, but appears in the filename.) Or, use a short name for the \texttt{toc} entry without the math, or use \textbackslash texorpdfstring:
   \begin{verbatim}
   \section{A name with math \textbackslash texorpdfstring{$1+2=3$}{text description}}
   \end{verbatim}
   (b) Avoid using the \texttt{includegraphics scale} option. Change:
   \begin{verbatim}
   \textbackslash includegraphics[\scale=<xx>\{\ldots\}]
   \end{verbatim}
   to:
   \begin{verbatim}
   \textbackslash includegraphics[width=<yy>\{\textwidth\}{\ldots\}]
   \end{verbatim}
   (c) Possible changes to tabular environments include: * columns, \texttt{multirow}, \texttt{longtable}, \texttt{supertabular}, \texttt{xtab}, \texttt{bigdelim}. See section 9.10.1.
   (d) Possible option clashes with \texttt{memoir}. See section 9.13.
   (e) If using indexes, see section 9.6.14.
   (f) If using many indexes, glossaries, .aux files, etc., see section 9.6.14 regarding \texttt{morewrites}. If \texttt{morewrites} is already used, be sure to add the setup with \texttt{allocate=10}.
   (g) Other changes as per \texttt{Special cases and limitations}, section 9.

3. Convert any \texttt{PDF} images to \texttt{SVG}. See section 9.8.

4. Manually compile the print version with \texttt{latex}, \texttt{pdflatex}, \texttt{lualatex}, or \texttt{xelatex}.

5. \texttt{l\_warp\_print} to finish the print version.

6. \texttt{l\_warp\_html} to create the \texttt{HTML} version.

7. \texttt{l\_warp\_images} to create the \texttt{SVG} images of any \texttt{SVG} math, \texttt{lateximage}, \texttt{Tikz}, etc.

See the \texttt{General Index} for "how-to", and the \texttt{Troubleshooting Index} if something doesn't work. The \texttt{Index of Objects} contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A \texttt{Troubleshooting} section is also available.
8 Additional details

8.1 Shell escape

Some documents require the use of an external program, which is allowed when using the --shell-escape command-line option. When the document is first compiled manually, and also whenever the print version is recompiled, lwarp detects and remembers whether shell escape is enabled. If so, it will also be enabled when the document is recompiled with lwarpmk.

8.2 Font and utf-8 support

⚠️ type 3 bitmapped fonts ⚠️

lwarp uses pdftotext to convert PDF output into UTF-8-encoded text. This process requires that UTF-8 information be embedded in the PDF file, which may prevent the use of older “type 3” bit-mapped fonts, and of older packages such as ae. The lwarp option pdftotextEnc may be useful in some situations. See section 8.3.

⚠️ vector fonts ⚠️

While using dvi latex or PDF pdflatex, if no font-related package is specified then the default Computer Modern font is used, which may be a “type 3” bit-mapped font which may not convert well to plain text. A “type 1” vector font is required.

To use the updated cm-super’s type 1 fonts instead of Computer Modern, install the cm-super font package.

To use Latin Modern instead, add

```latex
\usepackage{\lmodern}
```

to the preamble.

⚠️ Pkg dejavu ⚠️

Another useful option is the Deja Vu series of fonts, which have an increased coverage of language and glyphs:

```latex
\usepackage{dejavu}
```

latex, pdflatex, T1, UTF8

While using dvi latex or PDF pdflatex, lwarp automatically loads fontenc with T1 encoding. fontenc may be loaded with an additional encoding after lwarp. inputenc is automatically loaded with UTF8 encoding if it has not yet been loaded, but may also be specified with another encoding such as latin1. See the next section regarding index encoding.

⚠️ xelatex and lualatex ⚠️

X\LaTeX{} and Lua\LaTeX{} users must use the fontspec package. Do NOT use fontenc!

Place fontspec or fontenc, xunicode, and other font and UTF-8 related commands after \documentclass command and before \usepackage{lwarp}.

⚠️ package conflicts ⚠️

In some cases, a package conflict may require that a font package be loaded after lwarp, which should work as well:

1. documentclass{article/book/report} comes first, followed by any of:
2. Font and UTF-8 related commands:

   - For \texttt{Xe\LaTeX} or \texttt{Lua\LaTeX}:
     \fontspec and font choices
     \texttt{lwp} sets the following to turn off \TeX\ ligatures during the generation of HTML tags, and turn off common ligatures in regular text, since older browsers may not display them correctly and newer browsers can automatically re-create them.

     \begin{verbatim}
     \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,\TeX}}
     \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,\TeX}}
     \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
     \end{verbatim}

     - For \texttt{pdflatex}:

     \begin{enumerate}
     \item \texttt{\usepackage{\texttt{lmodern}}, or other font-related packages}
     \item \texttt{\usepackage[T1]{fontenc}}
     \item \texttt{\usepackage[utf8]{inputenc}, or \texttt{latin1}, etc. Or use \texttt{inputenx}}.
     \item \texttt{\usepackage[newunicodechar] along with related definitions.}
     \item \texttt{To assist with the PDF-HTML conversion:}
       \begin{enumerate}
       \item \texttt{\input {\texttt{glyphyunicode.tex}}}
       \item \texttt{\input {\texttt{ glyphyunicode-cmr.tex}} from the pdfx package}
       \item \texttt{\pdfgentounicode=1}
       \end{enumerate}
     \item \texttt{Another option to assist with the PDF-HTML conversion:}
       \begin{enumerate}
       \item \texttt{\usepackage{cmap}}
       \end{enumerate}
     \end{enumerate}

3. \texttt{\usepackage{lwp} (section 8.3)} goes after any of the above, followed by:

4. \texttt{\usepackage{newtxmath}} or other math-related font packages. Many of these load \texttt{amsmath}, which must be loaded after \texttt{lwp}, so they must also be loaded after \texttt{lwp}.

5. \texttt{\setmonofont{\texttt{TeX Gyre Cursor}}} or similar may be required if using \texttt{Xe\LaTeX} or \texttt{Lua\LaTeX} and \fontspec along with traditional font packages such as \texttt{txfonts}, \texttt{newtxtex}, etc. This is required to turn off the monospaced font's ligatures with \fontspec after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters.

6. ... the rest of the preamble and the main document.

\textbf{\fontspec with traditional font packages}

\textbf{\texttt{UTF-8 locale}} In some cases, an external program may require a \texttt{UTF-8 “locale”}. See section 10.8.

\textbf{8.2.1 Indexes, glossaries, and encoding}

\texttt{lwp} uses the \texttt{xindy} program to processes indexes. \texttt{xelatex} and \texttt{lualatex} use \texttt{xindy} and \texttt{pdflatex} uses \texttt{texindy}.

The \texttt{lwp} option \texttt{xindyLanguage} may be used to set the language option for \texttt{xindy}, and the \texttt{xindyCodepage} option may be used to set the codepage option for \texttt{xindy}. These are used for index generation.
8.3 lwarp package loading and options

lwarp supports book, report, and article classes, as well as the equivalent Koma-script classes and memoir, and various CJK-related classes and packages.

Load the lwarp package immediately after the font and UTF-8 setup commands.

Package options may be set while loading lwarp, or later with

\lwarpsetup{(key=value, . . . )}

lwarp package options are as follows:

- **mathsvg, mathjax**: For math display, select mathsvg (default) or mathjax. For more information about the math options, see section 9.7.
- **latexmk**: Tells lwarp to use latexmk to recompile the document several times if necessary. Otherwise, lwarp attempts to determine for itself whether to recompile. See section 8.4.
- **dvips**: Tells lwarp to use dvips and ps2pdf to convert DVI output to PDF.
- **dvipdfm**: Tells lwarp to use dvipdfm to convert DVI output to PDF.
- **dvipdfmx**: Tells lwarp to use dvipdfmx to convert DVI output to PDF.
- **HomeHTMLFilename**: See section 8.4.
- **HTMLFilename**: See section 8.4.
- **PrintLatexCmd**: Sets the shell commands executed by lwarp to use latex when generating indexes with lwarp printindex, lwarp htmlindex, or latexmk. If neither makeindex nor xindy is used, makeindex is assumed.
- **xindy**: Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use xindy when generating indexes with lwarp printindex, lwarp htmlindex, or latexmk.
- **makeindexStyle**: If you wish to use a custom .ist file for index generation, see section 29.
- **xindyStyle**: If you wish to use a custom .xdy file for index generation, see section 29.
- **xindyLanguage**: If using an index or glossary, see section 29.
- **xindyCodepage**: If using an index, see section 29.
- **PrintIndexCmd**: Sets the shell commands executed by lwarp printindex. If not specified, will be set by the selection of makeindex or xindy. May be used to specify the creation of multiple indexes. See section 9.6.14.
**Table 5: lwarp package options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mathsvg</td>
<td>Show math using svg images.</td>
</tr>
<tr>
<td>mathjax</td>
<td>Show math using MATHJAX.</td>
</tr>
<tr>
<td>latexmk</td>
<td>Use latexmk for compiling documents.</td>
</tr>
<tr>
<td>dvips</td>
<td>Use dvips and ps2pdf to convert DVI documents.</td>
</tr>
<tr>
<td>dvipdfm</td>
<td>Use dvipdfm to convert DVI documents.</td>
</tr>
<tr>
<td>dvipdfmx</td>
<td>Use dvipdfmx to convert DVI documents.</td>
</tr>
<tr>
<td>HomeHTMLFilename</td>
<td>The filename of the home page.</td>
</tr>
<tr>
<td>HTMLFilename</td>
<td>A prefix for the filenames of the remaining web pages.</td>
</tr>
<tr>
<td>PrintLatexCmd</td>
<td>The shell commands for lwarpmk print.</td>
</tr>
<tr>
<td>HTMLLatexCmd</td>
<td>The shell commands for lwarpmk html.</td>
</tr>
</tbody>
</table>

For indexing (section 9.6.14) and glossaries (section 9.6.11):

- makeindex: Use makeindex to generate indices.
- xindy: Use xindy to generate indices.
- makeindexStyle: Set a custom style for makeindex.
- xindyStyle: Set a custom style for xindy.
- xindyLanguage: The xindy language option used for index generation.
- xindyCodepage: The xindy codepage option used for index generation.
- PrintIndexCmd: Shell commands executed by lwarpmk printindex.
- HTMLIndexCmd: Shell commands executed by lwarpmk htmlindex.
- LatexmkIndexCmd: Shell commands executed by latexmk.
- GlossaryCmd: Shell command executed by lwarpmk printglossary and lwarpmk htmlglossary.

Seldom necessary:

- OSWindows: Force compatibility with MS-WINDOWS.
- pdftotextEnc: Set the encoding for pdftotext.
- lwarpmk: Generate a local copy of lwarpmk.lua.

Used internally by lwarp:

- warpprint: Generate print output, and also generate configuration files.
- warpHTML: Generate HTML output.
- BaseJobname: The \jobname to use. Set to the \jobname of the printed version even while generating HTML.
Examples:

```latex
makeindex -s lwarf.ist projectname.idx  \hspace{0.5cm} \textit{(makeindex)}
\texttt{xindy} -M lwarf.idxdxy -L english -C utf8 projectname.idx  \hspace{0.5cm} \textit{(xindy)}
```

**automatic setting**

The use of the makeindex or xindy options sets `PrintIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarf`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠️ **xindy**

If specifying `PrintIndexCmd` manually, be sure to assign an `xindy` language and codepage with the `-L` and `-C `xindy` options, as the `lwarf` `xindyLanguage` and `xindyCodepage` options are not used for the `PrintIndexCmd` option when it is set manually.

This option is stored in the configuration files `lwarfmk.conf` and `*.lwarfmkconf`, and is then passed by the `lwarf_printindex` command to the operating system to compile the print indexes. Since the command string is parsed by \TeX, written to a file, read from the file by Lua\TeX, and finally passed to the operating system, any attempt at quoting will be problematic. For complicated commands, it would be best to create a shell script, and simply refer to the script with the `lwarf PrintIndexCmd` option.

**Opt HTMLIndexCmd**

**HTMLIndexCmd**: Sets the shell commands executed by `lwarf` `htmlindex`. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 9.6.14.

⚠️ **filenames**

Example settings are similar to `PrintIndexCmd`, but append `_html` to the filenames:

```latex
makeindex -s lwarf.ist projectname.html.idx  \hspace{0.5cm} \textit{(makeindex)}
\texttt{xindy} -M lwarf.idxdxy -L english -C utf8 projectname.html.idx  \hspace{0.5cm} \textit{(xindy)}
```

**automatic setting**

The use of the makeindex or xindy options sets `HTMLIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarf`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠️ **xindy**

If specifying `HTMLIndexCmd` manually, be sure to assign an `xindy` language and codepage with the `-L` and `-C `xindy` options, as the `lwarf` `xindyLanguage` and `xindyCodepage` options are not used for the `HTMLIndexCmd` option when it is set manually.

As with `PrintIndexCmd`, to generate complicated indexes it may be worthwhile to use a shell script, then refer to that script with `lwarf HTMLIndexCmd`.

**Opt LatexmkIndexCmd**

**LatexmkIndexCmd**: Sets the shell commands executed by `latexmk`. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `LatexmkIndexCmd` does not include any filenames, which will be provided instead by `latexmk`. See section 9.6.14.

Example settings are similar to `PrintIndexCmd`, but without a filename:

```latex
makeindex -s lwarf.ist  \hspace{0.5cm} \textit{(makeindex)}
\texttt{xindy} -M lwarf.idxdxy -L english -C utf8  \hspace{0.5cm} \textit{(xindy)}
```

**automatic setting**

The use of the makeindex or xindy options sets `LatexmkIndexCmd` to one of the two settings shown above. `lwarf`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `latexmk` uses either of the single-line settings of `LatexmkIndexCmd` shown above to compile each of multiple indexes if necessary.

⚠️ **xindy**

If specifying `LatexmkIndexCmd` manually, be sure to assign an `xindy` language
and codepage with the -L and -C \textit{xindy} options, as the \texttt{lwp} \texttt{xindyLanguage}
and \texttt{xindyCodepage} options are not used for the \texttt{LatexmkIndexCmd} option when
it is set manually.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GlossaryCmd</td>
<td>\texttt{GlossaryCmd}: Sets the shell command executed by \texttt{lwp} \texttt{printglossary} and \texttt{lwp} \texttt{htmlglossary}. The print or HTML glossary filename is appended to this command. See section 9.6.11.</td>
</tr>
<tr>
<td>OSWindows</td>
<td>\texttt{OSWindows}: \texttt{lwp} attempts to automatically sense WINDOWS, but it may be forced with this option. See section 8.6.</td>
</tr>
<tr>
<td>pdftotextEnc</td>
<td>\texttt{pdftotextEnc}: Used to specify the encoding used by \texttt{pdftotext} during the PDF-HTML conversion. In most situations, the default is the correct choice.</td>
</tr>
<tr>
<td>lwarpmk</td>
<td>\texttt{lwarpmk}: If you wish to have \texttt{lwp} generate a local copy of \texttt{lwp}.lua for archival or local-installation purposes, compile the print version with the \texttt{lwp} \texttt{option} set. See section 29.</td>
</tr>
</tbody>
</table>

The following options are used internally by \texttt{lwp}, and usually are not used in the user's document:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>warpprint</td>
<td>\texttt{warpprint} and \texttt{warpHTML}: Usually controlled by \texttt{lwp}, and not set in the document. Select the \texttt{warpprint} option to generate print output (default), or the \texttt{warpHTML} option to generate HTML5 output. The default is print output, so the print version may be compiled with the usual \texttt{pdflatex}, etc. When \texttt{lwp} is loaded in print mode, it creates \texttt{&lt;project&gt;_html.tex}, which sets the \texttt{warpHTML} option before calling the user's source code \texttt{&lt;project&gt;_tex}. In this way, \texttt{&lt;project&gt;_tex} can \texttt{\usepackage{\texttt{lwp}}} without any options to create a printed version, while \texttt{&lt;project&gt;_html.tex} will create an HTML version.</td>
</tr>
<tr>
<td>BaseJobname</td>
<td>\texttt{BaseJobname}: Not intended for the user. Used internally by \texttt{lwp} when creating the *_html.tex file used to compile the HTML version. See section 29.</td>
</tr>
</tbody>
</table>
8.4 Customizing the HTML output

Table 6 shows several settings may be used to customize the HTML output. Watch for the correct placement of each!

⚠️ Placement!

⚠️ Changes! Note that if changes are made, it is best to first:

1. Clear all the HTML, PDF, and auxiliary files:
   
   ```
   Enter ⇒ lwarp mk clearall
   ```

2. Recompile the print version in order to recreate the configuration files for lwarp mk:

   ```
   Enter ⇒ lwarp mk print
   ```

3. Finally, recompile the HTML version with the new settings:

   ```
   Enter ⇒ lwarp mk html
   ```

Options for the lwarp package:

Use the following as options for \usepackage[options]{lwarp}:

<table>
<thead>
<tr>
<th>Opt</th>
<th>HomeHTMLFilename</th>
<th>Default: BASEJobname</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HomeHTMLFilename: Filename of the homepage, without the &quot;.html&quot; suffix. Defaults to the BASEJobname. A common setting is:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HomeHTMLFilename=index</td>
<td></td>
</tr>
<tr>
<td></td>
<td>causing the homepage to be the file index.html. Underscores are allowed in HomeHTMLFilename and HTMLFilename options, but may need to be escaped elsewhere, such as when appearing in a list:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\item[/href{file_name.pdf}{text}]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See section 8.4.1 for examples of naming and numbering HTML files.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt</th>
<th>HTMLFilename</th>
<th>Default: &lt;empty&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HTMLFilename: A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 8.4.1 for examples of naming and numbering HTML files.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt</th>
<th>latexmk</th>
<th>Default: false</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>latexmk: Controls whether lwarp uses latexmk to compile the document. This setting is written to lwarp mk's configuration files.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt</th>
<th>mathsvg</th>
<th>Default: true</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mathsvg: Selects svg display for math output. (The default.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt</th>
<th>mathjax</th>
<th>Default: false</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mathjax: Selects MATHJAX for math output.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt</th>
<th>makeindex</th>
<th>Default: makeindex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>makeindex: Selects makeindex for index generation by lwarp mk.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opt</th>
<th>xindy</th>
<th>Default: xindy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>xindy: Selects xindy for index generation by lwarp mk.</td>
<td></td>
</tr>
</tbody>
</table>

Placed in the preamble before \begin{document}:

<table>
<thead>
<tr>
<th>\linkhomename</th>
<th>\linkhomename: Name of the link to the home page. Paragraphs are allowed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default: Home</td>
<td>Redefine with \renewcommand.</td>
</tr>
</tbody>
</table>
Table 6: HTML settings

<table>
<thead>
<tr>
<th>Macro/Cntr/Bool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>\linkhomename</td>
<td>Name of the link to the homepage.</td>
</tr>
<tr>
<td>SideTOCDepth</td>
<td>Sectioning depth of the sideroc.</td>
</tr>
<tr>
<td>\sidetocname</td>
<td>Name of the sideroc.</td>
</tr>
<tr>
<td>FileDepth</td>
<td>Sectioning depth of the file splits.</td>
</tr>
<tr>
<td>CombineHigherDepths</td>
<td>Combine higher section levels.</td>
</tr>
<tr>
<td>FileSectionNames</td>
<td>Use section names for file names, else use numbers.</td>
</tr>
<tr>
<td>\FilenameLimit</td>
<td>Maximum length of the generated filenames.</td>
</tr>
<tr>
<td>FootnoteDepth</td>
<td>Sectioning depth of footnotes.</td>
</tr>
<tr>
<td>\abstractname</td>
<td>The name of the abstract.</td>
</tr>
<tr>
<td>\mathimagename</td>
<td>The svg math image lateximage alt tag.</td>
</tr>
<tr>
<td>\packagediagramname</td>
<td>The suffix for a package's lateximage alt tags.</td>
</tr>
<tr>
<td>\CSSFilename</td>
<td>The css for the following files.</td>
</tr>
<tr>
<td>\MathJaxFilename</td>
<td>The MathJax script for the following files.</td>
</tr>
<tr>
<td>\HTMLLanguage</td>
<td>The html lang tag.</td>
</tr>
<tr>
<td>\HTMLTitle</td>
<td>The homepage's &lt;title&gt;, overriding &lt;title&gt;.</td>
</tr>
<tr>
<td>\HTMLTitleBeforeSection</td>
<td>Set subpage &lt;title&gt;$ to \HTMLTitle - sectionname</td>
</tr>
<tr>
<td>\HTMLTitleAfterSection</td>
<td>Set subpage &lt;title&gt;$ to sectionname - \HTMLTitle</td>
</tr>
<tr>
<td>\HTMLAuthor</td>
<td>The html author meta tag, overriding &lt;author&gt;.</td>
</tr>
<tr>
<td>\HTMLDescription</td>
<td>The html description meta tag.</td>
</tr>
<tr>
<td>\HTMLFirstPageTop</td>
<td>Heading for the home page.</td>
</tr>
<tr>
<td>\HTMLPageTop</td>
<td>Heading for the other pages.</td>
</tr>
<tr>
<td>\HTMLPageBottom</td>
<td>Footing for all pages.</td>
</tr>
<tr>
<td>HTMLDebugComments</td>
<td>Boolean to generate html comments.</td>
</tr>
</tbody>
</table>
### Sectioning depth of the table of contents

- **tocdepth**: Sectioning depth of the table of contents. See section 17 for a list of \LaTeX\ stack depths.

### Sectioning depth of the sideroc

- **SideTOCDepth**: Sectioning depth of the sideroc. Defaults to 1, causing the sideroc to show sections but not subsections.

Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by SideTOCDepth. This sideroc is only shown if the web page is wide enough. When using a narrow web browser window, “responsive web design” is used to show the sideroc at the top of the page and a link back to Home at the bottom.

It is recommended to set:

\[
\text{SideTOCDepth} = \text{FileDepth}
\]

or

\[
\text{SideTOCDepth} = \text{FileDepth} + 1
\]

**⚠️ Inaccessible pages**

If SideTOCDepth < FileDepth, web pages will be inaccessible via the sideroc.

### Name of the sideroc

- **\sidetocname**: Name of the sideroc. Paragraphs are allowed. Redefine with \renewcommand.

### Sectioning depth of file splits

- **FileDepth**: Sectioning depth of file splits. Defaults to -5, causing the entire HTML website to be one single file.

  - To place the entire file into one HTML page, use:
    \[
    \setcounter{FileDepth}{-5}
    \]
  
  - To split the HTML file at \section depth, use:
    \[
    \setcounter{FileDepth}{1}
    \]

  **⚠️ Inaccessible pages!**

  To ensure that the HTML pages/files are accessible:
  Place a \tableofcontents somewhere before the first section break (therefore in the “home page”), and set tocdepth \geq \text{FileDepth}.

### Combine a higher section with its first lower subsections

- **CombineHigherDepths**: Combine a higher section with its first lower subsections, down to the FileDepth. Defaults to true. Set to false to simulate the concept of a chapter opening on its own page, for example.

The file splits are controlled by the counter FileDepth and the boolean CombineHigherDepths. Setting FileDepth to 0 splits the file at chapters, 1 at sections, etc. CombineHigherDepths controls whether to combine pages at levels higher than the chosen FileDepth, such as in this tutorial where the page which opens the chapter also contains the first section. Be careful to set tocdepth and SideTOCDepth to allow access to each page of the website. Set tocdepth and SideTOCDepth to be greater than or equal to FileDepth.

**⚠️ Inaccesible pages!**

When making changes to the file structure, it is possible to end up with the web browser pointing to an old file which is no longer in use. When this occurs, changes to the website will not appear in the browser, even if reloading the page, because that page is no longer in use. It is best to return to the home page, clean the files (\texttt{\texttt{l}warp\texttt{m}k cleanall}), change FileDepth
and/or CombineHigherDepths, then finally recompile and renavigate to the desired page using the new file structure.

- **FileSectionNames**: If true, web page filenames are derived from a sanitized version of the section names. If false, web pages are numbered. Either way, the HTMLFilename option is used as a prefix. See section 8.4.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after begin sanitized. For example, math in the section name is removed before creating the filename, so the rest of the filename must be sufficiently unique to avoid name collisions.

- **FootnoteDepth**: Determines where to place pending footnotes. 3 places footnotes before each break down to the \subsection level, 1 places footnotes before each \section break. Any pending footnotes are also placed at the bottom of each page before each file break.

- **HTMLDebugComments**: Set true to generate HTML comments, such as which section or <div> is being opened or closed.

- **abstractname**: The name of the abstract. This may also be over-written by the babel package. Defaults to “Abstract”. Redefine with \renewcommand.

### Configuration

<table>
<thead>
<tr>
<th>Option</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FileSectionNames</td>
<td>true</td>
<td>If true, web page filenames are derived from a sanitized version of the section names.</td>
</tr>
<tr>
<td>FilenameLimit</td>
<td>80</td>
<td>The maximum length of the filenames generated by \lwp. “.html” is added to this length.</td>
</tr>
<tr>
<td>FootnoteDepth</td>
<td>3</td>
<td>Determines where to place pending footnotes. 3 places footnotes before each break down to the \subsection level, 1 places footnotes before each \section break. Any pending footnotes are also placed at the bottom of each page before each file break.</td>
</tr>
<tr>
<td>HTMLDebugComments</td>
<td>false</td>
<td>Set true to generate HTML comments, such as which section or &lt;div&gt; is being opened or closed.</td>
</tr>
<tr>
<td>abstractname</td>
<td>Abstract</td>
<td>The name of the abstract. This may also be over-written by the babel package. Defaults to “Abstract”. Redefine with \renewcommand.</td>
</tr>
<tr>
<td>CSSFilename</td>
<td>\lwp.css</td>
<td>Sets the css file to use for the following files. May be changed before each sectioning command which would cause a file split. The css styles of the web pages are set by the CSSFilename command. If CSSFilename is not used, a default plain style is used to mimic printed \LaTeX output. \lwp_sagebrush.css is a semi-fancy colored style as shown in this tutorial. Change it to \lwp_formal.css for a more formal look, or comment out the CSSFilename command to see the default. CSSFilename may be used before each file break to set the css for individual pages of the website.</td>
</tr>
<tr>
<td>MathJaxFilename</td>
<td>\lwp_mathjax.txt</td>
<td>Sets the MathJax script file to use for the following files. May be changed before each sectioning command which would cause a file split. The MathJax script file is copied into the head of each HTML file. This may be used to point to a local repository, add extensions, or change the script somewhere in the middle of the document. MathJaxFilename may be used before each file break to set the script file for individual pages of the website.</td>
</tr>
<tr>
<td>HTMLLanguage</td>
<td>en-US</td>
<td>The HTML file's HTML lang meta tag. Defaults to en-US.</td>
</tr>
<tr>
<td>HTMTitle</td>
<td>\thetitle</td>
<td>Overrides \title for the HTML header's meta title. De-</td>
</tr>
</tbody>
</table>
faults to \thetitle, which is set by \title, or empty otherwise. Unlike the author, \thetitle is set by \title even if not using the titling package.

\HTMLTitleBeforeSection
Default: \HTMLTitleBeforeSection
\HTMLTitleAfterSection
Default: \HTMLTitleAfterSection
\HTMLAuthor
Default: \theauthor
\HTMLDescription
Default: <empty>
\HTMLFirstPageTop
Default: <empty>
\HTMLPageTop
Default: <empty>
\HTMLPageBottom
Default: <empty>

\tableofcontents
\TOC on the homepage!
\mathimagemame
Default: math image

\tableofcontents: Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage. Links to each chapter/section are provided, as selected by tocdepth.

\mathimagemame: Redefine with \renewcommand. When creating an svg math image, its alt tag may be set to the math expression, which may be hashed
for image reuse. In the case of \ensuremath or after \linemathother, where the contents require a unique image for each instance of the same expression, the alt tag is set to \mathimagename, and the image is not reused.

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "math image", and it may be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following svg math images.

\packagediagramname: Redefine with \renewcommand. For many packages, the output is placed inside a lateximage with an HTML alt tag set to the package name followed by \packagediagramname. For example:

(\text{-xy-} diagram)

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "diagram", and may it be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following lateximages.

\warpprint: An environment which is only used while generating print output. Place inside anything which does not apply to HTML and which may cause problems with \l warp. If \l warp knows about and emulates or supports a package then its related macros, lengths, counters, etc. probably won't have to be placed inside a warpprint environment, but unknown packages may cause problems which may be isolated from \l warp using this environment.

\warpHTML: An environment which is only used while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.

Do not place anything else on the same line as \end{warpprint}.

Do not place anything else on the same line as \end{warpHTML}.

\warpprintonly: {\langle contents\rangle} A macro version of the warpprint environment.

\warpHTMLonly: {\langle contents\rangle} A macro version of the warpHTML environment.

8.4.1 Example HTML file naming

Examples of ways to name or number HTML files:

Numbered HTML nodes:

Example: Homepage index.html, and node-1, node-2. 13

\footnote{See \SetHTMLFileNumber to number in groups by chapter, for example.}
\usepackage[
    HomeHTMLFilename=index,
    HTMLFilename={node-}
]{lwarp}
\boolfalse{FileSectionNames}

Named HTML sections, no prefix:
Example: index.html, and About.html, Products.html

\usepackage[
    HomeHTMLFilename=index,
    HTMLFilename={}
]{lwarp}
\booltrue{FileSectionNames}

Named HTML sections, with prefix:
Example: Homepage mywebsite.html, and additional pages such as
mywebsite-About.html, mywebsite-Products, etc.

\usepackage[
    HomeHTMLFilename=mywebsite,
    HTMLFilename={mywebsite-}
]{lwarp}
\booltrue{FileSectionNames}

8.5 Customizing the css

\CSSFilename{(filename)}
\CSSFilename{Default: lwarp.css}

\CSSFilename may be used to choose which .css file is used to display each page of the
web site. Use \CSSFilename before \begin{document} to assign the style of the home
page. If different parts of the website should have different styles, call \CSSFilename
again before each section heading which creates a new file. This may be changed
numerous times throughout the file, resulting in different HTML pages having different
\CSSFilename files assigned:

...\
\CSSFilename{myCSS.css}\
\chapter{Another Chapter}\
...

The styles provided by \texttt{lwarp} include:

\texttt{lwarp.css}: A default style if \CSSFilename is not used. This style is comparable to a
plain \LaTeX document. To set this style, you may use \CSSFilename{larp.css},
or no \CSSFilename call at all.
lwarp_formal.css: A formal style with a serif fonts and a traditional look.
lwarp_sagebrush.css: A style with muted colors, gradient backgrounds, additional borders, and rounded corners.

To see each style in use, change the \CSSFilename entry in the tutorial, lwarp\html again, and then reload the tutorial webpage.

Custom css: A customized style may also be created. For each new project a file called sample_project.css is generated. This may be renamed to <project>.css then used by assigning \CSSFilename<project>.css).

Note that sample_project.css is overwritten whenever lwarp is loaded in print mode. It is therefore important to rename the file to something like <project>.css before using it, so that your own changes are not overwritten.

<project>.css has an entry which loads lwarp.css, and this entry may be changed to load lwarp_formal.css or lwarp_sagebrush.css if desired. Additional changes to the css may be made by making entries later in the <project>.css file.

It is best to make a local project-specific css file such as project.css, containing only things which are different from lwarp.css. The file project.css should refer to lwarp.css as follows:

/* ( --- Start of project.css --- ) */
/* ( --- A sample project-specific CSS file for lwarp --- ) */

/* Uncomment one of the following: */
@import url("lwarp.css");
/* @import url("lwarp_formal.css"); */
/* @import url("lwarp_sagebrush.css"); */

/* Project-specific CSS setting follow here. */
/* . . . */

/* ( --- End of project.css --- ) */

Finally use \CSSFilename<project>.css} in the document to activate the custom css.

8.6 Selecting the operating system

lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.

If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.

When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean usingOSWindows is set true. This boolean may be tested by the user for later use.
8.7 Selecting actions for print or HTML output

The following environments and macros are used to select actions which only apply to either traditional \LaTeX\ print-formatted PDF generation, or to HTML generation.

For most of built-in \LaTeX\ and many additional packages there is user-level source code support or emulation, so no special handling will be required. For those cases which \larp\ does not handle by itself, the following environments and macros may be used to isolate sections of code for print-only or HTML-only.

These environments are also useful for creating a special version of the titlepage for print and another for HTML.

\begin{warpHTML}
... something to be done only during HTML generation
\end{warpHTML}

\begin{warpprint}
... something to be done only during traditional PDF generation
\end{warpprint}

\begin{warpall}
... something to be done during print PDF or HTML output
\end{warpall}

Macros are also provided for print-only or HTML-only code:

\warpprintonly \{(actions)\}

Performs the given actions only when print output is being generated.
\warpHTMLonly \{ (actions) \}

Performs the given actions only when HTML output is being generated.

### 8.8 Commands to be placed into the warpprint environment

Certain print-related commands should always be placed inside a warpprint environment, or may need other special handling. These are unrelated to HTML output, but are hard to isolate automatically. For example:

- Paragraph formatting: \parindent \parskip
- Manual page positions such as the textpos package, which is emulated but only in a limited way.
- Anything changing the page counter. Iwarp requires that the page counter not be adjusted during HTML output.

Some packages require additional setup commands. Where these packages are emulated for HTML, setup commands may work for the emulated HTML output as well as for print output. See the details for each package in this document for more information.

Also see section 14: Troubleshooting.

### 8.9 Title page

In the preamble, place an additional block of code to set the following:

\title{Document Title} % One line only
\author{Author One\affil{Affiliation One} \and
  Author Two\affil{Affiliation Two} }
\date{Optional date}

The title is used in the meta tags in the HTML files, unless overridden by \HTMLTitle, and the rest are used in \maketitle. To use a \subtitle or \published field, see section 67.8.

\maketitle Use \maketitle just after the \begin{document}, as this will establish the title of the homepage. Optionally, use a titlepage environment instead.

Env titlepage The titlepage environment may be used to hold a custom title page. The titlepage will be set in a <div> class titlepage, and \printtitle, etc. may be used inside this environment.

Env titlingpage Another form of custom title page, where \maketitle is allowed, and additional information may be included as well.

\title {((title)
Avoid newlines in the \title; these will interfere with the file break and CSS detection. Use a \subtitle command instead (section 67.8). The title will appear in the document \maketitle as a heading <h1>. The HTML meta title tag will also have this title, unless \HTMLTitle is used to set the meta title to something else instead.

\author \{(author)\}

In \author, \protect may be needed before some formatting commands. In HTML, the author will appear in a <div> of class author in the \maketitle. If the titling package is used, the author will also appear in a HTML meta tag, but \HTMLAuthor may be necessary to create a plain list of names if \author had affiliations added. \affiliation is a new addition to lwarp.

\date \{(date)\}

\date works as expected. In HTML, this will appear in a <div> class titl/date.

\thanks \{(text)\}

\thanks are allowed in the titlepage fields, and will be rendered as HTML notes at the bottom of the title page.

## 8.10 HTML page meta descriptions

\htmlDescription \{(A description of the web page.)\}

Default: (none)

Each page of HTML output should have its own HTML meta description, which usually shows up in web search results, is limited to around 150 characters in length, and should not include the ASCII double quote character (").

placement Use \htmlDescription just before \begin{document} to set the description of the home page, and also just before each sectioning command such as \chapter or \section where a new file will be generated, depending on FileDepth. For example, if FileDepth is 1, use \htmlDescription just before each \section command, and that description will be placed inside the HTML page for that \section. The same description will be used for all following HTML files as well, until reset by a new \htmlDescription. It is best to use a unique description for each HTML file.

disabling To disable the generation of HTML description meta tags, use:

\htmlDescription{}

## 8.11 HTML homepage meta title

\htmlTitle \{(title)\}

Default: \htmltitle{\thetitle}

Sets the contents of the web page <meta name="title"> element. May be set empty to cancel the meta title tag.

See section 8.4 for \HTMLTitleBeforeSection and \HTMLTitleAfterSection, used to set the title for HTML subpages.
8.12 HTML page meta author

\HTMLAuthor{(author)}

Sets the contents of the web page <meta name="author"> element. May be set empty to cancel the meta author tag.

\author may be used to create a list of authors and their affiliations, in several formats if using authblk, and these may not successfully parse properly into a sensible list for \theauthor. \HTMLAuthor may be used to set the meta tag to a simple list of names.

9 Special cases and limitations

Some commonly-used \LaTeX expressions should be modified as follows to allow for a smooth conversion to both HTML and print-formatted outputs.

See the General Index for “how-to”, and the Troubleshooting Index if something doesn’t work. The Index of Objects contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A Troubleshooting section is also available.

9.1 Things to avoid

In the document, avoid the following:

**page counter:** Do not adjust the page counter. If doing so is required for the print version, place the adjustment inside a warpprint environment.

**Custom math environment macros:** Do not use expressions such as \beq as a replacement for \begin{equation}.

**Custom macros in section, figure, table names:** Custom macros which appear in sectioning commands or float captions then appear in the .toc, .lof, and .lot lists, and should be made robust using \newrobustcmd or \robustify from etoolbox, xparse, etc.

When setting FILESectionNames to true to name the HTML files from the section names, the file names are created from sanitized versions of the chapter or section names, but the section names must be plain text or something which expands into plain text. Robust macros will not work at the sectioning level which is used for file names, but a robust macro or other complicated name may be used for the mandatory argument of \chapter, \section, etc., if a plain-text version is also included in the optional argument:

\chapter[Plain Name]{\ARobustMacro{Fancy Name}}
9.1.1 **Invalid HTML**

Additionally, some objects are valid \LaTeX, but invalid HTML. An example is a tabular inside `\textbf`, since HTML does not allow a table inside a span. \textbf{l}\texttt{warp} will create the table, and the browser may support it, but the result is technically invalid.

9.2 **Formatting**

9.2.1 **Text formatting**

\textbullet **\textbfseries, etc.** \textbf, etc. are supported, but \textbfseries, etc. work only in some situations.

\textbullet **HTML special chars** & , < , > have special meanings in HTML. If & , \textless , and \textgreater are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

\textbullet **program listings** For program listings, the listings package is supported, and its literate option is used to convert & , < , and > to proper HTML entities.

\textbullet **verbatim** The various verbatim-related environments do not convert & , < , and >, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

9.2.2 **Horizontal space**

\texttt{\textbackslash hspace} \texttt{\textbackslash hspace} is converted to an inline HTML span of the given width, except that 0 width is ignored, a width of .16667em is converted to an HTML thin breakable space (U+2009), and a \texttt{\textbackslash fill} is converted to a \texttt{\textbackslash quad}.

\texttt{\textbackslash ,} \texttt{\textbackslash ,} and \texttt{\textbackslash ,} are converted to HTML entities.

\texttt{\textbackslash kern} \texttt{\textbackslash kern} and \texttt{\textbackslash hskip} are entered into the HTML PDF output as-is, then interpreted by \texttt{pdftotext}, and thus usually appear as a single space.

9.2.3 **Text alignment**

Use the environments center, flushright, flushleft instead of the macros \texttt{\textbackslash centering}, \texttt{\textbackslash raggedright}, \texttt{\textbackslash raggedleft}.

\textbullet **figure & table alignment** \texttt{\textbackslash centering}, etc. are honored in a figure or table if they are the first command inside the float:

\begin{verbatim}
\begin{table*}
\centering
\caption{A Table}
\end{table*}
\end{verbatim}
9.2.4 Accents

Native \TeX accents such as " will work, but many more kinds of accents are available when using Unicode-aware \TeX and \LaTeX.

9.2.5 textcomp package

Some textcomp symbols do not have Unicode equivalents, and thus are not supported. Many textcomp symbols are not supported by many system/browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

9.2.6 Superscripts and other non-math uses of math mode

Use \textsuperscript{x} instead of \(^x\)

9.2.7 Empty \item followed by a new line of text or a nested list:

Use a trailing backslash: \item[label] \,

9.2.8 Filenames and URLs in lists or footnotes

Escape underscores in the filenames:

\item[\href{file_name.pdf}{text}]

9.2.9 relsize package

For HTML, only the inline macros are supported: \textlarger, \textsmaller, and \textscale. Each becomes an inline span of a modified font-size.

\relsize, \larger, \smaller, and \relscale are ignored.

While creating SVG math for HTML, the original definitions are temporary restored, and so should work as expected.

The HTML browser's setting for minimum font size may limit how small the output will be displayed.

9.3 Boxes and minipages

9.3.1 Marginpars

\marginpar \[⟨left⟩] ⟨right⟩ \ marginpar may contain paragraphs, but in order to remain
inline with the surrounding text \lwarp nullifies block-related macros inside the \marginpar. Paragraph breaks are converted to \(<br />\) tags.

To include block-related macros, use \marginparBlock, which takes the same arguments but creates a \(<div>\) instead of a \(<span>\). A line break will occur in the text where the \marginBlock occurs.

### 9.3.2 Save Boxes

△ boxes \TeX boxes are placed inline and do not allow line breaks, so boxes with long contents may overflow the line during HTML conversion. \lwarp uses methods which help avoid this problem.

△ \minipage, \parbox \savebox and related do not (yet) support \minipage or \parbox.

### 9.3.3 Minipages

△ inline A line of text with an inline \minipage or \parbox will have the \minipage or \parbox placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

placement \minipages and \parboxes will be placed side-by-side in HTML unless you place a \newline between them.

side-by-side Side-by-side \minipages may be separated by \quad, \qquad, \enskip, \hspace, \hfill, or a \rule. When inside a center environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side \minipages and these spacing commands, but not at the start or end of the paragraph.

△ \minipage in a span There is limited support for \minipages inside an HTML \(<span>\). An HTML \(<div>\) cannot appear inside a \(<span>\). While in a \(<span>, \minipages, and \parboxes, and any enclosed lists have limited HTML tags, resulting in an "inline" format, without markup except for HTML breaks. Use \newline or \par for an HTML break.

△ \minipage size When using \linewidth, \textwidth, and \textheight, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a \multicols \linewidth is divided by the specified number of columns.

if width is \linewidth If a \minipage or \parbox is assigned a width of exactly \linewidth, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if HTML A new macro \minipagefullwidth requests that, during HTML output, the next single \minipage or \parbox be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

△ \tabular, \multicols Inside a \tabular or \multicols environment, where the width depends on the browser window, \minipagefullwidth is effectively used by default for every \minipage or \parbox inside the environment. \UseMinipageWidths may be used to tell \lwarp
honor the specified widths of all following minipages and \parboxes until the end of the local scope, and \IgnoreMinipageWidths may be used to tell lwarp to ignore the specified widths.

⚠️ text alignment

Nested minipages adopt their parent's text alignment in HTML, whereas in regular \LaTeX pdf output they do not. Use a \flushleft or similar environment in the child minipage to force a text alignment.

### 9.3.4 Side-by-side minipages

Place side-by-side minipages inside a center environment, with horizontal space between them, such as \quad, \quad, \hspace, or \hfill. The result is similar in print and HTML. Do not use space commands at the start or end of the line.

### 9.3.5 Framed minipages and other environments

\fbox can only be used around inline <span> items during HTML output, but HTML cannot place a block element such as a <div> for a minipage or a list inside of a <span>. Several options are provided for framing an object, depending on which kind of object and which packages are loaded:

For a framed object, options include:

**To remove the frame in HTML output:** Place the \fbox command and its closing brace inside warpprint environments. This will nullify the frame for HTML output.

**To frame the contents inline with some formatting losses in HTML:** This is the default action of \fbox when enclosing a minipage. During HTML output, \fbox nullifies the HTML tags for minipage, \parbox, and lists. The contents are included as inline text inside the \fbox's <span> of class framebox. For lists, line breaks are converted to HTML breaks. The result is a plain-text inline version of the contents, framed inline with the surrounding text, but lacking any extra HTML markup.

**To frame the contents on their own line with improved formatting in HTML:** A new command \fboxBlock is included, intended to be a direct replacement for \fbox for cases where the \fbox surrounds a minipage, table, or list. For print output, this behaves as \fbox. For HTML output, the contents are placed inside an HTML <div> with the class framed, resulting in the contents being placed on their own line with a frame surrounding them. The contents preserve their HTML formatting, so lists and minipages look nicer, and valid HTML is created for a tabular. While an \fbox containing a \tabular is valid \LaTeX code, the result in HTML is problematic since a table is a <div> not a <span>, so use \fboxBlock around a \tabular, or else place the \tabular inside a minipage, or use \fminipage, described next. Also see below regarding the “Misplaced alignment tab character &.” error.

**To create a framed minipage in both print and HTML:** A new environment \fminipage is included. For print output, this is identical to \minipage, except that it is also
framed. For HTML output, this forms a `<div>` of class `framed`, the contents preserve their HTML formatting, and valid HTML is created for a tabular. Also see section 86 for a new environment `fcolorminipage`. Also see below regarding the “Misplaced alignment tab character &.” error.

**colored boxes and frames:** To create colored frames and boxes: See section 501 for `xcolor`'s `\colorbox` and `\fcolorbox`, and `lwarp`'s additional `\colorboxBlock` and `\fcolorboxBlock`.

**To frame tables or verbatim environments:** Place the contents inside a `\fminipage`, or perhaps a `\fboxBlock` for a tabular. Also, if using `\fboxBlock` with `tabular`, you will have to use `\StartDefiningTabulars` before the start of the macro which uses `\fboxBlock` and the tabular, and `\StopDefiningTabulars` afterwards. Also see the `lwarp` documentation for the `fancybox` package.

**To frame equations:** See section 217 for the `fancybox` package.

**For fancy framed minipages:** See packages `boxedminipage`, `shadow`, `fancybox`, `framed`, `mdframed`.

**Custom environments:** Use a custom environment to create a sidebar, containing a `BlockClass` environment with custom CSS formatting, and `\warpprintonly{hrule}` command:

```latex
\begin{BlockClass}{frameminipage}% ignored in print output
% use \CSS\ to format div class `\framedminipage`
\warpprintonly{hrule} % only appears in print output
Contents
\warpprintonly{hrule} % only appears in print output
\end{BlockClass}
```

### 9.3.6 `fancybox` package

`fancybox`'s documentation has an example `FramedEqn` environment which combines math, a `minipage`, and an `\fbox`. This combination requires that the entire environment be enclosed inside a `lateximage`, which is done by adding `\lateximage` at the very start of `FramedEqn`'s beginning code, and `\endlateximage` at the very end of the ending code. Unfortunately, the `HTML` `alt` attribute is not used here.

```latex
\newenvironment{FramedEqn}{\lateximage% NEW
\setlength{\fboxsep}{15pt}
\begin{minipage}\TheSbox\end{minipage}}{\lateximage% NEW
\end{FramedEqn}
```

**framing alternatives** `\fbox` works with `fancybox`. Also see `lwarp`'s `\fboxBlock` macro and `\fminipage` environment for alternatives to `\fbox` for framing environments.

**framed table example** The `fancybox` documentation's example framed table using an `\fbox` containing a `tabular` does not work with `lwarp`, but the `FramedTable` environment does work if
\fbox is replaced by \fboxBlock. This method loses HTML formatting. A better method is to enclose the table's contents inside a \fminipage environment. The caption may be placed either inside or outside the \fminipage:

\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
...
\end{tabular}
\end{fminipage}
\end{table}

\textbf{framed verbatim} \lwarp does not support the \verbatim environment inside a \span, box, or \fancybox's \Sbox, but a \verbatim may be placed inside a \fminipage. The \fancybox documentation's example FramedVerb may be defined as:

\newenvironment{FramedVerb}[1] % width 
{ 
 \VerbatimEnvironment
 \fminipage{#1}
 \beginVerbatim
 }{
 \endVerbatim
 \endfminipage
}

\textbf{framed \VerbBox} \fancybox's \VerbBox may be used inside \fbox.

\textbf{indented alignment} \LVerbatim, \LVerbatimInput, and \LUseVerbatim indent with horizontal space which may not line up exactly with what \texttt{pdftotext} detects. Some lines may be off slightly in their left edge.

\section{9.3.7 \texttt{mdframed} package}

\textbf{Pkg \texttt{mdframed} support} Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for \texttt{mdframed} environments and frame titles.

\textbf{loading} When used, \lwarp loads \texttt{mdframed} in HTML with framemethod=none.

\textbf{font} For title font, use

\texttt{frametitlefont=\textbf},

instead of

\texttt{frametitlefont=\bfseries},

where \texttt{\textbf} must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the \texttt{mdframed} source).
Since lwarp does not support \bfseries and friends, only one font selection may be made at a time.

**Theorem Title Font**

Theorem title font is not supported, since the following text is not in braces in the \texttt{mdframed} source.

**Ignored Options**

userdefinedwidth and align are currently ignored.

**CSS Classes**

Environments created or encapsulated by \texttt{mdframed} are enclosed in a \texttt{<div>} of class \texttt{mdframed}, and also class \texttt{md<environmentname>} for new environments.

Frame titles are placed in a \texttt{<div>} of class \texttt{|mdframedtitle|}. Subtitles are in a \texttt{<div>} of class \texttt{mdframedsubtitle}, and likewise for substubs.

### 9.4 Section Names

If using named HTML files, by selecting \texttt{\booltrue{FileSectionNames}}, the generated filenames may be simplified by using \texttt{\FilenameSimplify} and \texttt{\FilenameNullify}:

\begin{verbatim}
\FilenameSimplify\{(text)\}
\end{verbatim}

To remove common short words from the automatically-generated filenames, replacing each with a single hyphen “-”, use \texttt{\FilenameSimplify}:

\begin{verbatim}
\FilenameSimplify*{-in-}
\FilenameSimplify*{A-}
\end{verbatim}

The first example removes the word “in” in the middle of a filename, and the second example removes “A” at the start of the filename. The star forces the arguments to be detokenized, which is required for a plain-text comparison. (The unstarrd form is used for a token-sensitive comparison, which is seldom required by the user.) After simplification, repeated hyphen characters will be further simplified to a single hyphen “-”. Finally, single hyphens at the start or end of the filename are removed.

\begin{verbatim}
\FilenameNullify\{(macros)\}
\end{verbatim}

**Macros in Section Names**

Macro names may appear in the automatically-generated file names. To remove these, create non-robust nullified versions of the macros, ensuring that each line ends with a percent character % as shown below. These are placed inside \texttt{\FilenameNullify}, which adds them to the list of macros which are nullified during filename generation. Low-level macros such as \texttt{\begingroup} will cause problems when nullified. Many macros such as \texttt{\textbf} are already nullified. lwarp also nullifies built-in symbol and textcomp macros, including if defined by xunicode, but not all xunicode macros. See the definition of \texttt{\LWR@nullfonts} for a complete list.

\begin{verbatim}
\FilenameNullify\%
\renewcommand*{\macroname}[1][]{\#1}\%
\renewcommand*{\anothermacro}{\%
\end{verbatim}

**Duplicate Filename**

Avoid duplicate file names. Section names at levels which result in HTML file splits must be unique. lwarp will generate an error if a duplicate HTML filename is generated.
Use the optional \toc caption entry parameter for formatting. Remember to \protect \LaTeX commands which appear in section names and \toc captions.

\section*{9.5 Cross-references}

\subsection*{9.5.1 Page references}

The printed page does not translate to the HTML page, so \pageref references are converted to parentheses containing \pagerefPageFor, which defaults to “see ”, followed by a hyperlink to the appropriate object.

Ex:

\ref{sec:name} on page \pageref{sec:name}

in HTML becomes:

“Sec. 1.23 on page (see sec. 1.23)”.

\pagerefPageFor may be redefined to “page for ”, empty, etc. See page 468.

\subsection*{9.5.2 cleveref and varioref packages}

cleveref and varioref are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \cpageref and \cpagerefrange. This phrase includes \cpagerefFor, which defaults to “for”.

Ex:

\cpageref{tab:first,tab:second}

in HTML becomes:

“pages for table 4.1 and for table 4.2”

See \cpagerefFor at page 541 to redefine the message which is printed for page number references.
9.5.3 Hyperlinks, hyperref, and url

lwarp emulates hyperref, including the creation of active hyperlinks, but does not require that hyperref be loaded by the document.

Do not place a comment with a % character between arguments for \hyperref, etc., as it is neutralized for inclusion in HTML URLs.

lwarp can also load url, but url should not be used at the same time as hyperref, since they both define the \url command. lwarp does not (yet) attempt to convert url links into hyperlinks during HTML output, nor does the print version of url create hyperlinks.

When generating HTML, lwarp’s emulation of hyperref does not automatically load backref, so backref must be loaded explicitly.

9.5.4 Footnotes and page notes

lwarp uses native \LaTeX footnote code, although with its own \box to avoid the \LaTeX output routine. The usual functions mostly work as-is.

To have footnote numbers reset each time footnotes are printed:

\setcounter{footnoteReset}{1}

For bigfoot, manyfoot, or perpage:

\MakePerPage{footnoteX}

or

\MakeSortedPerPage{footnoteX}

The footnotes are reset when they are printed, according to section level as set by FootnoteDepth, which is not necessarily by HTML page. This is recommended for \alph, \Alph, or \fnsymbol footnotes, due to the limited number of symbols which are available.

The footmisc stable option is emulated by lwarp.

When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the footmisc package with the stable option, provide a short toc entry, and protect the \footnote:

\usepackage[stable]{footmisc}

\subsection[Subsection Name]{Subsection Name}\protect\footnote{A footnote.}

If using memoir class, with which lwarp preloads footmisc, the stable option must be declared before lwarp is loaded:

\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwp}
Do not use a starred sectioning command. As an alternative, it may be possible to adjust \secnumdepth instead.

If using fancybox or fancyverb with VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

\subsection[Subsection Name]{Subsection Name}\protect\footnotemark
\footnotetext{A footnote with \verb+verbtim+.}

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when VerbatimFootnotes are selected. The browser usually compensates.

While emulating pfnote, larp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. larp therefore uses continuous footnote numbering even for pfnote.

Verbatim footnotes are not yet supported.

If using the bigfoot package, and possibly also manyfoot, problems may occur with counter allocation because larp uses many counters, and there is a difference in how counters numbered 256 and up are handled in pdf\LaTeX. With bigfoot this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as an input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining bigfoot or manyfoot footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use \texttt{Xe\LaTeX} or Lua\LaTeX instead of pdf\LaTeX.

9.6 Front and back matter

9.6.1 Custom classes with multiple authors and affiliations

Some classes allow multiple authors and affiliations. Often it is possible to emulate these using a standard class along with authblk:

\documentclass{customclass} % for print document
\documentclass{article} % for html document
\usepackage{larp}
\begin{warpHTML}
\usepackage{authblk}
\let\affiliation\affil % maybe required
\end{warpHTML}
9.6.2 Starred chapters and sections

The following describes `\ForceHTMLPage` and `\ForceHTMLTOC`, which may be used for endnotes, glossaries, tocbibind, bibliographies, and the index. See the following sections where applicable. Continue here if interested in the reason for adding these commands to `lwarp`.

Some packages use `\chapter*` or `\section*` to introduce reference material such as notes or lists, often to be placed in the back matter of a book. These starred sections are placed inline instead of on their own HTML pages, and they are not given TOC entries.

`lwarp` provides a method to cause a starred section to be on its own HTML page, subject to `FileDepth`, and also a method to cause the starred section to have its own TOC entry during HTML output.

\ForceHTMLPage

To place a starred section on its own HTML page, use `\ForceHTMLPage` just before the `\chapter*` or `\section*`. `lwarp` will create a new page for the starred sectional unit.

A starred sectional unit does not have a TOC entry unless one is placed manually. The typical method using `\phantomsection` and `\addcontentsline` works for inline text but fails when the new starred section is given its own webpage after the TOC entry is created, or when creating an EPUB where the TOC entry will point to the page before the starred section. If the starred section has its own HTML page but no correct TOC entry pointing to that page, the page will be inaccessible unless some other link is created.

\ForceHTMLTOC

To automatically force the HTML version of the document to have a TOC entry for a starred section, use `\ForceHTMLTOC` just before the `\chapter*` or `\section*`, and place `\phantomsection` and `\addcontentsline` inside a `warpprint` environment.

For print output, `\ForceHTMLTOC` and `\ForceHTMLPage` have no effect.

9.6.3 abstract package

\texttt{Pkg abstract}

If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

9.6.4 titling and authblk

\texttt{Pkg titling}

 lwarp supports the native \LaTeX titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling.

\texttt{Pkg authblk}

package support

If using the titling package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 67.8.
9.6.5 tocloft package

If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard \LaTeX commands to create the titles, allowing other packages to work with it.

\section*{tocloft & other packages}

9.6.6 appendix package

During HTML conversion, the option toc without the option page results in a toc link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

\section*{incorrect toc link}

9.6.7 pagenote package

pagenote works as-is, but the page option is disabled.

9.6.8 endnotes package

To place the endnotes in the toc, use:

\begin{verbatim}
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional
\end{verbatim}

To additionally have the endnotes on their own HTML page, if FileDepth allows:

\begin{verbatim}
\ForceHTMLPage
\theendnotes
\end{verbatim}

9.6.9 BibTeX

\begin{verbatim}
\etalchar Displays a superscript “+” to indicate “and others”.
\end{verbatim}

\section*{Modify *.bib}

When enough authors are cited for a source, Bib\TeX may use the \etalchar command to display a math superscript with a + character to indicate “and others”. Without modification, this will result in an “Improper \textsuperscript” error. At present, lwp requires that \etalchar be replaced by a text superscript. To do so, add to the start of the .bib file the following:

@PREAMBLE{"\let\etalchar\relax \newcommand{\etalchar}[1]{\textsuperscript{#1}}}"
9.6.10 **gloss package**

To process the HTML glossary:

```
bibtex <projectname>_html.gls
```

9.6.11 **glossaries package**

`lwarpmk` has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`, which process the glossaries created by the `glossaries` package using that package's `makeglossaries` program.

The shell command to execute is set by the `lwarp` option `G/l.VarossaryCmd`, which defaults to `makeg/l.Varossaries`. The print or HTML glossary filename is appended to this command.

In some situations it may be required to modify the default command, such as to add the `perl` command in front:

```
\usepackage[G/l.VarossaryCmd={perl makeg/l.Varossaries},]{lwarpmk}
```

To set the language to use for processing glossaries with `xindy`:

```
\usepackage[G/l.VarossaryCmd={makeg/l.Varossaries -L english},]{lwarpmk}
```

Other options for `makeglossaries` may be set as well.

The glossaries may be placed in a numbered or unnumbered section, given a `toc` entry, and placed inline or on their own HTML page:

**Numbered section, on its own HTML page:**

```
\usepackage[xindy, toc, numberedsection=nolabel]{glossaries}
```

```
\printglossaries
```

**Unnumbered section, inline with the current HTML page:**

```
\usepackage[xindy, toc]{glossaries}
```

```
\printglossaries
```

**Unnumbered section, on its own HTML page:**

```
\usepackage[xindy, toc]{glossaries}
```

```
\ForceHTMLPage
\printglossaries
```

**glossary style**

The default style=item option for `glossaries` conflicts with `lwarp`, so the style is forced to index instead.
number list  The page number list in the printed form would become \namerefs in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/html versions  The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

9.6.12  nomenc package

Pkg  nomenc  To process the HTML nomenclature:

    makeindex <project>_html.nlo -s nomenc.ist -o <project>_html.nls

9.6.13  Indexing overview

There are many ways to process indexes for a LaTeX document, including native LaTeX capabilities, a number of packages and classes, the possible availability of shell escape and \texttt{latexmk}, and the need to process print and HTML versions. \texttt{lwpark} attempts to provide easy recompilation of indexes along with the rest of the document, but the various indexing options must be set correctly. Numerous examples are given below. Some differ in minor details, so the important parts are highlighted in red, and options are in green.

Once set up properly, the entire document may be recompiled with \texttt{lwpark\ print} and \texttt{lwpark\ html}. In some cases, it will also be necessary to compile the indexes with \texttt{lwpark\ printindex} and \texttt{lwpark\ htmlindex}. A recompile may then be forced with \texttt{lwpark\ print1} and \texttt{lwpark\ html1}.

manual processing  The user may continue to process indexes manually or by shell script without the use of \texttt{lwpark}, but adjustments will be required to process HTML indexes as well. In general, *.idx and *.ind files will be accompanied by *_html.idx and *_html.ind files.

custom index style  If using a custom indexing style file, see sections 9.6.19 and 9.6.20.

source code  See section 77 for \texttt{lwpark}'s core index and glossary code, section 281 for index, section 430 for splitidx, section 280 for imakeidx, section 464 for tocbibind, and section 519.17 for \texttt{memoir}'s indexing patches.

9.6.14  Indexing with basic LaTeX and makeidx

\texttt{lwpark} processing  The following allow the user to process indexes automatically, or using \texttt{lwpark}'s commands:

Enter ⇒ \texttt{lwpark\ printindex}

Enter ⇒ \texttt{lwpark\ htmlindex}
For a single index using *makeindex*:

\usepackage[makeindex,latexmk] {lwpamp}

The usual .idx and .ind files will be used, along with the new lwpamp.ist style file. When creating the HTML index, “.html” is automatically appended to each of the names.

lwpamp will use latexmk if specified, in which case latexmk will create the index automatically. Otherwise, use

Enter ⇒ lwpamp printindex
Enter ⇒ lwpamp htmlindex

to compile the indexes.

For a single index using *xindy*:

\usepackage[
      xindy,
        xindyLanguage=english, <optional>
        xindyCodepage=utf8, <optional>
        latexmk <optional>
    ]{lwpamp}

The usual .idx and .ind files will be used, along with the new lwpamp. xdy style file.

lwpamp will use latexmk if specified, in which case latexmk will create the index automatically. Otherwise, use

Enter ⇒ lwpamp printindex
Enter ⇒ lwpamp htmlindex

to compile the indexes.

9.6.15 Indexing with index

lwpamp is told how to use *makeindex* using the PrintIndexCmd and HTMLIndexCmd options. The file lwpamp.ist is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.
For multiple indexes using `makeindex` and `index`:

(Assuming that the second index has file extensions `.sist` and `.sind`)

\begin{verbatim}
\usepackage[
    makeindex, latexmk,]
    \PrintIndexCmd={
        makeindex -s lwarp.ist <projectname>.idx ;
        makeindex -s lwarp.ist
        -o <projectname>.sind <projectname>.sidx
    },
    HTMLIndexCmd={
        makeindex -s lwarp.ist <projectname>_htm/l.Var.idx ;
        makeindex -s lwarp.ist
        -o <projectname>_htm/l.Var.sind <projectname>_htm/l.Var.sidx
    }
}\end{verbatim}

\usepackage{index}

\makeindex

\newindex{secondname}{sidx}{sind}{Second Index}

For \texttt{W/I.sc/N.sc/D.sc/O.sc/W.sc/S.sc}, replace the two ";" characters with ".".

\textbf{Windows}

For \textit{Windows}, replace the two ";" characters with ".&".

When creating the HTML index, ".html" is automatically appended to the index filenames.

Use

\begin{verbatim}
Enter ⇒ lwarp\mk printindex
Enter ⇒ lwarp\mk htmlindex
\end{verbatim}

to compile the indexes.

If the \texttt{latexmk} option is selected for lwarp, \texttt{latexmk} will compile the document but will not compile the indexes. lwarp\mk printindex and lwarp\mk htmlindex will still be required.

\subsection{9.6.16 Indexing with \texttt{splitidx}}

lwarp is told how to use \texttt{splitindex} using the \texttt{PrintIndexCmd} and \texttt{HTMLIndexCmd} options. The file \texttt{lwarp.ist} is specified, which generates index letter heads for print output and also allows special \texttt{HTML} formatting for \texttt{HTML} output.

If the \texttt{latexmk} option is selected for lwarp, \texttt{latexmk} will compile the document but will not compile the indexes. lwarp\mk printindex and lwarp\mk htmlindex will still be required.

\textbf{\texttt{\the@page}}

When using \texttt{\AtWriteToIndex} or \texttt{\AtNextWriteToIndex}, the user must not refer to \texttt{\the@page} during \texttt{HTML} output, as the concept of a page number is meaningless. Instead, do

\begin{verbatim}
\addtocounter{LWR@autoindex}{1}
\LWR@new@/l.Varabe/l.Var{LWRindex-\arabic{LWR@autoindex}}
\end{verbatim}
where the \index-like action occurs, and then refer to \arabic{LWR@autoindex} instead of \thepage where the reference should occur.

See section 519.17 in the lwarp-patch-memoir package for the \@wrspindexhyp macro as an example.

**For multiple indexes using makeindex and splitidx:**

\begin{verbatim}
\usepackage[
    makeindex, latexmk,
    PrintIndexCmd={
        splitindex <projectname> -- -s lwpard.ist
    },
    HTMLIndexCmd={
        splitindex <projectname>_html -- -s lwpard.ist
    }
]{lwpard}
\usepackage{splitidx}
\makeindex
\newindex[Second Index]{secondname}
\end{verbatim}

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

Enter ⇒ lwpard printindex
Enter ⇒ lwpard htmlindex

to compile the indexes.

**For multiple indexes using xindy and splitidx:**

\begin{verbatim}
\usepackage[
    xindy, latexmk,
    PrintIndexCmd={
        splitindex -m xindy <projectname> -- -M lwpard.xdy
        -L english -C utf8
    },
    HTMLIndexCmd={
        splitindex -m xindy <projectname>_html -- -M lwpard.xdy
        -L english -C utf8
    }
]{lwpard}
\usepackage{splitidx}
\makeindex
\newindex[Second Index]{secondname}
\end{verbatim}

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

Enter ⇒ lwpard printindex
Enter ⇒ lwpark htmlindex
to compile the indexes.

9.6.17 Indexing with imakeidx

Due to the number of methods which may be used to process multiple indexes, the options for style file and xindy language and codepage must be specified in one of several different ways. These are described in detail later in this section, but are summarized here.

If shell escape is used, imakeidx will automatically compile the indexes by itself. Options specifying a custom style file and xindy language and codepage must be specified for each \makeindex command using its options= option, which must include lwarp’s special lwarp.ist or lwarp.xdy file, or a file based on them. If using a custom indexing style file, see sections 9.6.19 and 9.6.20. The splitindex option is also available of shell escape is used, in which case the splitidx package and splitindex program will also be used.

If shell escape is not possible, latexmk may be used to automatically compile the indexes. The style, language, and codepage options are specified with lwarp’s makeindexStyle, xindyStyle, xindyLanguage, and xindyCodepage options. These are passed to latexmk by lwarp’s lwpark printindex and lwpark htmlindex commands.

Where shell escape and latexmk are not possible, lwarp may be used to manually compile the indexes. lwarp’s PrintIndexCmd and HTMLIndexCmd options are used.

For a single or multiple indexes using makeindex and imakeidx:

The index style lwarp.ist is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```latex
\usepackage[makeindex,latexmk] {lwarp}
\usepackage[makeindex]{imakeidx}
```

```latex
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

imakeidx will automatically compile the indexes. Shell escape is not required while using makeindex. latexmk may be specified, and if so it will be used for lwpark print and lwpark html, but imakeidx will actually create the indexes.

For a single or multiple indexes using makeindex and splitindex with imakeidx:

The index style lwarp.ist is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.
\usepackage{makeindex,latexmk} \{lwarf\}
\usepackage{makeindex,splitindex}[imakeidx]

\makeindex[options={-s lwarf.ist}]
\makeindex[name=secondname,options={-s lwarf.ist}]

⚠️ enable shell escape

Shell escape is required while using \texttt{splitindex}. For the first compile, use

Enter ⇒ \texttt{pdflatex \--shell-escape \texttt{projectname.tex}}

Enter ⇒ \texttt{pdflatex \--enable-write18 \texttt{projectname.tex}} (MiKTeX)

or similar with \texttt{xelatex} or \texttt{lualatex}. \texttt{lwarf} will remember that shell escape was used.

\texttt{imakeidx} will automatically execute \texttt{splitindex}, and will also use \texttt{makeindex} to compile the indexes.

\texttt{latexmk} may be specified, and if so it will be used for \texttt{lwarf\texttt{pmk print}} and \texttt{lwarf\texttt{pmk html}}, but \texttt{imakeidx} will actually create the indexes.

For multiple indexes using \texttt{xindy} and \texttt{imakeidx}, using shell escape:

Options may be given to \texttt{imakeidx}'s \texttt{makeindex} command. The style file \texttt{lwarf\texttt{.xdy}} is automatically used for \texttt{html} output, and is not necessary for print output since the output will be similar. If language or codepage must be set, they should be specified as options for \texttt{makeindex}, since \texttt{imakeidx} will process the indexes.

\usepackage[xindy,latexmk] \{lwarf\}
\usepackage[xindy,splitindex][imakeidx]

\makeindex[
  \texttt{options={{-M lwarf\texttt{.xdy} -L english \texttt{-c utf8}}}}
]
\makeindex[
  \texttt{name=secondname,}
  \texttt{options={{-M lwarf\texttt{.xdy} -L english \texttt{-c utf8}}}}
]

⚠️ enable shell escape

For the first compile, use

Enter ⇒ \texttt{pdflatex \--shell-escape \texttt{projectname.tex}}

Enter ⇒ \texttt{pdflatex \--enable-write18 \texttt{projectname.tex}} (MiKTeX)

or similar with \texttt{xelatex} or \texttt{lualatex}. \texttt{lwarf} will remember that shell escape was used.

\texttt{imakeidx} will automatically execute \texttt{splitindex} if selected, and will also use \texttt{xindy} to compile the indexes.

If selected, \texttt{latexmk} will automatically recompile the entire document as necessary.
For indexes using `xindy` and `imakeidx`, without shell escape, but *with latexmk*:

lwarp’s options are used, and are passed to `latexmk`.

\begin{verbatim}
\usepackage[
  xindy,
  xindyLanguage=english, \text{<optional>}
  xindyCodepage=utf8, \text{<optional>}
]{lwarp}
\usepackage[xindy]{imakeidx}
...\makeindex
\makeindex[name=secondname]
\end{verbatim}

`latexmk` will create the indexes automatically when `lwarpmk print` and `lwarpmk html` are executed.

For indexes using `xindy` and `imakeidx`, without shell escape, and *without latexmk*:

`lwarp` must be told how to create the indexes:

\begin{verbatim}
\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8 \text{<projectname>}.idx ;
    xindy -M lwarp.xdy -L english -C utf8 secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8 \text{<projectname>}.html.idx ;
    xindy -M lwarp.xdy -L english -C utf8 secondname.html.idx
  }
]{lwarp}
\usepackage[xindy]{imakeidx}
...\makeindex
\makeindex[name=secondname]
\end{verbatim}

\textbf{Windows} \hspace{1cm} For Windows, replace the two “;” characters with “&”.

\texttt{<projectname>} is the \jobname{}: if compiling “name.tex”, use the filenames name.idx and name.html.idx.

Use

Enter ⇒ \texttt{lwarpmk printindex}

Enter ⇒ \texttt{lwarpmk htmlindex}

to compile the indexes.
9.6.18 Indexes with memoir

For a single index with memoir and makeindex:

\documentclass{memoir}
\usepackage[makeindex,latexmk]{l warp}
\makeindex

The usual .idx and .ind files will be used, along with the \warp.ist style file. 
\l warp\texttt{mk} will use latexmk if specified, in which case latexmk will create the index automatically. Otherwise, use

Enter ⇒ \texttt{l warp\texttt{mk} printindex}

Enter ⇒ \texttt{l warp\texttt{mk} htmlindex}
to compile the indexes.

For multiple indexes with memoir and makeindex, using latexmk:

\l warp's options are used, and are passed to latexmk.

\documentclass{memoir}
\usepackage[makeindex,latexmk]{l warp}
\makeindex
\makeindex[secondname]

\l warp\texttt{mk} will use latexmk to create the indexes automatically when the user executes \texttt{l warp\texttt{mk} print} and \texttt{l warp\texttt{mk} html}.

For multiple indexes with memoir and makeindex, without latexmk:

\l warp\texttt{mk} must be told how to create the indexes:

\documentclass{memoir}
\usepackage[
makeindex, PrintIndexCmd={
 makeindex -s l warp.ist <projectname>.idx ;
 makeindex -s l warp.ist secondname.idx
},
HTMLIndexCmd={
 makeindex -s l warp.ist <projectname>_html.idx ;
 makeindex -s l warp.ist secondname_html.idx
}]{l warp}
\makeindex
\makeindex[secondname]

⚠️ \textbf{Windows}

For Windows, replace the two \texttt{\textasciitilde;\textasciitilde;} characters with \texttt{\&\&}.

<projectname> is the \texttt{\jobname}: if compiling \texttt{name.tex}, use the filenames \texttt{name.idx} and \texttt{name_html.idx}.

Use

Enter ⇒ \texttt{l warp\texttt{mk} printindex}

Enter ⇒ \texttt{l warp\texttt{mk} htmlindex}
to compile the indexes.

For a single index with \texttt{memoir} and \texttt{xindy}:

\begin{verbatim}
\documentclass{memoir}
\usepackage[
  \texttt{xindy},
  \texttt{xindyLanguage=english}, \texttt{optional},
  \texttt{xindyCodepage=utf8}, \texttt{optional},
  \texttt{latexmk}
]{\texttt{lwarpmk}}
\xindyindex
\makeindex
\end{verbatim}

\texttt{lwarpmk} will use \texttt{latexmk} if specified, in which case \texttt{latexmk} will create the index automatically. Otherwise, use

Enter ⇒ \texttt{lwarpmk printindex}

Enter ⇒ \texttt{lwarpmk htmlindex}

to compile the indexes.

For multiple indexes with \texttt{memoir} and \texttt{xindy}, using \texttt{latexmk}:

\texttt{lwarpmk}'s options are used, and are passed to \texttt{latexmk}.

\begin{verbatim}
\documentclass{memoir}
\usepackage[
  \texttt{xindy},
  \texttt{xindyLanguage=english}, \texttt{optional},
  \texttt{xindyCodepage=utf8}, \texttt{optional},
  \texttt{latexmk}
]{\texttt{lwarpmk}}
\xindyindex
\makeindex
\makeindex[secondname]
\end{verbatim}

\texttt{lwarpmk} will use \texttt{latexmk} to create the indexes automatically.
For multiple indexes with \texttt{memoir} and \texttt{xindy}, \textit{without latexmk}:

\texttt{lwarp\_mk} must be told how to create the indexes:

\begin{verbatim}
\documentclass{memoir}
\usepackage[
    xindy,
    PrintIndexCmd={
      \texttt{xindy -M /\jobname/varwarp.xdy -L eng/\jobname/shish -C utf8 <\jobname>.idx ;
      \texttt{xindy -M /\jobname/varwarp.xdy -L eng/\jobname/shish -C utf8
      \texttt{secondname.idx}
    },
    HTMLIndexCmd={
      \texttt{xindy -M /\jobname/varwarp.xdy -L eng/\jobname/shish -C utf8
      \texttt{<\jobname>_htm/\jobname.idx ;
      \texttt{xindy -M /\jobname/varwarp.xdy -L eng/\jobname/shish -C utf8
      \texttt{secondname_html/\jobname.idx}
    }
\}\{\lwarp\}
...
\xindyindex
\makeindex
\makeindex[secondname]
\end{verbatim}

\textbf{Windows} \textit{For Windows, replace the four “;” characters with “&”.

<\jobname> is the \texttt{\jobname}: if compiling “\texttt{name.tex}”, use the filenames \texttt{name.idx} and \texttt{name_html.idx}.

Use

\begin{verbatim}
  Enter ⇒ lwarp\_mk printindex
  Enter ⇒ lwarp\_mk htmlindex
\end{verbatim}
to compile the indexes.

\section*{9.6.19 Using a custom \texttt{makeindex} style file}

\textbf{Prog makeindex File lwarp.ist}

When using \texttt{makeindex}, \texttt{lwarp\_mk} uses the file \texttt{lwarp.ist} to process the index. This file is over-written by \texttt{lwar} whenever a print version of the document is processed.

To use a custom \texttt{makeindex} style file:

1. Copy \texttt{lwarp.ist} to a new filename such as \texttt{projectname.ist}

2. Make changes to \texttt{projectname.ist}. Keep the lines which refer to \texttt{\hyperindexref}. These lines creates the hyperlinks for the HTML index. During print output \texttt{\hyperindexref} becomes a null function.

3. In the document source use the \texttt{makeindexStyle} option for \texttt{lwar}:

\begin{verbatim}
\usepackage[
  ... other options ...
\end{verbatim}
\textred{makeindexStyle=projectname.ist},
}{lwarpmk}

Likewise, refer to the custom style file if using \PrintIndexCmd, \HTMLIndexCmd, or \LatexmkIndexCmd.

4. Recompile the print version, which causes lwarp to rewrite the lwarpmk.conf configuration file. This tells lwarpmk to use the custom projectname.ist file instead of lwarp.ist.

9.6.20 Using a custom xindy style file

When using xindy, lwarpmk uses the file lwarp.ydy to process the index. This file is over-written by lwarp whenever a print version of the document is processed.

To use a custom xindy style file:

1. Copy lwarp.ydy to a new filename such as projectname.ydy
2. Make changes to projectname.ydy.
   Keep the lines which refer to \hyperindexref:
   
   (define-attributes (("hyperindexref")))
   (markup-locref :open "\hyperindexref{" :close "}")
   ...
   (markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")

   These lines create the hyperlinks for the HTML index. During print output \hyperindexref becomes a null function.
   To create custom styles, refer to the lines for \textbf and \textit.
3. In the document source use the xindyStyle option for lwarp:

   \usepackage[
   ... other options ...
   \textred{xindyStyle=projectname.ydy},
   ]{lwarpmk}

   Likewise, refer to the custom style file if using \PrintIndexCmd, \HTMLIndexCmd, or \LatexmkIndexCmd.

4. Recompile the print version, which causes lwarp to rewrite the lwarpmk.conf configuration file. This tells lwarpmk to use the custom projectname.ydy file instead of lwarp.ydy.

9.6.21 Additional indexing limitations

⚠️ xindy with hyperref

xindy and hyperref may not work well together for print output with “see”, “see also”, reference ranges, or stylized index references. It may be necessary to turn off hyper-referencing for indexes:
empty index

If an HTML index is empty, it may be necessary to add the following before \lwp is loaded:

\usepackage{morewrites}
\morewritessetup{allocate=10}
.
\usepackage{\lwp}

\textbf{makeindex custom display styles}

When using \texttt{makeindex}, custom display styles are possible:

\begin{warpprint}
\newcommand{\notesstyle}{#1nn}
\end{warpprint}

\begin{warpHTML}
\makeatletter
\newcommand{\notesstyle}{\LWR@doindexentry{#1} notes }
\makeatother
\end{warpHTML}
.
A sentence.\index{key|notesstyle}

\textbf{xindy custom display styles}

For custom styles with \texttt{xindy}, see \texttt{lwp.xdy} for \texttt{\textbf{bf}} and \texttt{\textit{it}} as examples.

\section{Index positions, toc, tocbind}

\textbf{placement and toc options}

An index may be placed inline with other HTML text, or on its own HTML page:

\textbf{Pkg makeidx} \textbf{Inline, with a manual toc entry:}

A commonly-used method to introduce an index in a \LaTeX\ document:

\begin{verbatim}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}
\printindex
\end{verbatim}

\textbf{Pkg makeidx} \textbf{On its own HTML page, with a manual toc entry:}

\begin{verbatim}
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}
\end{warpprint}
\end{verbatim}

\textbf{Pkg tocbind} \textbf{Inline, with an automatic toc entry:}

The tocbind package may be used to automatically place an entry in the toc.
On its own HTML page, with an automatic TOC entry:

Use the `tocbibind` `numindex` option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as `imakeidx`, may also have options for including the index in the Table of Contents.

If using `tocloft` with `tocbibind`, `anonchap`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard LaTeX commands to create the titles, allowing other packages to work with it.

### 9.7 Math

#### 9.7.1 Math in section names

If using named HTML files, in section names use paren math `\((x+y)\)` instead of dollar math `$_{x+y}$`. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use `\textorpdfstring`:

```latex
\section{A name with math
\textorpdfstring{$1+2=3$}{text description}}
```

#### 9.7.2 Rendering tradeoffs

**Math rendering** Math may be rendered as SVG graphics or using the MathJax JavaScript display engine.

**SVG files** Rendering math as images creates a new SVG file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to SVG only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

**SVG inline** The svg images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.
PNG files
Others \LaTeX-to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but svg files are the preferred approach for scalable graphics.

MathML
Conversion to MathML might be a better approach, among other things allowing a more compact representation of math than SVG drawings. Problems with MathML include limited browser support and some issues with the fine control of the appearance of the result. Also see section 11 regarding ePub output with MathJax.

9.7.3 svg option

SVG math option
For svg math, math is rendered as usual by \LaTeX into the initial PDF file using the current font\footnote{See section 506 regarding fonts and fractions.}, then is captured from the PDF and converted to svg graphics via a number of utility programs. The svg format is a scalable-vector web format, so math may be typeset by \LaTeX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An HTML alt attribute carries the \LaTeX code which generated the math, allowing copy/paste of the \LaTeX math expression into other documents.

SVG image font size
For the \LaTeXimage environment, the size of the math and text used in the svg image may be adjusted by setting \LaTeXimageFontSizeName to a font size name — without the backslash, which defaults to:

\renewcommand{\LaTeXimageFontSizeName}{normalsize}

For inline svg math, font size is instead controlled by \LaTeXimageFontScale, which defaults to:

\newcommand*{\LaTeXimageFontScale}{.75}

SVG math copy/paste
For svg math, text copy/paste from the HTML <alt> tags lists the equation number or tag for single equations, along with the \LaTeX code for the math expression. For \AMS environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred \AMS environment, although the \tag macro will still appear inside the \LaTeX math expression.

\begin{itemize}
\item SVG math does not work inside \TeX boxes, since a \newpage is required before and after each image.
\end{itemize}

9.7.4 MathJax option

MathJax math option
The popular MathJax alternative (mathjax.org) may be used to display math.

When MathJax is enabled, math is rendered twice:

1. As regular \LaTeX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of \LaTeX, and
2. As detokenized printed \LaTeX commands placed directly into the HTML output for interpretation by the MathJax display scripts. An additional script is used to pre-set the equation number format and value according to the current \LaTeX values, and the MathJax cross-referencing system is ignored in favor of the \LaTeX internal system, seamlessly integrating with the rest of the \LaTeX code.

### 9.7.5 Customizing MathJax

MathJax does not have preexisting support every possible math function. Additional MathJax function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```latex
\CustomizeMathJax{
newcommand{\expval}[1]{\langle #1 \rangle}
newcommand{\abs}[1]{\lvert #1 \rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

### 9.7.6 MathJax limitations

**MathJax limitations** Limitations when using MathJax include:

- **subequations**  
  - MathJax itself does not support subequations. This may be improved by parsing the \LaTeX math expression to manually insert tags, but this has not yet been done.

- **footnotes in math**  
  - Footnotes inside equations are not yet supported while using MathJax.

- **lateximage**  
  - Math appearing inside a lateximage, and therefore also inside a Tikz or picture environment, is rendered as SVG math even if MathJax is used in the rest of the document.

- **siunitx**  
  - Usage of \textsf{siunitx} inside a math equation is supported via a third-party MathJax extension. While inside a math expression, do not use \texttt{SI} or \texttt{si} inside \texttt{\text}, where it will be rendered as normal text.

  - \texttt{\textbf{siunitx inside an equation}}  
    - [https://github.com/burnpanck/MathJax-siunitx](https://github.com/burnpanck/MathJax-siunitx)
    - Also see section 9.7.11.

- **tabbing**  
  - A tabbing environment is emulated using an HTML <pre>. While MathJax is enabled inside tabbing, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.

- **other macros and packages**  
  - Other math-related macros and packages are not supported by MathJax, including \texttt{vcentermath} and \texttt{bigdelim}, along with occasionally-used macros such as \texttt{\relax}. lwarp emulates footnotes, units, and \texttt{nicefrac} for MathJax.
9.7.7 Catcode changes

The math shift character $ is not set for HTML output until after the preamble. Macros defined in the preamble which contain $ must be enclosed between \StartDefiningMath and \StopDefiningMath to temporarily change to the HTML meaning of $:

\StartDefiningMath
\newcommand{. . . }
\StopDefiningMath

As an alternative, use \( and \) instead of $, in which case \StartDefiningMath and \StopDefiningMath are not necessary.

If a package defines macros using $, it may be necessary to use \StartDefiningMath and \StopDefiningMath before and after loading the package.

9.7.8 Complicated inline math objects

An inline math expression is usually converted to a reusable hashed SVG math image, or a MathJax expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as $x+1$, so the image can be reused for multiple instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses.

Another problem is complicated contents which do not expand well in an alt tag. The macro \inlinemathother may be used before a dynamic math expression, and \inlinemathnormal after. Doing so tells lwarp to use an unhashed SVG math image, even if MathJax is in use. See section 45.

9.7.9 Complicated display math objects

By default, or when selecting \displaymathnormal, MathJax math display environments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

When selecting \displaymathother, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate Tikz picture, which will not render in MathJax and will not make sense as an HTML alt tag. In this mode, MathJax is turned off, math display environments become SVG images, even if MathJax is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

9.7.10 ntheorem package

This conversion is not total. Font control is via CSS, and the custom \LaTeX font settings are ignored.
\section*{Equation numbering}

\texttt{nttheorem} has a bug with equation numbering in \texttt{AMS} environments when the option \texttt{thref} is used. \texttt{lwp} does not share this bug, so equations with \texttt{\split}, etc, are numbered correctly with \texttt{lwp}'s HTML output, but not with the print output. It is recommended to use \texttt{cleveref} instead of \texttt{nttheorem}'s \texttt{thref} option.

\subsection*{9.7.11 \texttt{siunitx} package}

\texttt{siunitx} due to \texttt{pdftotext} limitations, fraction output is replaced by symbol output for \texttt{per-mode} and \texttt{quotient-mode}.

\textbf{\texttt{math mode required}}

Some units will require that the expression be placed inside math mode.

\begin{itemize}
\item \textbf{NOTE: As of this writing, the \texttt{siunitx} extension for \texttt{MATHJAX} is not currently hosted at any public CDN, thus \texttt{siunitx} is not usable with \texttt{MATHJAX} unless a local copy of this extension is created first. See \texttt{MathJaxFilename} to select a custom MathJax script.}
\end{itemize}

\textbf{\texttt{tabular}}

Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in \texttt{\num} or \texttt{\si}.

\subsection*{9.7.12 \texttt{units} and \texttt{nicefrac} packages}

\texttt{units} and \texttt{nicefrac} work with \texttt{lwp}, but \texttt{MATHJAX} does not have an extension for \texttt{units} or \texttt{nicefrac}. These packages do work with \texttt{lwp}'s option \texttt{svgmath}.

\subsection*{9.7.13 \texttt{newtxmath} package}

\begin{itemize}
\item \textbf{The proper load order is:}
\begin{verbatim}
\usepackage{lwp}
\usepackage{amsthm}
\usepackage{newtxmath}
\end{verbatim}
\end{itemize}

\subsection*{9.8 Graphics}

\begin{itemize}
\item \textbf{Avoid using the \texttt{\includegraphics} \texttt{scale} option. Change:}
\begin{verbatim}
\usepackage{lwp}
\usepackage{amsthm}
\usepackage{newtxmath}
\end{verbatim}
\item \textbf{to:}
\begin{verbatim}
\usepackage{lwp}
\usepackage{amsthm}
\usepackage{newtxmath}
\end{verbatim}
\end{itemize}

\begin{itemize}
\item \textbf{For \texttt{\includegraphics} with \texttt{.pdf} or \texttt{.eps} files, the user must provide a \texttt{.pdf} or \texttt{.eps}
\item \texttt{\includegraphics} file formats}
\end{itemize}
image file for use in print mode, and also a .svg, .png, or .jpg version of the same image for use in HTML.

\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.

For print output, lwp will automatically choose the .pdf or .eps format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for HTML:

\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html

To convert a PDF image to SVG, use the utility pdftocairo:

Prog pdftocairo PDF to SVG

Enter ⇒ pdftocairo -svg filename.pdf

For a large number of images, use lwp:

Prog lwp mk pdftosvg

Enter ⇒ lwp mk pdftosvg *.pdf    (or a list of filenames)

For EPS images converted to PDF using the package epstopdf, use

Prog lwp mk epstopdf

Enter ⇒ lwp mk pdftosvg *.PDF

to convert to SVG images.

When using dvilatex, it is necessary to convert EPS to PDF and then to SVG:

DVI latex

Enter ⇒ lwp mk epstopdf *.eps   (or a list of filenames)

Enter ⇒ lwp mk pdftosvg *.pdf   (or a list of filenames)

For PNG or JPG while using pdflatex, lualatex, or xelatex, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

PNG and JPG

GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities

If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

graphics vs. graphicx

If using the older graphics syntax, use both optional arguments for \includegraphics. A single optional parameter is interpreted as the newer graphicx syntax. Note that viewports are not supported by lwp — the entire image will be shown.

viewport

For \includegraphics, avoid px and % units for width and height, or enclose them inside \warpHTML environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys \textwidth or \textheight to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the scale option, since it is not well supported by HTML browsers.
options \includegraphics accepts width and height, origin, rotate and scale, plus new class and alt keys.

**HTML class** With HTML output, \includegraphics accepts an optional class=xyz keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

**HTML alt tags** Likewise, the \includegraphics alt key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag of “(image)”.

\rotatebox \rotatebox accepts the optional origin key.

**browser support** \rotatebox, \scalebox, and \reflectbox depend on modern browser support. The css3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike \LaTeX, so expect some ugly results for scaling and rotating.

### 9.8.1 tikz package

**Pkg tikz** If using display math with \tikzpicture or \tikz, along with matrices with the & character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of & in the tikz expression must be replaced with \&.

### 9.8.2 grfile package

**Pkg grfile** grfile is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

### 9.8.3 color package

**Pkg color** color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.

### 9.8.4 xcolor package

**Pkg xcolor** \colorbboxBlock and \fcolorbboxBlock are provided for increased HTML compatibility, and they are identical to \colorbox and \fcolorbox in print mode. In HTML mode they place their contents into a <div> instead of a <span>. These <div>s are set to display: inline-block so adjacent \colorbboxBlocks appear side-by-side in HTML, although text is placed before or after each.
Print-mode definitions for \colorboxBlock and \fcolorboxBlock are created by lwarp's core if xcolor is loaded.

- **background: none** \colorbox and \fcolorboxBlock allow a background color of none, in which case only the frame is drawn, which can be useful for HTML.
- **color support** Color definitions, models, and mixing are fully supported without any changes required.
- **colored tables** \rowcolors is supported, except that the optional argument is ignored so far.
- **colored text and boxes** \textcolor, \colorbox, and \fcolorbox are supported.
- **\color and \pagecolor** \color and \pagecolor are ignored. Use css or \textcolor where possible.

### 9.8.5 epstopdf package

**Pkg** epstopdf Images with an .eps extension will be converted to .pdf. The HTML output uses the .svg version, so use

```
\lwp make pdftosvg <listofPDFfiles>
```

to generate .svg versions.

### 9.8.6 pstricks package

**Pkg** pstricks All pstricks content should be contained inside a pspicture environment.

```
\lwp use pspicture
```

### 9.8.7 pdftricks package

**Pkg** pdftricks The pdftricks image files <jobname>-fig*.pdf must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

```
\lwp make pdftosvg <jobname>-fig*.pdf
```

### 9.8.8 psfrag package

**Pkg** psfrag The psfrags environment is modified to use lateximage to encapsulate the image. Always use a psfrags environment to contain any local \psfrag macros and the associated \includegraphics or \epsfig calls. Outside of a psfrags environment, psfrags adjustments will not be seen by lwarp.

```
\lwp use psfrags
```

**Tip:** Use a mono-spaced font for the tags in the eps file.
9.8.9  **psto** tool package

\texttt{psto}\texttt{tool} \texttt{graphicspath} is ignored, and the file directory must be stated.

\textbf{\texttt{\textcircled{}}} \textbf{path and filename}  
The filename must not have a file extension.

Use

\texttt{Enter} \texttt{\Rightarrow} \texttt{lwarpmk html}

followed by

\texttt{Enter} \texttt{\Rightarrow} \texttt{lwarpmk limages}

9.8.10  **asymptote** package

\texttt{asymptote} \texttt{Pdf} \texttt{latex} \texttt{project.tex}
\texttt{asy} \texttt{project-*.asy}
\texttt{pdflatex} \texttt{project.tex}

\texttt{lwarpmk print}
\texttt{asy} \texttt{project-*.asy}
\texttt{lwarpmk print1}
\texttt{lwarpmk print1}

\texttt{lwarpmk html}
\texttt{asy} \texttt{project\_html-*.asy}
\texttt{lwarpmk html1}
\texttt{lwarpmk html1}
\texttt{lwarpmk limages}

9.8.11  **overpic** package

\texttt{overpic} \texttt{Pkg} \texttt{scaling}

The macros \texttt{overpicfontsize} and \texttt{overpicfontskip} are used during HTML generation. These are sent to \texttt{\fontsize} to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the overpic and Overpic environments.

9.9  **Tabbing**

The tabbing environment works, except that \texttt{svg math} and \texttt{lateximage} do not yet work inside the environment.

\textbf{\textcircled{}}} \textbf{math in tabbing}  
If math is used inside tabbing, place tabbing inside a \texttt{lateximage} environment, which
will render the entire environment as a single SVG image.

### 9.10 Tabular

#### 9.10.1 tabular environment

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, * column specifiers, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

#### Defining macros and environments:

- **Misplaced alignment tab character &**
  
  When defining environments or macros which include `\begin{tabular}` and instances of the `&` character, it may be necessary to make `&` active before the environment or macro is defined, then restore `&` to its default catcode after, using the following commands. These are are ignored in print mode.

  ```latex
  \StartDefiningTabulars
  \begin{define macros or environments using tabular and & here}
  \StopDefiningTabulars
  ```

- **floatrow**
  
  This includes before and after defining any macro which used \tttabbox from floatrow.

- **tabular inside another environment**
  
  When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

  ```latex
  \StartDefiningTabulars  % because & is used in a definition
  \newenvironment{outerenvironment}{}
  \{\tabular{cc}
  \left & \right \\\n  \}
  \{\TabularMacro\ResumeTabular
  \left & \right \\\n  \endtabular
  \}
  \StopDefiningTabulars
  ```

#### Cell contents:

- **Macro in a table**
  
  Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

  ```latex
  \TabularMacro\somemacro & more row contents \\
  ```

#### Column specifiers:

- *** column specification**
  
  * in a column specification is not used (so far). Repeat the column type the correct number of times.
@ and ! • Only one each of @ and ! is used at each column, and they are used in that order.
\multiorow • In \multiorow cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the \multiorow which do not appear in the HTML version.
⚠ \newcolumntype • \newcolumntype is ignored; unknown column types are set to l.

Rules:

vertical rules • Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.
width and trim • Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.
full-width rules • \toprule, \midrule, \bottomrule, and \hline ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.
combined rules • If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:
\begin{verbatim}
\cmidrule{2-3} \\[-2ex
\bottomrule
\end{verbatim}
The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.
⚠ \warpprintonly • For \toprule and \bottomrule, when combined with a warpprint or warpHTML environment, if a “Misplaced \noalign” error occurs, change
This & That \endhead
to
\begin{verbatim}
\warpprintonly{This & That \endhead}
\end{verbatim}
and likewise with the other \end headings. Keep the \endfirsthead row unchanged, as it is still relevnt to HTML output.

Other:

• tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.
\longtable headings • For \longtable, place headings and footings which do not apply to HTML inside \warpprintonly{}.
⚠ S columns • For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside {} braces, including commands such as \multiorow. While producing HTML output, though, anything placed inside braces is not seen by lwarp’s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:
\begin{verbatim}
\warpprintonly{1 & 2 & \{\multiorow{2}(2cm){Text}\} & 3 \}
\warpHTMLonly{1 & 2 & \multiorow{2}(2cm){Text} & 3 \}
\end{verbatim}
9.10.2 \texttt{multirow} package

- **vposn**
  - Note that recent versions of \texttt{multirow} include a new optional \texttt{vposn} argument.

- **multirow cells**
  - For \texttt{multirow}, insert \texttt{\mrowcell} into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

\[
\ldots & \texttt{\multirow(2){.5in}{text}} & \ldots \\
\ldots & \texttt{\mrowcell} & \ldots
\]

- **colored cells**
  - The \texttt{multirow} documentation regarding colored cells recommends using a negative number of rows. This will not work with \texttt{lwp}, so \texttt{\warpPrintonly} and \texttt{\warpHTMLonly} must be used to make versions for print and HTML.

- **with \texttt{multicolumn}**
  - See section 332.2 for \texttt{multicolumnrow}.

\begin{itemize}
  \item \texttt{\multicolumnrow\{2\}(c\{c\}{3\{0\}in\{0pt\}}\{Text\})}
  \end{itemize}

  The two arguments for \texttt{\multicolumn} come first, followed by the five arguments for \texttt{\multicolumnrow}, many of which are optional, followed by the contents.

- **skipped cells**
  - As per \texttt{\multirow}, skipped cells to the right of the \texttt{\multicolumnrow} statement are not included in the source code on the same line. On the following lines, \texttt{\mcolrowcell} must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

\[
\ldots & \texttt{\multicolumnrow\{2\}(c\{c\}{3\{0\}in\{0pt\}}\{Text\})} & \ldots \\
\ldots & \texttt{\mcolrowcell} & \texttt{\mcolrowcell} & \ldots
\]

9.10.3 \texttt{longtable} package

- **Pkg** \texttt{longtable}
  - Use one of either \texttt{\endhead} or \texttt{\endfirsthead} for both print and HTML, and use a \texttt{\warpPrintonly} macro to disable the other head phrase, and also the \texttt{\endfoot} and \texttt{\endfirstfoot} phrases. (See section 9.10.4 if using \texttt{threeparttablex}.)

\[
\begin{longtable}{ [column specifiers] } \\
\endfirsthead % or \endhead, for print and HTML
\warpPrintonly{ % not used in HTML \\
\endhead % or \endfirsthead \\
\endfoot \\
\begin{lastfoot macros} \endlastfoot \\
\end{longtable}
\]

\[
\ldots \text{table contents} \ldots \\
\warpHTMLonly{ % HTML last footer, without \endfoot % or \endlastfoot. \\
\}
\end{longtable}
\]
Misplaced \noalign

Use the \warpprintononly macro instead of the warpprint environment. Doing so helps avoid “Misplaced \noalign.” when using \begin{warpprint}.

\kill \kill is ignored, place a \kill line inside

\begin{warpprint} ... \end{warpprint}

or place it inside \warpprintonly.

lateximage longtable is not supported inside a lateximage.

9.10.4 threeparttablex package

Pkg threeparttablex threeparttablex is used with longtable and booktabs as follows:

\begin{longtable}{ [column specifiers] } 
[ ... ] \endfirsthead % or \endhead, for print and HTML 
\warpprintononly{} % not used in HTML 
[ ... ] \endhead % or \endfirsthead 
[ ... ] \endfoot 
\bottomrule \insertTableNotes \endlastfoot 
\end{longtable}

... table contents ...
\warpprintonly \% HTML last footer 
\bottomrule 
\UseMinipageWidths \% optional 
\insertTableNotes 
\endlastfoot 
\end{longtable}

table width The table notes are created using a \multicolumn. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, lwarp guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use \UseMinipageWidths before \insertTableNotes. The width is then specified, and in many cases the result is an improvement in overall table layout.

9.10.5 supertabular and xtab packages

Pkg supertabular For \tablefirsthead, etc., enclose them as follows:

Pkg xtab \StartDefiningTabulars \tablefirsthead ... \StopDefiningTabulars

See section 9.10.1.

lateximage supertabular and xtab are not supported inside a lateximage.
9.10.6 colortbl package

Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.

`colortbl` ignores the overhang arguments.

9.10.7 ctable package

Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the `&` character.

9.10.8 bigdelim package

Use `\mrowcell` to ensure proper alignment.

9.11 Floats

9.11.1 Float contents alignment

`\centering`, etc. are honored in a figure or table if they are the first command inside the float:
9.11.2 float, trivfloat, and/or algorithmicx together

If using \texttt{\newfloat, trivfloat, and/or algorithmicx together}, see section 475.1.

9.11.3 caption and subcaption packages

To pass options to \texttt{caption}, select the options before loading lwarp:

\begin{verbatim}
\documentclass[article]
... \PassOptionsToPackage{options_list}{caption} ...
\usepackage{lwarp}
... \usepackage{caption}
\end{verbatim}

To ensure proper float numbering, set caption positions such as:

\begin{verbatim}
\captionsetup[figure]{position=bottom}
\captionsetup[subfigure]{position=bottom}
\captionsetup[table]{position=top}
\captionsetup[subtable]{position=top}
\end{verbatim}

Similarly for longtable. These positions depend on where the user places the \texttt{caption} command inside each float.

9.11.4 subfig package

At present, the package options for \texttt{lofdepth} and \texttt{lotdepth} are not working. These counters must be set separately after the package has been loaded.

In the document source, use \texttt{\hfill and \hspace* subfig-inline} between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

9.11.5 floatrow package

Use \texttt{\StartDefiningTabulars and \StopDefiningTabulars} before and after defining macros using \texttt{\ttabbox} with a tabular inside. See section 9.10.1.

When combined with the subfig package, while inside a subfloatrow \texttt{\ffigbox} and \texttt{\ttabbox} must have the caption in the first of the two of the mandatory arguments.

The emulation of floatrow does not support \texttt{\FBwidth or \FBheight}. These values are pre-set to .3\texttt{\linewidth and 2in}. Possible solutions include:
• Use fixed lengths. \texttt{larp} will scale the HTML lengths appropriately.
• Use \texttt{warpprint} and \texttt{warpHTML} environments to select appropriate values for each case.
• Inside a \texttt{warpHTML} environment, manually change \texttt{FBwidth} or \texttt{FBheight} before the \texttt{figbox} or \texttt{tabbox}. Use \texttt{FBwidth} or \texttt{FBheight} normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

### 9.11.6 keyfloat package

**Pkg** keyfloat

- **keywrap**

If placing a \texttt{\keyfig[H]} inside a \texttt{keywrap}, use an absolute width for \texttt{\keyfig}, instead of \texttt{lwproporptional widths}. (The \texttt{[H]} option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the \texttt{lwp} option.)

### 9.12 KOMA-SCRIPT classes

**Cls** komascript

- **keywrap**

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

- \texttt{\titlehead, \subject, \captionformat, \figureformat, and \tableformat} are not yet emulated.

⚠️ **Not fully tested!** Please send bug reports!

Some features have not yet been tested. Please contact the author with any bug reports.

### 9.13 MEMOIR class

**Cls** memoir

- **options clash**

While emulating \texttt{memoir}, \texttt{larp} pre-loads a number of packages (section 519.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading \texttt{larp}:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{larp}
...
\usepackage{package_name}
```

⚠️ **version numbers**

\texttt{memoir} emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since \texttt{larp} is intended to support the freestanding packages, which are often newer than the date declared by \texttt{memoir}, it is hoped that \texttt{memoir} will update and change its emulated version numbers to match.
\verb!\footnote! is not supported.
\newfootnoteseries, etc. are not supported.

\lwarp loads \pagenote to perform \memoir's \pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

Poem numbering is not supported.

The \verbatim environment does not yet support the \memoir enhancements. It is currently recommended to load and use \fancyvrb instead.

The \memoir glossary system is not yet supported by \lwarpmk. The \glossaries package may be used instead, but does require the glossary entries be changed from the \memoir syntax to the \glossaries syntax.

9.14 International languages

⚠️ section and file names

If using \pdflatex with the setting \booltrue{FileSectionNames}, non-ASCII text in section names can result in corrupted HTML file names. \pdflatex may be used if setting \boolfalse{FileSectionNames}, in which case HTML file numbers will be generated.

For correct HTML file names, use \xelatex, \lualatex, or dedicated document classes / engines.

(As of this writing, this warning is only relevant to the kotex package.)

9.15 Miscellaneous packages

9.15.1 \verse and \memoir

When using \verse or \memoir, always place a \verb!\! after each line.

The documentation for the \verse and \memoir packages suggest defining an \verb!\attrib! command, which may already exist in current documents, but it will only work for print output. \lwarp provides \verb!\attribution!, which works for both print and HTML output. To combine the two so that \verb!\attrib! is used for print and \verb!\attribution! is used for HTML:

\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}

These lengths are used by \verse and \memoir to control the left margin, and they may already be set by the user for print output. New lengths \HTML\vleftskip and \HTML\vleftmargi are provided to control the margins in HTML output. These new lengths may be set by the user before any \verse environment, and persist until they are manually changed again. One reason to change \HTML\vleftmargi is if there is a wide \flagverse in use, such as the word “Chorus”, in which case the value of
\HTMLleftmargini should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

\textbf{\triangleleft spacing} Horizontal spacing relies on \texttt{pdftotext}’s ability to discern the layout (-layout option) of the text in the HTML-tagged PDF output. For some settings of \HTMLleftmargini or \HTMLleftskip the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

\textbf{9.15.2 \texttt{newclude} package}

\textbf{\triangleleft loading} \texttt{newclude} modifies \texttt{\label} in a non-adaptive way, so \texttt{newclude} must be loaded before \texttt{lwp} is loaded:

\begin{verbatim}
\documentclass{article}
...<font setup>
\usepackage{newclude}
\usepackage[warpHTML]{lwp}
...\end{verbatim}

\textbf{9.15.3 \texttt{babel} package}

\textbf{\triangleleft \texttt{CaptionSeparator}} When French is used, the caption separator is changed to a dash. The following may be used to restore it to a colon:

\begin{verbatim}
\renewcommand*{\CaptionSeparator}{:~}
\end{verbatim}

\textbf{\triangleleft punctuation spaces} Also when French is used, \texttt{lwp} creates fixed-width space around punctuation by patching \texttt{\FBcolonspace}, \texttt{\FBthinspace}, \texttt{\FBguillemetspace}, \texttt{\FBmedkern}, \texttt{\FBthickkern}, \texttt{\FBtextellipsis}, and the tilde. If the user’s document also changes these parameters, the user’s changes should be placed inside a \texttt{warprint} environment so that the user’s changes do not affect the HTML output.

\textbf{9.15.4 \texttt{polyglossia} package}

\textbf{\triangleleft \texttt{CaptionSeparator}} \texttt{lwp} uses \texttt{cleveref}, which has some limitations when using \texttt{polyglossia}, possibly resulting in the error

\begin{verbatim}
! Undefined control sequence. ...
\end{verbatim}

To test compatibility, add

\begin{verbatim}
\usepackage{cleveref}
\end{verbatim}

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

\begin{verbatim}
\setdefaultlanguage{english}
\end{verbatim}

or some other language supported by \texttt{cleveref}, then select other languages using \texttt{\setotherlanguages}. 

Once the print version works with cleveref and polyglossia, the HTML version should work as well using lwarp.

### 9.15.5 `todonotes` and `luatodonotes` packages

The documentation for `todonotes` and `luatodonotes` have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

### 9.15.6 `fixme`

External layouts (\texttt{\textbackslash fxloadlayouts}) are not supported.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after `fixme` is loaded:

\begin{verbatim}
def\FXFaceInlineHTMLStyle{font-weight:bold}
def\FXFaceEnvHTMLStyle{font-weight:bold}
def\FXFaceSignatureHTMLStyle{font-style:italic}
def\FXFaceTargetHTMLStyle{font-style:italic}
\end{verbatim}

### 9.15.7 `chemfig` package

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `\lateximage`:

\begin{verbatim}
\begin{lateximage}[(-chemfig--\packagediagramname)]
\chemfig{...}
\polymerdelim[...]{}
\end{lateximage}
\end{verbatim}

### 9.15.8 `chemformula` package

\begin{itemize}
\item **chemformula with \texttt{MathJax}**
\end{itemize}

\texttt{chemformula} works best without \texttt{MathJAX}. If \texttt{MathJAX} is used, `\texttt{\textbackslash displaymathother}` must be used before `\texttt{array}`, and then `\texttt{\textbackslash displaymathnormal}` may be used after. (The `chemformula` package adapts to `array`, but does not know about \texttt{MathJAX}, and MathJAX does not know about `chemformula`.)

While using \texttt{MathJAX}, `\texttt{\textbackslash displaymathother}` may also be used for other forms of display and inline math which contain `chemformula` expressions.

### 9.15.9 `mhchem` package

See section 321.
9.15.10 \texttt{xparse} package

\texttt{Pkg xparse} To remove from the log any warnings about redeclaring objects, place the following before \texttt{lwarf} is loaded:

\texttt{\usepackage[log-declarations=false]{xparse}}

9.15.11 \texttt{kotex} package

\texttt{Pkg kotex} See section 9.14 regarding \texttt{pdflatex} and Korean section names.

⚠️ Korean section names
10  Compiling using custom shell commands

\texttt{l\textit{warp}} and \texttt{l\textit{warp\textbackslash{}mk}} try to make it easy to process print and \texttt{html} compilation tasks in most situations. Depending on the operating system, command-line options, T\TeX engine, and \texttt{l\textit{warp}} options, the commands \texttt{l\textit{warp\textbackslash{}mk print}} and \texttt{l\textit{warp\textbackslash{}mk html}} are automatically set up to correctly recompile the project. These actions may be overridden using \texttt{l\textit{warp}} options, thus allowing the use of packages such as \texttt{perl\textbackslash{tex}} and \texttt{py\textbackslash{thontex}}.

10.1  Command options

\begin{tabular}{ll}
\texttt{Opt PrintLatexCmd} & The \texttt{l\textit{warp}} options \texttt{PrintLatexCmd} and \texttt{HTMLLa\textit{texCmd}} are used to set customized commands to be executed by \texttt{l\textit{warp\textbackslash{}mk print}} and \texttt{l\textit{warp\textbackslash{}mk html}}. \\
\texttt{Opt HTMLLa\textit{texCmd} } & \\
\end{tabular}

\begin{description}
\item[\texttt{PrintLatexCmd}] should be set to shell commands which take \texttt{project.tex} and generate \texttt{project.pdf}.
\item[\texttt{HTMLLatexCmd}] should be set to take \texttt{project\_html.tex} and generate \texttt{project\_html.pdf}. \texttt{\textit{l\textbackslash{warp}}mk} will then take \texttt{project\_html.pdf} and automatically convert it and generate \texttt{project.html}.
\end{description}

10.2  Literal character macros

The \texttt{l\textit{warp}} package options are parsed by T\TeX, and so some characters require the use of a special macro to represent them. See table 7. \texttt{\textbackslash{W}rapquote} and \texttt{\textbackslash{W}rapseq} may be used to increase operating-system portability. \texttt{\jobname} must have \texttt{\_html} appended for processing \texttt{html}. \texttt{\space} may be necessary between other macros.

⚠️ macro not found

To use these macros, either \texttt{kv\textbackslash{options-patch}} must be loaded before \texttt{l\textit{warp}}:

\begin{verbatim}
\usepackage{kv\textbackslash{options-patch}}
\usepackage[
  PrintLatexCmd={ ... },
  HTMLLatexCmd={ ... }
]{l\textit{warp}}
\end{verbatim}
Table 7: Literal character macros

<table>
<thead>
<tr>
<th>Character</th>
<th>Macro</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>\LWRpercent</td>
<td></td>
</tr>
<tr>
<td>$</td>
<td>\LWRdollar</td>
<td></td>
</tr>
<tr>
<td>&amp;</td>
<td>\LWRamp</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>\LWRhash</td>
<td></td>
</tr>
<tr>
<td>\</td>
<td>\LWRbackslash</td>
<td></td>
</tr>
<tr>
<td>' or &quot;</td>
<td>\LWRopquote</td>
<td>Depends on the operating system.</td>
</tr>
<tr>
<td>&amp; or &amp;&amp;</td>
<td>\LWRopseq</td>
<td>Depends on the operating system.</td>
</tr>
<tr>
<td>(space)</td>
<td>\space</td>
<td>Forces an extra space.</td>
</tr>
<tr>
<td>(jobname)</td>
<td>\jobname</td>
<td>Without file extension.</td>
</tr>
</tbody>
</table>

or \l warpsetup must be used to set PrintLatexCmd and HTMLLatexCmd:

\usepackage[...]{l warp}
\l warpsetup{
  PrintLatexCmd=
  {  
    latex tm \LWRopseq
    dvips -o tm-pics.ps tm.dvi \LWRopseq
    ps2pdf tm-pics.ps \LWRopseq
    pdf/l. Varatex tm.tex
  },
  HTMLLatexCmd=
  {  
    latex tm_html \LWRopseq
    dvips -o tm_html-pics.ps tm_html.dvi \LWRopseq
    ps2pdf tm_html-pics.ps \LWRopseq
    pdf/l. Varatex tm_html.tex
  }
}

10.3 latexmk

If latexmk is used for a project, it may be easiest to continue using it.

latexmk project. tex would create project.pdf as normal.
latexmk project_html. tex would create project_html.pdf, then
l warp mk pdftohtml project_html.pdf would take project_html.pdf and convert it to project.html.
\texttt{sagetex} \texttt{latexmk} may simplify the use of packages such as \texttt{sagetex}.

### 10.4 perl\texttt{tex} package

The \texttt{lwr\_package} option settings to use \texttt{perl\_tex} would be similar to:

```latex
\usepackage[
  ...
  \texttt{PrintLatexCmd=\{\texttt{perl\_tex -latex=pdf\_latex project.tex}\} }, \\
  \texttt{HTMLLatexCmd=\{\texttt{perl\_tex -latex=pdf\_latex project\_html.tex}\} }, \\
  ... 
\}]
```

\textbf{“impure” math} Place \texttt{perl\_tex} math expressions between \texttt{\disp\_mathother} and \texttt{\disp\_mathnormal}, or \texttt{\inlinemathother} and \texttt{\inlinemathnormal}. See section 9.7.9.

### 10.5 pythont\texttt{ex} package

An example using \texttt{pythontex}:

```latex
\usepackage[
  ...
  \texttt{PrintLatexCmd=\{
    \texttt{pdflatex project.tex \LWRopseq}
    \texttt{pythontex project \LWRopseq}
    \texttt{pdflatex project.tex}
  \} }, \\
  \texttt{HTMLLatexCmd=\{
    \texttt{pdflatex project\_html.tex \LWRopseq}
    \texttt{pythontex project\_html \LWRopseq}
    \texttt{pdflatex project\_html.tex}
  \} }, \\
  ... 
\}]
```

Another possibility is to use \texttt{latexmk}, placing the \texttt{latexmk ...} commands in the \texttt{PrintLatexCmd} and \texttt{HTMLLatexCmd} options. While using these options, the \texttt{lwr\_package} \texttt{latexmk} option would not be used.

\textbf{“impure” math} No attempt has yet been made to make \texttt{pythontex} robust with \texttt{HTML} output. Some math objects must be surrounded by \texttt{\disp\_mathother} ... \texttt{\disp\_mathnormal}, or \texttt{\inlinemathother} ... \texttt{\inlinemathnormal}. Displays of code may have to be enclosed inside a \texttt{lateximage} environment to prevent \texttt{<, >} and similar from being interpreted by the browser as \texttt{HTML} entities.

### 10.6 Other packages

Other packages such as \texttt{sympytex} and \texttt{rterf\_ace} would be set up similar to \texttt{pythontex},
and the same warnings would apply.

10.7 *make* program

To use *lwarp* with the *make* program, have the makefile take `project.tex` and generate the print version `project.pdf`, as normal. `\usepackage{lwramp}` must be used, and it generates `lwarpmk.conf` when the print version is created.

To generate HTML, first have `project_html.tex` be compiled to generate `project_html.pdf`. This must be in PDF format. Finally, have `project_html.pdf` be converted to HTML using `lwarpmk pdftohtml project_html.pdf`, and convert SVG math with `lwarpmk images`.

10.8 UTF-8 locale

⚠ **UTF-8 locale** *lwarpmk* uses the *texlua* program, which sets the “locale” to “C”, including for external operating-system calls such as when executing *lwarpmk html*. In some cases, an external program called from the user’s document may require the use of a UTF-8 “locale”. For UNIX-related operating systems, it may be required to use *lwarp*’s custom compilation options to add a locale change:

```
\usepackage{lwramp}[PrintLatexCmd={
  env LC_CTYPE=en_US.UTF-8
  xelatex --shell-escape project.tex
}
HTMLLatexCmd={
  env LC_CTYPE=en_US.UTF-8
  xelatex --shell-escape project_html.tex
}]
```

The only example seen so far where this is required is the *ditaa* package, where the locale change allows the use of UTF-8 with XelATeX and *ditaa*. To use LuaLaTeX instead, the locale change would have to be made inside the *ditaa* package where its calls the *ditaa* program.
11 EPUB conversion

lwarp does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

To assign the author's name for regular lwarp HTML files, and also for the EPUB, use \HTMLAuthor {⟨name⟩}. This assigns the name to the <meta> author element. It may be set empty, and it defaults to \theauthor.

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

FormatEPUB

Bool FormatEPUB
Default: false

FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

To help convert lwarp HTML output to EPUB, add

\booltrue{FormatEPUB}


to the project's source preamble after \usepackage{lwarp}. The EPUB version of the document cannot co-exist with the regular HTML version, so

Enter ⇒ lwarpmk cleanall
Enter ⇒ lwarpmk html
Enter ⇒ lwarpmk limages

to recompile with the FormatEPUB boolean turned on. Several changes are then made to the HTML output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program Calibre (https://calibre-ebook.com/).

The EPUB conversion program must know what order the files are included. For lwarp projects, set the EPUB conversion software to do a breadth-first search of the files. For Calibre, this option is found in

Preferences → Plugins → File type plugins → HTML to Zip

Check the box Add linked files in breadth first order. Set the document encoding as utf-8, which is what lwarp generates for HTML, even if the original printed document uses some other encoding.
The EPUB-conversion program must also know where the section breaks are located. For a list of lwarp's section headings, see table 9. For example, an article class document would break at \section, which is mapped to HTML heading level <h4>, whereas a book class document would break at \chapter, which is HTML heading level <h3>. For Calibre, this option is found in

Preferences → Conversion (Common Options) → Structure Detection → Detect chapters at (XPath expression)

Select the “magic wand” to the right of this entry box, and set the first entry

**Match HTML tags with tag name:**

to “h4”. (Or “h3” for document classes with \ chapters.) The Detect chapters at field should then show

//h:h4 — or — //h:h3

This option is also available on the main tool bar at the Convert books button.

Once these settings have been made, the lwarp-generated HTML files may be loaded by Calibre, and then converted to an EPUB.

**MathJax support**

MathJax may be used in EPUB documents. Some e-readers include MathJax, but any given reader may or may not have a recent version, and may or may not include extensions such as support for siunitx.

lwarp adds some modifications to MathML to support equations numbered by chapter. These modifications may not be compatible with the e-reader’s version of MathJax, so lwarp requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn't work.

Until math support in EPUB documents is improved, it is recommended to use svg images instead of MathJax, especially for equations numbered by chapter, or where siunitx support is important.
12 Word-processor conversion

\texttt{lwr}p may be told to modify its \texttt{HTML} output to make it easier to import the \texttt{HTML} document into a word processor. At the time of this writing, it seems that \texttt{LibreOffice} works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected \texttt{HTML} classes. \texttt{lwr}p provides some assistance in locating these frame boundaries, as shown below.

12.1 Activating word-processor conversion

A special boolean is provided to simplify the process of converting \texttt{lwr}p \texttt{HTML} output to \texttt{EPUB}:

<table>
<thead>
<tr>
<th>Boolean</th>
<th>FormatWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default</td>
<td>false</td>
</tr>
</tbody>
</table>

Changes \texttt{HTML} output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off \texttt{HTML} debug comments. Additionally, honors the booleans \texttt{WPMarkFloats}, \texttt{WPMarkMinipages}, \texttt{WPMarkTOC}, and \texttt{WPMarkLOFT}.

To help modify \texttt{lwr}p \texttt{HTML} output for easier import to a word processor, add

\verbatim
\booltrue{FormatWP}
\endverbatim

to the project's source preamble after \texttt{lwr}p is loaded. The following changes are then made to the \texttt{HTML} output:

- If using a class without chapters, \texttt{\section} and lower are shifted up in level for the \texttt{HTML} heading tags. The \texttt{CSS} has not been changed, so the section heading formats will not match the normal \texttt{HTML} output, but when imported to \texttt{LibreOffice Writer} the higher section headings will import as \texttt{Heading 1} for the title, \texttt{Heading 2} for \texttt{\section}, etc.

- Headers, footers, and navigation are removed at file splits.

- Any accumulated footnotes are printed at the bottom of each section.

- Forces single-file output.

- Turns off \texttt{HTML} debugging comments. These are comments appearing inside the \texttt{HTML} code, marking the opening/closing of sections and \texttt{\div}s, but they are no longer useful when the document has been imported into a word processor.

- An additional \texttt{\div} with an \texttt{id} encapsulates each float and minipage, which on import into \texttt{LibreOffice Writer} causes a thin frame to appear around the text block for each.

- Float captions are given an explicit italic formatting.
• Tabular rule borders are made explicit for *LibreOffice Writer*. *LibreOffice* displays a light border around each cell while editing, even those which have no border when printed, and *lwarp* also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in *LibreOffice*.

• `\includegraphics` and `svg` math width and height are made explicit for *LibreOffice*.

• `\hspace` is approximated by a number of `\quad` s, and rules are approximated by a number of underscores.

• Explicit **HTML** styles are given to:
  - `\textsc{}`, etc.
  - `\underline{}`, `\textastair`, `\soul`, and `\ulem` markup.
  - `\center`, `\flushleft`, `\flushright`.
  - `\marginpar`, `\keyfloat`, `\sidenotes`, `\floatfit`, and `\wrapfig`.
  - fancybox `\shadowbox`, etc.
  - The \LaTeX and \TeX logos.

• Honors several booleans:
  - **WPMarkFloats**: Marks the begin and end of floats.
  - **WPMarkMinipages**: Marks the begin and end of minipages.
  - **WPMarkTOC**: Marks the location of the Table of Contents.
  - **WPMarkLOFT**: Marks the locations of the List of Figures/Tables.
  - **WPMath**: Prints \LaTeX math instead of using images.
  - **WPTitleHeading**: Adjusts title and section headings.

Several of these may be used to add markers to the HTML text which help determine where to adjust the word processor document after import.

### 12.2 Additional modifications

**WPMarkFloats**

<table>
<thead>
<tr>
<th>Bool</th>
<th>WPMarkFloats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default: false</td>
<td></td>
</tr>
</tbody>
</table>

Adds

```plaintext
=== begin table ===
...
=== end ===
```
or

```plaintext
=== begin figure ===
...
=== end ===
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.
WPMarkMinipages

**Bool WPMarkMinipages**

*Default: false*

Adds

```latex
=== begin minipage ===
...
=== end minipage ===
```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

WPMarkTOC

**Bool WPMarkTOC**

*Default: true*

While formatting for word processors, adds

```latex
=== table of contents ===
```

where the Table of Contents would have been. This helps identify where to insert the actual toc.

*If set false, the actual toc is printed instead.*

WPMarkLOFT

**Bool WPMarkLOFT**

*Default: false*

While formatting for word processors, adds

```latex
=== list of figures === and/or
=== list of tables ===
```

where each of these lists would have been. This helps identify where to insert the actual lists.

*If set false, the actual lists are printed instead.*

WPMarkMath

**siunitx**

**Bool WPMarkMath**

*Default: false*

**Prog TeXMaths**

While formatting for word processors, prints math as \LaTeX{} code instead of creating svg images or MathJax. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

When using the *siunitx* package, enter

```latex
\usepackage{siunitx}
```

in the *TeXMaths* preamble. Equation numbering is problematic for *AMS* math environments.
Table 8: Section HTML headings for word-processor conversion

<table>
<thead>
<tr>
<th>Section</th>
<th>With \chapter</th>
<th>Without \chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>&lt;h1&gt;</td>
<td>plain</td>
</tr>
<tr>
<td>\part</td>
<td>&lt;h2&gt;</td>
<td>&lt;h1&gt;</td>
</tr>
<tr>
<td>\chapter</td>
<td>&lt;h3&gt;</td>
<td>&lt;h2&gt;</td>
</tr>
<tr>
<td>\section</td>
<td>&lt;h4&gt;</td>
<td>&lt;h3&gt;</td>
</tr>
<tr>
<td>\subsection</td>
<td>&lt;h5&gt;</td>
<td>&lt;h4&gt;</td>
</tr>
<tr>
<td>\paragraph</td>
<td>&lt;h6&gt;</td>
<td>&lt;h5&gt;</td>
</tr>
<tr>
<td>\subparagraph</td>
<td>span</td>
<td>&lt;h6&gt;</td>
</tr>
</tbody>
</table>

* For default depths when not FormatWP, see table 9 on page 195.

WPTitleHeading

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at Heading 2 when imported into LibreOffice. Set to false to cause the title to be plain text, and the section headings to begin at Heading 1.

See table 8 on page 181.

12.3 Recommendations

For use with LibreOffice Writer, it is recommended to:

1. Set booltrue(FormatWP)
2. Set booltrue(WPMarkTOC) and boolfalse(WPMarkLOFT)
3. Use lwarp to generate the HTML document.
6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
7. Manually create cross references.
This process yields a document with an actual \textsc{LibreOffice} Table of Contents, but a simulated List of Figures and List of Tables.

For \texttt{siunitx}, remember to adjust the preamble as mentioned above.

\texttt{LibreOffice} has options in the \texttt{View} menu to turn on/off the display of thin borders around table cells and text objects.

\section*{12.4 Limitations}

Floats and captions are not explicitly converted to \texttt{LibreOffice} floats with their own captions. Floats are surrounded by a thin frame in the \texttt{LibreOffice} editor, and may be marked with \texttt{WPMarkFloats}, but are not given a proper \texttt{LibreOffice} object frame. Captions are given an explicit italic formatting, but not a proper \texttt{LibreOffice} paragraph style.

Cross references are not actual \texttt{LibreOffice} linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo \texttt{LOF} and \texttt{LOT} match the numbering of the \LaTeX{} and HTML versions.

Equation numbering is not automatic, but the equation numbers in \texttt{SVG} math will match the \LaTeX{} and HTML output. \texttt{SVG} math is recommended when using the \texttt{AMS} environments, which may have multiple numbered equations per object.

As of when last checked, \texttt{LibreOffice} ignores the following:

- Minipage alignment.
- Tabular cell vertical alignment.
- Image rotation and scaling.
- Rounded border corners, which are also used by:
  - \texttt{\textcircled{}}
  - \texttt{booktabs trim}
- \texttt{\hspace} and rules, also used by \texttt{algorithmic}.
- Coloring of text decorations, used by \texttt{soul} and \texttt{ulem}.
- Overline text decoration, used by \texttt{romanbar}.

\texttt{LibreOffice} also has limitations with frames and backgrounds:

- Multiple lines in an object are framed individually instead of as a whole.
- Nested frames are not handled correctly.
- Images inside boxes are not framed correctly.
- Spans with background colors and frames are not displayed correctly.
13  Modifying lwarp

locating something  To quickly find the source for a package in lwarp.dtx, search for *packagename, such as *siunitx.

Likewise, to quickly find the source for a file in lwarp.dtx, search for *filename, such as *lwarp.css.

Purely text-based packages probably will work as-is when generating HTML.

Look to existing code for ideas on how to expand into new code.

An environment may be converted to a lateximage then displayed with an image of the resulting LATEX output. See section 89 for an example of the picture environment.

css classes  To create a custom html block or inline css class, see section 52.9.

print/HTML macros  To create print and HTML versions of the same macro or environment, see section 37.

TEX boxes  Any TEx boxes must be undone, as svg math or lateximages require \newpage, which will not work in a TEx box.

index recreation  To recreate the index for the lwarp documentation:

    makeindex -s ggio.ist -o lwarp.gls lwarp.glo
    splitindex lwarp.idx -- -s gind.ist

13.1  Creating a development system

The following creates a local development system for lwarp on a TeXLive system in a UNIX-like environment. Doing so allows anything requesting lwarp to use the development version instead of whichever version is installed in TeXLive.

Create a development directory:

Place into this directory lwarp.dtx and lwarp.ins.
To create lwarp.sty, execute

    Enter ⇒  pdflatex lwarp.ins

which creates lwarp.sty and several hundred additional lwarp-*.sty files for the various packages which are supported.
To create the documentation lwarp.pdf, execute

    Enter ⇒  pdflatex lwarp.dtx

To make the development files visible to other projects:

Create the directory

    /usr/local/texlive/texmf-local/tex/latex/local/lwarp
Inside this directory, create the file `update`, containing:

```bash
ln -s /path_to_dev_directory/lwp*.sty .
ln -s /path_to_dev_directory/lwp_base/lwpine_marker.png .
ln -s /path_to_dev_directory/lwp_base/lwpine_marker.eps .
mktexlsr
```

Run `./update` now, and whenever a new *lwp-* package is added.

**To make the development version of *lwpmk* visible to other projects:**

```bash
cd /opt
ln -s /usr/local/texlive/texmf-local/bin/x86_64-linux texbin_local
cd texbin_local
ln -s ../../scripts/lwp/lwpmk.lua lwpmk
cd /usr/local/texlive/texmf-local/scripts/
mkdir lwp
cd lwp
ln -s /path_to_dev_directory/lwpmk.lua lwpmk
```

Verify that the correct version is found with

```
which lwpmk
```

**To make the local versions visible to the shell:**

Paths must be set by the shell startup, such as in `.bashrc` and `.cshrc`:

In `.bashrc`:

```bash
PATH=/opt/texbin_local:/opt/texbin:$PATH
```

In `.cshrc`:

```
setenv PATH ${HOME}/bin:/opt/texbin_local:/opt/texbin:$PATH
```

### 13.2 Modifying a package for *lwp* 

If a class loads additional packages, it will be required to modify the class for *lwp*, since *lwp* must be loaded before most other packages.

To work with *lwp*, a class must first set up anything which replicates the functions of the basic *\LaTeX* classes, load any required fonts, then load *lwp*, then finally load and adjust any other required packages.

When creating `html`, *lwp* redefines the \usepackage and \RequirePackage macros such that it first looks to see if a *lwp-*<packagename>.sty version exists. If so, the *lwp* version is used instead. This modular system allows users to create their own versions of packages for *lwp* to use for `html`, simply by creating a new package with
a \texttt{l\textasciitilde warp}- prefix. If placed in the local directory along with the source code, it will be seen by that project alone. If placed alongside the other \texttt{l\textasciitilde warp}- packages where \TeX can see it, then the user’s new package will be seen by any documents using \texttt{l\textasciitilde warp}. (Remember \texttt{mktexlsr} or \texttt{texhash}.)

An \texttt{l\textasciitilde warp-<packagename>.sty} package is only used during \texttt{HTML} generation. Its purpose is to pretend to be the original package, while modify anything necessary to create a successful \texttt{HTML} conversion. For many packages it is sufficient to simply provide nullified macros, lengths, counters, etc. for anything which the original package does, while passing the raw text on to be typeset. See the pre-existing \texttt{l\textasciitilde warp}- packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new \texttt{l\textasciitilde warp}- package, including package options, user-adjustable counters, lengths, and booleans, and conditional behaviors. In many of these packages, most of the new definitions have a “local” prefix according to the package name, and @ characters inside the name, which hides these names from the user. In most cases these macros will not need to be emulated for \texttt{HTML} output. Only the “user-facing” macros need to be nullified or emulated.

Each \texttt{l\textasciitilde warp-*} package should first call either of:

\begin{verbatim}
\LWR@ProvidesPackageDrop
-or-
\LWR@ProvidesPackagePass
\end{verbatim}

If “Drop”ped, the original print-version package is ignored, and only the \texttt{l\textasciitilde warp-} version is used. Use this where the original print version is useless for \texttt{HTML}. If “Pass”ed, the original package is loaded first, with the user-supplied options, then the \texttt{l\textasciitilde warp-} version continues loading as well. See section 350 (nththeorem) for an example of selectively disabling user options for a package. Use this when \texttt{HTML} output only requires some modifications of the original package. For a case where the original package is usable without changes, there is no need to create a \texttt{l\textasciitilde warp-} version.

13.2.1 Adding a package to the \texttt{l\textasciitilde warp.dtx} file

When adding a package to \texttt{l\textasciitilde warp.dtx} for permanent including in \texttt{l\textasciitilde warp}, provide the \texttt{l\textasciitilde warp-<packagename>} code in \texttt{l\textasciitilde warp.dtx}, add its entry into \texttt{l\textasciitilde warp.ins}, and also remember to add

\begin{verbatim}
\LWR@loadafter{<packagename>}
\end{verbatim}

to \texttt{l\textasciitilde warp.dtx} in section 21.1. This causes \texttt{l\textasciitilde warp} to stop with an error if \texttt{packagename} is loaded before \texttt{l\textasciitilde warp}. Finally, add an entry in table 2, \textit{Supported packages and features}, and also the Updates section.

13.3 Modifying a class for \texttt{l\textasciitilde warp}

If a class loads additional packages, it will be required to modify the class for \texttt{l\textasciitilde warp}, since \texttt{l\textasciitilde warp} must be loaded before most other packages.
To work with \texttt{lwrwp}, a class must first set up anything which replicates the functions of the basic \LaTeX classes, load any required fonts, then load \texttt{lwrwp}, then finally load and adjust any other required packages.

### 13.4 Testing \texttt{lwrwp}

When changes have been made, test the print output before testing the \texttt{HTML}. The print output compiles faster, and any errors in the printed version will be easier to figure out than the \texttt{HTML} version.

Remember that the configuration files are only rewritten when compiling the printed version of the document.

When changing the source to \texttt{lwrwpmk} or a css file in \texttt{lwrwp.dtx}:

1. Change the source in \texttt{lwrwp.dtx}.
2. \texttt{pdflatex lwrwp.ins}
3. \texttt{pdflatex lwrwp.dtx}
4. If modifying \texttt{lwrwpmk} the new version should now be active.
5. If modifying css files:
   - (a) For the document, \texttt{lwrwpmk} \texttt{print} to update the css files in the project.
   - (b) Reload the \texttt{HTML} document to see the effect of the new css files.

Sometimes it is worth checking the \texttt{<project>_htm/lwrwp.pdf} file, which is the \texttt{PDF} containing \texttt{HTML} tags. Also, \texttt{<project>_htm/lwrwp.html} has the text conversion of these tags, before the file is split into individual \texttt{HTML} files.

It is also worth checking the browser's tools for verifying the correctness of \texttt{HTML} and \texttt{CSS} code.

### 13.5 Modifying \texttt{lwrwpmk}

In most installations, \texttt{lwrwpmk.lua} is an executable file located somewhere the operating system knows about, and it is called by typing \texttt{lwrwpmk} into a terminal.

A project-local copy of \texttt{lwrwpmk.lua} may be generated, modified, and then used to compile documents:

1. Add the \texttt{lwrwpmk} option to the \texttt{lwrwp} package.
2. Recompile the printed version of the document. The \texttt{lwrwpmk} option causes \texttt{lwrwp} to create a local copy of \texttt{lwrwpmk.lua}
3. The \texttt{lwrwpmk} option may now be removed from the \texttt{lwrwp} package.
4. Copy and rename \texttt{lwrwpmk.lua} to a new file such as \texttt{mymake.lua}.
5. Modify \texttt{mymake.lua} as desired.
6. If necessary, make \texttt{mymake.lua} executable.
7. Use \texttt{mymake.lua} instead of \texttt{lwarppmk.lua}.
14 Troubleshooting

14.1 Using the lwarp.sty package

Also see:
Section 8.8: Commands to be placed into the warpprint environment
Section 9: Special cases and limitations

Text is not converting correctly / corrupted HTML tags:
- Font-related UTF-8 information must be embedded in the PDF file. See section 8.2 regarding bitmapped vs. vector fonts.
- See section 9.2.1 regarding HTML entities and the characters &, <, and >.

Undefined HTML settings:
- See the warning regarding the placement of the HTML settings at section 8.4.

Tabular problems: See section 9.10.1.

Obscure error messages:

Print first: Be sure that a print version of the document compiles and that your document's \LaTeX code is correct, before attempting to generate an HTML version.

\end{warpHTML}, \end{warpprint}, \end{warpaOlNvarOlNvar}: Each of these must be without any other characters on the same line.

Options clash: If using memoir, see section 9.13.

“No room for a new \write.”: Before \usepackage{lwarp}, add:
\usepackage{morewrites}
\morewritesetup{allocate=10}

“Missing $ inserted.”: If using a filename or URL in a footnote or \item, escape underscores with \_.

“Label(s) may have changed. Rerun to get cross-references right.”:
This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as $X=1$ may be replaced with
\texttt{\textit{X}=1}

“Leaders not followed by proper glue”: This can be caused by a missing \l@floattype or \l@sectiontype definition. See lwarp's definitions for examples.

“Improper \prevdepth”: lateximages and svg math require \newpage, which cannot work inside \TeX boxes or \ensuremath. Anything using \newsavebox, \newbox, \lrbox, \savebox, \hbox, \vbox, \usebox, \sbox, etc., must be modified to work without box commands.
If you find something using \ensuremath, have it temporarily set:
\LetLtxMacro{\ensuredmath}\LWR@origensuredmath
inside a group first.

Also, custom macros which appear inside a section, figure, or table name should be made robust since they appear inside the .toc, .lof, or .lot files. Use \newrobustcmd or \robustify from etoolbox, xparse, etc.

If using BibTeX, see section 9.6.9.

“! Undefined control sequence ... \@begindocumenthook’’': See section 9.15.4 if using polyglossia.

“\begin{equation} ended by \end{document}’’: Do not use custom macros such as \beq and \eeq to replace
\begin{equation}
\end{equation}

“Misplaced \omit”: If using \LWR@formatted to define new macros for print and HTML modes, see section 37 regarding \LWR@expandableformatted.

Complicated objects inside math: Some objects, such as Tikz, may not compile in lwarp’s normal math emulation. Insert
\displaymathother -or- \linemathother

before the math, and then
\displaymathnormal -or- \linemathnormal

when displaying “normal” math. See section 9.7.9.

Slow compilation of math objects: Complicated math objects can also cause problems with alt tags, resulting in very slow compilation, large alt tags, and possible crashes. Use \linemathother ...\linemathnormal or \displaymathother ...\displaymathnormal around the math expression.

Incorrect MathJax: Some objects do not convert to MathJax. Use \displaymathother before these objects, then \displaymathnormal to return to “normal” display math. See section 9.7.9.

Missing sections: See section 8.4 regarding the FileDepth and SideTOCDepth counters, and the use of \tableofcontents in the home page.

Misnumbered footnotes from section headings: See section 9.5.4.

Missing html files:

• See the warning regarding changes to the html settings at section 8.4.
• Ensure that the filenames are unique after math and short words are removed. See FileSectionNames at section 8.4.

Missing / incorrect cross-references:

• Use lwarpmk again followed by lwarpmk html or lwarpmk print to compile the document one more time.
• Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French). \nameref refers to the most recently-used section where the \label was defined. If no section has been defined before the \label, the link will be empty. Index entries also use \nameref and have the same limitation.
\begin{itemize}
\item \texttt{cleveref} and \texttt{varioref} are supported, but printed page numbers do not map to \texttt{HTML}, so a section name or a text phrase are used for \texttt{\cpageref} and \texttt{\cpagerefrange}. This phrase includes \texttt{\cpagerefFor}, which defaults to “for”.
\end{itemize}

\texttt{Ex:}
\begin{verbatim}
\cpageref{tab:first,tab:second}
\end{verbatim}

in \texttt{HTML} becomes:

“pages for table 4.1 and for table 4.2”

See \texttt{\cpagerefFor} at page 541 to redefine the message which is printed for page number references.

\textbf{BibTeX errors with} \texttt{\etalchar}: See section 9.6.9.

\textbf{Malformed URLs:} Do not use the \% character between arguments of \texttt{\hyperref}, etc., as this character is among those which is neutralized for inclusion in \texttt{HTML} URLs.

\textbf{Em-dashes or En-dashes in listing captions and titles:}

Use \texttt{XeLaTeX} or \texttt{LuaLaTeX}.

\textbf{Floats out of sequence:}

\textbf{Mixed “Here” and floating:} Floats [H]ere and regular floats may become out of order. \texttt{\clearpage} if necessary.

\textbf{Caption setup:} With \texttt{\captionsetup} set the positions for the captions above or below to match their use in the source code.

\textbf{Images are appearing in strange places:}

\begin{itemize}
\item Enter \texttt{lwarpmk images} to refresh the \texttt{lateximage} images.
\end{itemize}

\textbf{SVG images:}

\item \textbf{adding/removing} When a math expression, picture, or \texttt{Tikz} environment is added or removed, the \texttt{svg} images must be re-created by entering \texttt{lwarpmk images} to maintain the proper image-file associations. Inline \texttt{svg} math may be hashed and thus not need to be recreated, but display math and objects such as \texttt{Tikz} may move to new image numbers when the document is changed.

\item \textbf{recompile first} Before attempting to create the \texttt{svg} image files, \texttt{lwarpmk} verifies that the \texttt{HTML} version of the document exists and has correct internal image references.\textsuperscript{15} If it is necessary to recompile the document's \texttt{HTML} version one more time, \texttt{lwarpmk} usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the \texttt{LaTeX} recompile warnings.

\item \textbf{HTML instead of images} If \texttt{HTML} appears where an \texttt{svg} image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

\item \textbf{page counter} Incorrect \texttt{svg} images will also occur if the document changes the page counter:
\begin{verbatim}
\setcounter{page}{<value>}
\end{verbatim}

The page counter must \textit{not} be adjusted by the user.

Expressing math as \texttt{svg} images has the advantage of representing the math exactly as \texttt{LaTeX} would, but has the disadvantage of requiring an individual file
for each math expression. For inline math, and some other objects, \texttt{lwar} uses an
MD5 hash on its \LaTeX source to combine multiple instances of identical inline
expressions into a single image file, but display math and other environments
such as \texttt{picture} and \texttt{Tikz} require one image file each. For a document with a
large amount of math, see section 6.5 to use \texttt{MATHJAX} instead.

\begin{itemize}
    \item The document's css stylesheet may not be available, or may be linked
          incorrectly. Verify any \texttt{\textbackslash CSSFile} statements point to a valid
          css file.
\end{itemize}

\begin{itemize}
    \item Check the pdf file used to create HTML to see if the tags overflowed the
          margin. (This is why such large page size and margins are used.)
\end{itemize}

\begin{itemize}
    \item Be sure to \texttt{lwp}clean, recompile, then start by reloading the home
          page. You may have been looking at an older version of the document. If
          you changed a section name, you may have been looking at the file for the
          old name.
    \item See the warning regarding changes to the HTML settings at section 8.4.
    \item Verify that the proper css is actually being used.
    \item The browser may compensate for some subtle changes, such as automati-
          cally generating ligatures, reflowing text, etc.
\end{itemize}

\begin{itemize}
    \item Verify the proper begin/end of \texttt{warprint}, \texttt{warpHTML}, and \texttt{warppall}
          environments.
\end{itemize}

\subsection{Debug tracing output}

\texttt{\textbackslash tracing\textbackslash warp} When \texttt{\textbackslash tracing\textbackslash warp} is used, \texttt{lwp} will add extra tracing messages to the \texttt{.log} file.
The last several messages may help track down errors.

Place \texttt{\textbackslash tracing\textbackslash warp} just after \texttt{\usepackage{lwp}} to activate tracing.

\subsection{Compiling the \texttt{lwp.dtx} file}

\texttt{lwp\_tutorial\_tex}: Copy or link \texttt{lwp\_tutorial\_tex} from the \texttt{tps doc} directory
to the source directory, or wherever you wish to compile the documentation.
This file is included verbatim in the documentation, but is in the doc directory
so that it may be found by \texttt{texdoc} and copied by the user.

\textbf{Illogical error messages caused by an out-of-sync \texttt{lwp.sty} file:}

\begin{enumerate}
    \item Delete the \texttt{lwp.sty} file.
\end{enumerate}

\footnote{This becomes important when dealing with a document containing thousands of images.}
2. Enter \texttt{pdflatex lwap.ins} to generate a new \texttt{lwap.sty} file.
3. Enter \texttt{pdflatex lwap.dtx} to recompile the \texttt{lwap.pdf} documentation.

**Un-nested environments:**

Be sure to properly nest:

- \verbatim{\begin{macrocode} and \end{macrocode}}
- \verbatim{\begin{macro} and \end{macro}}
- \verbatim{\begin{environment} and \end{environment}}
15 Trademarks

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This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of crude hacks clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

Judgement calls were made, and are often commented. Improvements are possible. The author is open to ideas and suggestions.

Packages were patched for re-use where they provided significant functionality. Examples include \texttt{xcolor} with its color models and conversion to HTML color output, and \texttt{siunitx} which provides many number and unit-formatting options, almost all of which are available in pure-text form, and thus easily used by \texttt{pdftotext}.

Packages were emulated where their primary purpose was visual formatting which is not relevent to HTML output. For example, packages related to sectioning are already patched by numerous other packages, creating a difficult number of combinations to try to support, and yet in HTML output all of the formatting is thrown away, so these packages are merely emulated.

Packages with graphical output are allowed as-is, but must be nested inside a \texttt{lateximage} environment to preserve the graphics.

Testing has primarily been done with the Iceweasel/Firefox browser.
17 Section depths and HTML headings

Stacks are created to track depth inside the \LaTeX{} document structure. This depth is translated to HTML headings as shown in table 9. “Depth” here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the \LaTeX{} document structure.

When starting a new section, the program first must close out any existing sections and lists of a deeper level to keep the HTML tags nested correctly.

Support for the memoir package will require the addition of a book level, which may push the HTML headings down a step, and also cause subsubsection to become a \texttt{<div>} due to a limit of six HTML headings.

It is possible to use HTML5 \texttt{<section>} and \texttt{<h1>} for all levels, but this may not be well-recognized by older browsers.

Fixed levels for parts and chapters allow the css to remain fixed as well.

---

<table>
<thead>
<tr>
<th>Section</th>
<th>\LaTeX{} depth</th>
<th>HTML headings</th>
</tr>
</thead>
<tbody>
<tr>
<td>title of the entire website</td>
<td>-5</td>
<td>\texttt{&lt;h1&gt;}</td>
</tr>
<tr>
<td>none</td>
<td>-2</td>
<td>\texttt{not yet used}</td>
</tr>
<tr>
<td>book</td>
<td>-1</td>
<td>\texttt{&lt;h2&gt;}</td>
</tr>
<tr>
<td>part</td>
<td>0</td>
<td>\texttt{&lt;h3&gt;}</td>
</tr>
<tr>
<td>chapter</td>
<td>1</td>
<td>\texttt{&lt;h4&gt;}</td>
</tr>
<tr>
<td>section</td>
<td>2</td>
<td>\texttt{&lt;h5&gt;}</td>
</tr>
<tr>
<td>subsection</td>
<td>3</td>
<td>\texttt{&lt;h6&gt;}</td>
</tr>
<tr>
<td>paragraph</td>
<td>4</td>
<td>\texttt{&lt;span class = &quot;paragraph&quot;&gt;}</td>
</tr>
<tr>
<td>subparagraph</td>
<td>5</td>
<td>\texttt{&lt;span class = &quot;subparagraph&quot;&gt;}</td>
</tr>
<tr>
<td>listitem</td>
<td>7</td>
<td>new for this package, used for list items</td>
</tr>
</tbody>
</table>

* If Format\texttt{WP} is true, section headings may be adjusted, depending on \texttt{WPfTitleHeading}. See table 8 on page 181.
18 Source code

This is where the documented source code for \texttt{lwarz} begins, continuing through the following sections all the way to the change log and index at the end of this document.

The following sections document the actual implementation of the \texttt{lwarz} package.

- **line numbers**: The small numbers at the left end of a line refer to line numbers in the \texttt{lwarz.sty} file.
- **subjects**: Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph.
- **objects**: Black-colored tags in the left margin are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag are command macros. Each of these also appears in the index as individual entries, and are also listed together under “files”, “packages”, “environments”, “booleans”, and “counters”.
- **warnings**: Special warnings are marked with a warning icon.

Green-colored tags in the left margin show which sections of source code apply to the generation of \texttt{html}, \texttt{print}, or both forms of output.

— \texttt{lwarz} source code begins on the following page —
19 Detecting the \TeX{} engine — \texttt{pdflatex}, \texttt{lualatex}, \texttt{xelatex}

See: \url{http://tex.stackexchange.com/a/47579}.

Detects Xe\TeX{} and Lua\TeX{}:

\begin{verbatim}
1 \RequirePackage{iftex}
2 \newif\ifxetexor\l.Valuatex
3 \ifXeTeX
4 \xetexor\l.Valuatextrue
5 \else
6 \ifLuaTeX
7 \xetexor\l.Valuatextrue
8 \else
9 \xetexor\l.Valuatexfalse
10 \fi
11 \fi
12 \ifLuaTeX
13 \RequirePackage{\l.Valuatex85}% until the geometry package is updated
14 \fi
15 \fi
16 \RequirePackage{ifpdf}
17 \RequirePackage{ifptex}
\end{verbatim}

20 Early package requirements

\begin{description}
\item[Pkg etoolbox] Provides \texttt{ifbool} and other functions.
\item[Pkg xpatch] Patches macros with optional arguments.
\item[Pkg ifplatform] Provides \texttt{ifwindows} to try to automatically detect Windows OS.
\item[Pkg letltxmacro]\end{description}

21 Package load order

Several packages must never be used with \texttt{lwp}, others should only be loaded before \texttt{lwp}, and others should only be loaded after. The \texttt{lwp} core checks most of these
cases. In some lwarp-* packages, \LWR@/l.Varloadbefore is used to trigger an error if they are loaded after lwarp, while additional code provides necessary patches for when they are loaded before.

Packages which must be loaded after lwarp are enforced by a large number of \LWR@/l.Varloadafter statements, below. Some packages are emulated by memoir, and so these are tested by \LWR@/l.Varnotmemoirloadafter, which does not cause an error if memoir is used.

\LWR@/l.Varcheckloadfilename is used to check each filename to see if it must never be loaded, or must always be loaded before lwarp.

\LWR@loadafter {⟨packagename⟩} Error if this package was loaded before lwarp.

\newcommand*{\LWR@loadafter}[1]{% \@ifpackageloaded{#1}{\PackageError{lwp}{% Package #1, or one which uses #1, must be loaded after lwarp.\MessageBreak Move \detokenize{\usepackage}{#1} after \detokenize{\usepackage}{lwarp}.\MessageBreak Package #1 may also be loaded by something else,\MessageBreak which must also be moved after lwarp.})}{%}

\LWR@notmemoirloadafter {⟨packagename⟩} Error if not memoir class and this package was loaded before lwarp.

memoir emulates many packages, and pretends that they have already been loaded.

\newcommand*{\LWR@notmemoirloadafter}[1]{% \@ifclassloaded{memoir}{\newcommand*{\LWR@notmemoirloadafter}[1]{}{\LetLtxMacro\LWR@notmemoirloadafter{\LWR@loadafter}}}{\newcommand*{\LWR@notmemoirloadafter}[1]{}{}

\LWR@notltjloadafter {⟨packagename⟩} Error if not a \LaTeX{} class and this package was loaded before lwarp.

\LetLtxMacro\LWR@notltjloadafter{\LWR@loadafter} \@ifclassloaded{ltjarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}{\LetLtxMacro\LWR@notltjloadafter{\LWR@loadafter}}}{\newcommand*{\LWR@notltjloadafter}[1]{}{}
\LWR@loadbefore \{\textit{packagename}\} Error if this package is loaded after lwarp.

\newcommand*{\LWR@loadbefore}[1]{\@ifpackage{#1}{\PackageError{lwarp}{Package #1 must be \usepackage{#1} before \usepackage{lwarp}.}{}}}

\LWR@checkloadbefore \{\textit{thispackagename}\} \{\textit{packagename}\} If package names match, error if it is loaded after lwarp.

\newcommand*{\LWR@checkloadbefore}[2]{\edef\LWR@tempone{#1}\ifdefstring{\LWR@tempone}{#2}{\LWR@loadbefore{#1}}{}}

\LWR@loadnever \{\textit{badpackagename}\} \{\textit{replacementpkgnames}\} The first packages is not supported, so tell the user to use the second instead.

\newcommand*{\LWR@loadnever}[2]{\PackageError{lwarp}{Package #1 is not supported by lwarp's HTML conversion. Package(s) #2 may be useful instead}{\PackageError{lwarp}{Package #1 might conflict with lwarp in some way, or is superceded by another package. For a possible alternative, see package(s) #2.}{}}}

\LWR@checkloadnever \{\textit{thispackagename}\} \{\textit{badpackagename}\} \{\textit{replacementpkgnames}\} If this package name is the bad packagename, suggest the replacements instead.
The first package is not supported, so tell the user to use the second instead. This version checks immediately for packages which may have been loaded before lwarp.

The first class is not supported, so tell the user to use the second instead. This version checks immediately for classes which may have been loaded before lwarp.

21.2 Error for disallowed packages and classes loaded before lwarp
The older CJK and CJKutf8 only work with xecJK:

```latex
\@ifpackage{xeCJK}{%
 \LWR@earlyloadnever{CJK}{ctex, xecJK}
 \LWR@earlyloadnever{CJKutf8}{ctex, xecJK}
}
```

\texttt{bxcjkatype} is based on CJK:

```latex
\LWR@earlyloadnever{bxcjkatype}{upLaTeX, bxjsarticle, ujarticle, utarticle}
```

\texttt{hangul} is not in TeXLive, and is not tested:

```latex
\LWR@earlyloadnever{hangul}{kotex, xetexko, luatexko}
```

Others:

```latex
\LWR@earlyloadnever{colortab}{colortbl}
\LWR@earlyloadnever{epspdf}{graphicx}
\LWR@earlyloadnever{fancyheadings}{fancyhdr}
\LWR@earlyloadnever{fancytabular}{cleveref}
\LWR@earlyloadnever{glossaries}{glossaries}
\LWR@earlyloadnever{hyperref}{hyperref}
\LWR@earlyloadnever{pdfcprot}{microtype}
\LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
\LWR@earlyloadnever{picins}{floatflt, wrapfig}
\LWR@earlyloadnever{siunitx}{siunitx}
\LWR@earlyloadnever{tenc}{fontenc, inputenc, inputenx}
\LWR@earlyloadnever{tenc}{inputenc, inputenx}
\LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
```

### 21.3 Enforcing package loading after lwarp

Packages which should only be loaded after \texttt{l warp} are tested here to trip an error of they have already been loaded.

The following packages must be loaded after lwarp:

```latex
\LWR@loadafter{2in1}
```
\lW@\loadafter{errata}
\lW@\loadafter{eso-pic}
\lW@\loadafter{eurosym}
\lW@\loadafter{everypage}
\lW@\loadafter{everyshi}
\lW@\loadafter{extramarks}
\lW@\loadafter{fancybox}
\lW@\loadafter{fancyhdr}
\lW@\loadafter{fancyheadings}
\lW@\loadafter{fancyref}
\lW@\loadafter{fancytabs}
\lW@\loadafter{fancyvrb}
\lW@\loadafter{figcaps}
\lW@\loadafter{figsize}
\lW@\loadafter{fitbox}
\lW@\loadafter{fix2col}
\lW@\loadafter{fixme}
\lW@\loadafter{fixmetodonotes}
\lW@\loadafter{flafter}
\lW@\loadafter{flippdf}
\lW@\loadafter{float}
\lW@\loadafter{floatflt}
\lW@\loadafter{floatpag}
\lW@\loadafter{floatrow}
\lW@\loadafter{fitrace}
\lW@\loadafter{flushend}
\lW@\loadafter{fnbreak}
\lW@\loadafter{fnypchap}
\lW@\loadafter{nlineno}
\lW@\loadafter{fnpara}
\lW@\loadafter{fnpos}
\lW@\loadafter{fontawesome}
\lW@\loadafter{fontawesome5}
% fontenc must be loaded before lwp
% fontspec must be loaded before lwp
\lW@\loadafter{footmisc}
\lW@\loadafter{footnote}
\lW@\loadafter{footnotebackref}
\lW@\loadafter{footnotehyper}
\lW@\loadafter{footnoterange}
\lW@\loadafter{footnpag}
\lW@\loadafter{foreign}
\lW@\loadafter{forest}
\lW@\loadafter{framed}
\lW@\loadafter{ftcap}
\lW@\loadafter{ftnright}
\lW@\loadafter{fullminipage}
\lW@\loadafter{fullpage}
\lW@\loadafter{fullwidth}
\lW@\loadafter{fw}
\lW@\loadafter{gentombow}
\lW@\loadafter{gmeometric}
\lW@\loadafter{glossaries}
% geometry is always loaded by lwp, and lwp-geometry is AtBeginDocument
\lW@\loadafter{graphics}
% pre-loaded by xunicode
\ListWarp\LoadAfter{graphicx}\% pre-loaded by xunicode
\ListWarp\LoadAfter{gloss}
\ListWarp\LoadAfter{glossary}
\ListWarp\LoadAfter{grffile}
\ListWarp\LoadAfter{grid}
\ListWarp\LoadAfter{grid-system}
\ListWarp\LoadAfter{gridset}
\ListWarp\LoadAfter{hang}
\ListWarp\LoadAfter{hanging}
\ListWarp\LoadAfter{hypcap}
\ListWarp\LoadAfter{hypdestopt}
\ListWarp\LoadAfter{hypernat}
\ListWarp\LoadAfter{hyperref}
\ListWarp\LoadAfter{hyperxmp}
\ListWarp\LoadAfter{hyphenat}
\ListWarp\LoadAfter{idxlayout}
\ListWarp\LoadAfter{ifoddpage}
\ListWarp\LoadAfter{imakeidx}
\ListWarp\LoadAfter{intopdf}
\ListWarp\LoadAfter{karnaugh-map}
\ListWarp\LoadAfter{keyframe}
\ListWarp\LoadAfter{layaureo}
\ListWarp\LoadAfter{layout}
\ListWarp\LoadAfter{layouts}
\ListWarp\LoadAfter{leading}
\ListWarp\LoadAfter{letterspace}
\ListWarp\LoadAfter{lettrine}
\ListWarp\LoadAfter{lineno}
\ListWarp\LoadAfter{lips}
\ListWarp\LoadAfter{listings}
\ListWarp\LoadAfter{listliketab}
\ListWarp\LoadAfter{longtable}
\ListWarp\LoadAfter{lscape}
\ListWarp\LoadAfter{ltablenum}
\ListWarp\LoadAfter{ltapelst}
\ListWarp\LoadAfter{ltablenum}
\ListWarp\LoadAfter{ltcnum}
\ListWarp\LoadAfter{ltcaption}
\ListWarp\LoadAfter{ltggrid}
\ListWarp\LoadAfter{ltgtable}
\ListWarp\LoadAfter{lua-check-hyphen}
\ListWarp\LoadAfter{lua-visual-debug}
\ListWarp\LoadAfter{luacolor}
\ListWarp\LoadAfter{luatodonotes}
\ListWarp\LoadAfter{magaz}
\ListWarp\LoadAfter{makeidx}
\ListWarp\LoadAfter{manyfoot}
\ListWarp\LoadAfter{marginfit}
\ListWarp\LoadAfter{marginfix}
\ListWarp\LoadAfter{marginnote}
\ListWarp\LoadAfter{marvosym}
\ListWarp\LoadAfter{mathtools}
\ListWarp\LoadAfter{mcaption}
\ListWarp\LoadAfter{mdframed}
\loadafter{memhfixc}
\loadafter{metalogo}
\loadafter{metalogox}
\loadafter{mhchem}
\loadafter{microtype}
\loadafter{midfloat}
\loadafter{midpage}
\loadafter{minitoc}
\loadafter{moreverb}
\loadafter{mparhack}
\loadafter{mu/vertcap}
\loadafter{mu/vertico/vertarru/vert}
\loadafter{mu/vertitoc}
\loadafter{musicography}
\loadafter{nameauth}
\loadafter{nameref}
\loadafter{natbib}
\loadafter{nccfancyhdr}
\loadafter{needspace}
\loadafter{newtxmath}
\loadafter{newunicodechar}
\loadafter{nextpage}
\loadafter{nicefrac}
\loadafter{niceframe}
\loadafter{nomencl}
\loadafter{nonfloat}
\loadafter{nonumonpart}
\loadafter{nopageno}
\loadafter{notes}
\loadafter{notespages}
\loadafter{nowidow}
\loadafter{ntheorem}
\loadafter{octave}
\loadafter{overpic}
\loadafter{pagegrid}
\loadafter{pagenote}
\loadafter{parnotes}
\loadafter{parskip}
\loadafter{pbox}
\loadafter{pdfcomment}
\loadafter{pdfescape}
\loadafter{pdfmarginpar}
\loadafter{pdfpages}
\loadafter{pdfprivacy}
\loadafter{pdfrender}
\loadafter{pdfsync}
\loadafter{pdftricks}
\loadafter{pdfx}

% morefloats must be allowed early for print mode
% morewrites must be loaded before lwp
% \loadafter{memhfixc} must be \loadafter{moreverb}
% \loadafter{mparhack} must be \loadafter{multicol}
% \loadafter{musicography} must be \loadafter{namerefs}
% \loadafter{notes} must be \loadafter{nextpage}
% \loadafter{notespages} must be \loadafter{notes}
% \loadafter{nowidow} must be \loadafter{notes}
% \loadafter{ntheorem} must be \loadafter{notes}
% \loadafter{octave} must be \loadafter{notes}
% \loadafter{overpic} must be \loadafter{notes}
% \loadafter{pagegrid} must be \loadafter{notes}
% \loadafter{pagenote} must be \loadafter{notes}
% \loadafter{parnotes} must be \loadafter{notes}
% \loadafter{parskip} must be \loadafter{notes}
% \loadafter{pbox} must be \loadafter{notes}
% \loadafter{pdfcomment} must be \loadafter{notes}
% \loadafter{pdfescape} must be \loadafter{notes}
% \loadafter{pdfmarginpar} must be \loadafter{notes}
% \loadafter{pdfpages} must be \loadafter{notes}
% \loadafter{pdfprivacy} must be \loadafter{notes}
% \loadafter{pdfrender} must be \loadafter{notes}
% \loadafter{pdfsync} must be \loadafter{notes}
% \loadafter{pdftricks} must be \loadafter{notes}
% \loadafter{pdfx} must be \loadafter{notes}
483 \LWR@loadafter{showtags}
484 \LWR@loadafter{sidecap}
485 \LWR@loadafter{sidemargin}
486 \LWR@loadafter{SIunits}
487 \LWR@loadafter{siunitx}
488 \LWR@loadafter{soul}
489 \LWR@loadafter{soulpos}
490 \LWR@loadafter{soulutf8}
491 \LWR@loadafter{splitidx}
492 \LWR@loadafter{srcctx}
493 \LWR@loadafter{srctex}
494 \LWR@loadafter{stabular}
495 \LWR@loadafter{stfloats}
496 \LWR@loadafter{strktx}
497 \LWR@loadafter{subcaption}
498 \LWR@loadafter{subfig}
499 \LWR@loadafter{subfigure}
500 \LWR@loadafter{supertabular}
501 \LWR@loadafter{tline}
502 \LWR@loadafter{tabs}
503 \LWR@loadafter{tablefootnote}
504 \LWR@notmemoir{loadafter}{tabularx}
505 \LWR@loadafter{tabular}
506 \LWR@loadafter{tascmac}
507 \LWR@loadafter{textarea}
508% \LWR@loadafter{textcomp}% maybe before lwp with font packages
509 \LWR@loadafter{textfit}
510 \LWR@loadafter{textpos}
511 \LWR@loadafter{thm}
512 \LWR@loadafter{thinspace}
513 \LWR@loadafter{threadcol}
514 \LWR@loadafter{threeptable}
515 \LWR@loadafter{threeptablex}
516 \LWR@loadafter{thumb}
517 \LWR@loadafter{thumbs}
518 \LWR@loadafter{tikz}
519 \LWR@loadafter{titleps}
520 \LWR@loadafter{titlesec}
521 \LWR@loadafter{titletoc}
522 % \LWR@notmemoir{loadafter}{titling}
523\LWR@notmemoi{loadafter}{tocbasic}% preloaded by koma-script classes
524 \LWR@notmemoi{loadafter}{tocbidge}
525 \LWR@loadafter{tocdata}
526 \LWR@loadafter{tocenter}
527 \LWR@notmemoi{loadafter}{tocloft}
528 \LWR@loadafter{tocstyle}
529 \LWR@loadafter{todo}
530 \LWR@loadafter{todonotes}
531 \LWR@loadafter{topcapt}
532 \LWR@loadafter{tram}
533 \LWR@loadafter{transparent}
534 \LWR@loadafter{trimclip}
535 \LWR@loadafter{trivfloat}
536 \LWR@loadafter{truncate}
537 \LWR@loadafter{turnthepeople}
22 MD5 hashing

The MD5 hash is used for lateximage filenames for svg math.

\newcommand{\LWR@mdfive}[1]{%
\PackageError{/lwarp}{No MD5 macro was found}{Lwarp must find the macros pdfmdfivesum or mdfivesum.}
}
The default for \texttt{pdf\LaTeX}, \texttt{dv\LaTeX}, \texttt{up\LaTeX}, etc:

\begin{verbatim}
583 \let\LWR@mdfive\pdfmdfivesum

For Lua\LaTeX:

584 \ifLuaTeX
585 \RequirePackage{pdftexcmds}
586 \let\LWR@mdfive\pdfmdfivesum
587 \fi

For Xe\LaTeX:

588 \ifXeTeX
589 \@ifundefined{pdffivesum}{\let\LWR@mdfive\pdfmdfivesum}
590 \@ifundefined{mdfivesum}{\let\LWR@mdfive\mdfivesum}
591 \fi

\end{verbatim}

\section{pdf\LaTeX\ T1 and utf-8 encoding}

When using pdf\LaTeX, \texttt{l\warp} requires T1 encoding, and recommends utf-8 encoding.

If some other input encoding is already defined, \texttt{l\warp} will try to use it instead, and hope for the best.

\texttt{Xe\LaTeX} and Lua\LaTeX\ are both utf-8 by nature.

\begin{verbatim}
\LWR@pdfencoding  Sets T1, and also utf8 if not already set.

594 \newcommand*{\LWR@pdfencoding}{% 
595 \RequirePackage[T1]{fontenc}
596 
597 \@ifpackageloaded{inputenc}{% 
598 \@ifpackageloaded{inputenx}{% 
599 \RequirePackage[utf8]{inputenc}
600 } 
601 } 
602 
603 \ifPDFTeX% pdf\LaTeX\ or dvi\LaTeX
604 \LWR@pdfencoding
605 \fi
606 \fi
607 \ifpd\LaTeX
608 \LWR@pdfencoding
609 \fi
\end{verbatim}
24 Unicode input characters

If using \texttt{pdflatex}, convert a minimal set of Unicode characters. Additional characters may be defined by the user, as needed.

A commonly-used multiply symbol is declared to be \texttt{\texttimes}.

The first arguments of \texttt{\newunicodechar} below are text ligatures in the source code, even though they are not printed in the following listing.

\begin{verbatim}
610 \iffpTeX
611 \else
612 \RequirePackage{newunicodechar}
613 \newunicodechar{\times}{\texttimes}
614 \newunicodechar{ff}{ff}% the first arguments are /textligatures
615 \newunicodechar{fi}{fi}
616 \newunicodechar{f/l}{f/l}
617 \newunicodechar{ffi}{ffi}
618 \newunicodechar{ff/l}{ff/l}
619 \newunicodechar{---}{---}
620 \newunicodechar{--}{--}
621 \fi
622 \fi
\end{verbatim}

25 Avoid a bitmapped font

If \texttt{dvi} or \texttt{pdf \LaTeX}, and if the default Computer Modern is the selected font family, ensure that \texttt{cm-super} or \texttt{lmodern} is used to provide a vector font.

\begin{verbatim}
627 \ifxetexor\luatex
628 \else
629 \ifdefstring{\f@family}{cmr}{%
630 \iffileexists{type1ec.sty}% found in cm-super
631 {}%
632 \% cm-super not installed
633 \iffileexists{lmodern.sty}{%
634 \PackageInfo{\textwarp}{cm-super not installed, loading lmodern}
635 \RequirePackage{lmodern}
636 }%
637 \PackageError{\textwarp}{%\Warp requires a vector font.\MessageBreak
638 Install and load cm-super, lmodern, or another\MessageBreak
639 Type-1 vector font before loading \textwarp%\MessageBreak
640 }%
641 Install cm-super or lmodern.\MessageBreak
\end{verbatim}
If \texttt{lmodern}, load it before \texttt{l warp}:
\begin{verbatim}
 \space\protect\usepackage{\texttt{lmodern}}\MessageBreak
 \space\protect\usepackage{\texttt{l warp}}%
\end{verbatim}

}\% cm-super not installed
\%(\% family

\section{Upright quotes}

In \textsf{PDF\TeX{}}, preserve upright quotes in verbatim text. \texttt{upquote} also loads \texttt{textcomp}.
\begin{verbatim}
\if\PDFTeX
 \RequirePackage{upquote}
\fi
\if\p\TeX{}
 \RequirePackage{upquote}
\fi
\end{verbatim}

\section{Miscellaneous tools}

\texttt{\LWR@providelength} {\langle\texttt{lengthname}\rangle} Provides the length if it isn't defined yet.

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.
\begin{verbatim}
 \newcommand*{\LWR@providelength}[1]{%\% 
 \ifdef\LWR@providelength{#1}{}{\new\LWR@providelength{#1}}% 
\end{verbatim}

Prints a length in the given units, without printing the unit itself.
\begin{verbatim}
 \LWR@convertto {\langle\texttt{dest unit}\rangle} {\langle\texttt{length}\rangle}
\end{verbatim}

\begin{verbatim}
 \newcommand*{\LWR@convertto}[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr \texttt{#1}}
\end{verbatim}

\texttt{\LWR@patcherror} {\langle\texttt{packagename}\rangle} {\langle\texttt{macroname}\rangle}

Prints an error if could not patch a macro.
\begin{verbatim}
 \newcommand*{\LWR@patcherror}[2]{%\% 
 \PackageError{\texttt{l warp}}{Unable to patch package #1, macro #2}{% Please contact the author of the \texttt{l warp} package.}
\end{verbatim}
\LWR@isolate \langle text\rangle Isolates Chinese characters from the surrounding text. This is required to avoid extra spaces on either side of the Chinese characters, especially when written to a file.

\newcommand{\LWR@isolate}[1]{#1}%
\ifpackage{ctexpatch}{\renewcommand{\LWR@isolate}[1]{\nu/l.Var/l.Var#1\nu/l.Var/l.Var}}{}
\ifpackage{xecJK}{\renewcommand{\LWR@isolate}[1]{\nu/l.Var/l.Var#1\nu/l.Var/l.Var}}{}

\LWR@firstoffour \langle first\rangle \langle second\rangle \langle third\rangle \langle fourth\rangle
\LWR@secondoffour \langle first\rangle \langle second\rangle \langle third\rangle \langle fourth\rangle
\LWR@thirdoffour \langle first\rangle \langle second\rangle \langle third\rangle \langle fourth\rangle
\LWR@fourthoffour \langle first\rangle \langle second\rangle \langle third\rangle \langle fourth\rangle

Expands to the nth of the four arguments. Used for extra cross referencing.

\long\def\LWR@firstoffour#1#2#3#4{#1}
\long\def\LWR@secondoffour#1#2#3#4{#2}
\long\def\LWR@thirdoffour#1#2#3#4{#3}
\long\def\LWR@fourthoffour#1#2#3#4{#4}

\section{Operating-System portability}
\lwr

\lwr
lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.

If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.

When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean usingOSWindows is set true. This boolean may be tested by the user for later use.

\subsection{Literal characters}

Literal characters to be used in PrintLatexCmd and HTMLLatexCmd. These are defined without @ to easily allow their inclusion in the user's document.
The literal % character:

\let\LWRpercent\percentchar

The literal $ character:

\catcode'\$=12
\def\LWRdollar{$}
\catcode'\$=3

The literal & character:

\catcode'\&=12
\def\LWRamp{&}
\catcode'\&=4

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

\catcode'\&=0
&\catcode'\&=12
&\def\LWRbackslash{}&
&\catcode'\&=0
&\catcode'\&=4

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

\catcode'\&=1
\catcode'\{=12
\def\LWRleftbrace&{}
\catcode'\{=1
\catcode'\&=4

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

\catcode'\&=2
\catcode'\}=12
\def\LWRrightbrace{}&
\catcode'\}=2
\catcode'\&=4

The literal # character:

\catcode'\#=12
\def\LWRhash{#}
\catcode'\#=6

\LWRopquote The operating system's quote mark, UNIX default. For WINDOWS, see \LWR@setOSWindows, below.

\def\LWRopquote{'}
The operating system's sequential execution command, UNIX default. For WINDOWS, see \LWR@setOSWindows, below.

\def\LWRopseq{\space\LWRamp\LWRamp\space\space}

\section{Common portability code}

\begin{verbatim}
Bool usingOSWindows  Set if the OS\#windows option is used, or if WINDOWS is automatically detected.
\newbool{usingOSWindows}
\boolfalse{usingOSWindows}
\end{verbatim}

\section{UNIX, LINUX, and MAC OS}

\begin{verbatim}
\OSPathSymbol  Symbol used to separate directories in a path.
\newcommand*{\OSPathSymbol}{/}
\end{verbatim}

\section{MS-WINDOWS}

For MS-WINDOWS:

\begin{verbatim}
\LWR@setOSWindows  Set defaults for the MS-WINDOWS operating system. lwarp attempts to auto-detect the operatings system, and the OS\#windows option may also be used to force MS-WINDOWS compatibility.
\newcommand*{\LWR@setOSWindows}
{\booltrue{usingOSWindows}
 \renewcommand*{\OSPathSymbol}{\@backslashchar}
 \def\LWRopquote{"}
 \def\LWRopseq{\space\LWRamp\space\space}
}
\end{verbatim}

Test for windows during compile. The user may also specify OS\#windows package option in case this test fails.

\begin{verbatim}
\ifwindows
 \LWR@setOSWindows
\fi
\end{verbatim}
## Package options

**Pkgs kvoptions** Allows key/value package options.

\begin{verbatim}
\RequirePackage{kvoptions}
\SetupKeyvalOptions{family=LWR,prefix=LWR@}
\end{verbatim}

**\lwarpsetup** A user interface to set the keys:

\begin{verbatim}
\newcommand{\lwarpsetup}[1]{\setkeys{LWR}{#1}}
\end{verbatim}

**Bool warpprint**

**Bool warpingHTML**

**Bool mathjax**

**Bool LWR@origmathjax**

Set to true/false depending on the package option selections for print/HTML/EPUB output and mathsvg/mathjax. LWR@origmathjax remembers the original setting to be restored by \displaymathnormal.

\begin{verbatim}
\newbool{warpprint}
\newbool{warpingHTML}
\newbool{mathjax}
\newbool{LWR@origmathjax}
\end{verbatim}

**defaults** The default is print output, and svg math if the user chose HTML output.

\begin{verbatim}
\boolequaltrue{warpprint}%
\boolequalfalse{warpingHTML}%
\boolequalfalse{mathjax}%
\end{verbatim}

**Opt warpprint** If the warpprint option is given, boolean warpprint is true and boolean warpingHTML is false, and may be used for \ifbool tests.

\begin{verbatim}
\DeclareVoidOption{warpprint}{%
\PackageInfo{lwarp}{Using option 'warpprint'}
\boolequaltrue{warpprint}%
\boolequalfalse{warpingHTML}%
%
}
\end{verbatim}

**Opt warpingHTML** Anything in the warpingHTML environment will be generated for HTML output only.

**Opt warpingHTML** If the warpingHTML option is given, boolean warpingHTML is true and boolean warpprint is false, and may be used for \ifbool tests.

\begin{verbatim}
\DeclareVoidOption{warpingHTML}{%
\PackageInfo{lwarp}{Using option 'warpingHTML'}%
\boolequaltrue{warpingHTML}%
\boolequalfalse{warpprint}%
%
}
\end{verbatim}

**Opt mathsvg** Option mathsvg selects svg math display: If the mathsvg option is given, boolean
mathjax is false, and may be used for \ifbool tests.

```
\DeclareVoidOption{mathsvg}{% 
\PackageInfo{lwp}{Using option 'mathsvg'} 
\boolfalse{mathjax} 
\boolfalse{LWR@origmathjax}%
}
```

**Opt mathjax** Option mathjax selects \textsc{MathJax} math display: If the mathjax option is given, boolean mathjax is true, may be used for \ifbool tests.

```
\DeclareVoidOption{mathjax}{% 
\PackageInfo{lwp}{Using option 'mathjax'} 
\true{mathjax} 
\true{LWR@origmathjax}%
}
```

**Opt BaseJobname** Option BaseJobname sets the \texttt{BaseJobname} for this document. This is the \jobname of the printed version, even if currently compiling the HTML version. I.e. this is the \jobname without _html appended. This is used to set \HomeHTMLFilename if the user did not provide one.

```
\DeclareStringOption{\jobname}{BaseJobname}
```

**Opt ImagesDirectory** Option ImagesDirectory sets the name of the directory to use for the lateximage images.

```
\DeclareStringOption{\BaseJobname-images}{ImagesDirectory}
```

**Opt ImagesName** Option ImagesName sets the prefix to use for the lateximage images.

```
\DeclareStringOption{image-}{ImagesName}
```

**Opt makeindexStyle** Selects a custom .ist file. A customized file should be based on \texttt{lwp.ist}, and must retain the lines related to \hyperindexref.

```
\DeclareStringOption{lwp.ist}{makeindexStyle}
```

**Opt xindyStyle** Selects a custom .xdy file. A customized file should be based on \texttt{lwp.xdy}, and must retain the line

```
(markup-locref :open "\hyperindexref{" :close "}")
```

```
\DeclareStringOption{lwp.xdy}{xindyStyle}
```

**Opt xindyLanguage** Sets the xindy language to be assigned in \texttt{lwpmk}'s configuration files. This is then

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```
used by **lwarp** while processing the index and glossary.

```
\DeclareStringOption[english]{xindyLanguage}
```

**xindyCodepage**

Sets the `xindy` codepage to be assigned in lwarp's configuration files. This is then used by **lwarp** while processing the index.

```
\DeclareStringOption[utf8]{xindyCodepage}
```

**pdftotextEnc**

The option `pdftotextEnc` sets the encoding used by `pdftotext`. This is passed to `pdftotext` using its `-enc` option, and is used when converting \LaTeX\ PDF output with HTML tags into a plain-text file with HTML tags.

```
\DeclareStringOption[UTF-8]{pdftotextEnc}
```

**lwarp**

Tells lwarp to generate a local copy of lwarp called lwarp.lua. Useful for archiving for future use. This file may be made executable and acts just like lwarp.

If lwarp option, creates a local copy of lwarp.lua:

```
\newbool{LWR@creatinglwarp}
\boolfalse{LWR@creatinglwarp}
\DeclareVoidOption{lwarp}{
\PackageInfo{lwp}{Using option 'lwarp'}
\booltrue{LWR@creatinglwarp}
}
```

**OSWindows**

Tells lwarp to use MS-WINDOWS compatibility. Auto-detection of the operating system is attempted, and this option is only necessary if the auto-detection fails. See the automatically-generated lwarp.conf file to find out whether the operating system was detected correctly.

```
\DeclareVoidOption(OSWindows){
\PackageInfo{lwp}{Using option 'OSWindows'}
\LWR@setOSWindows
}
```

**HomeHTMLFilename**

The filename of the homepage. The default is the jobname. This option is stored into \LWR@HomeHTMLFilename, and later transferred into \HTMLFilename for internal use.

```
\DeclareStringOption[]{HomeHTMLFilename}
```

**HTMLFilename**

The filename prefix of web pages after the homepage. The default is empty, no prefix. This option is stored into \LWR@HTMLFilename, and later transferred into \HTMLFilename for internal use.

```
\DeclareStringOption[]{HTMLFilename}
```

**PrintLatexCmd**

The shell commands to use to compile the print document.

```
\DeclareStringOption[]{PrintLatexCmd}
```
lwarp

\DeclareStringOption[]{PrintLatexCmd}

**Opt** HTMLLatexCmd

Default: *<automatic>*

The shell commands to use to compile the HTML document.

\DeclareStringOption[]{HTMLLatexCmd}

**Opt** PrintIndexCmd

Default: *<empty>*

The shell commands to use to compile the print indexes.

\DeclareStringOption[]{PrintIndexCmd}

**Opt** HTMLIndexCmd

Default: *<empty>*

The shell commands to use to compile the HTML indexes.

\DeclareStringOption[]{HTMLIndexCmd}

**Opt** LatexmkIndexCmd

Default: *<empty>*

The shell commands to be used by \texttt{latexmk} to compile the print indexes. Unlike \texttt{PrintIndexCmd} and \texttt{HTMLIndexCmd}, \texttt{LatexmkIndexCmd} does not include the filename, which will be provided by \texttt{latexmk}.

\DeclareStringOption[]{LatexmkIndexCmd}

**Opt** makeindex

Tells \texttt{lwarp} to use \texttt{makeindex} for index generation. When \texttt{lwarpmk\.conf} and \texttt{*\.lwarpmkconf} are generated, PrintIndexCmd and HTMLIndexCmd will be set for \texttt{makeindex} with a single index file.

\DeclareBoolOption[false]{makeindex}

**Opt** xindy

Tells \texttt{lwarp} to use \texttt{xindy} for index generation. When \texttt{lwarpmk\.conf} and \texttt{*\.lwarpmkconf} are generated, PrintIndexCmd and HTMLIndexCmd will be set for \texttt{xindy} with a single index file.

\DeclareBoolOption[false]{xindy}

**Opt** GlossaryCmd

Default: \texttt{makeglossaries}

The shell command to use to compile the glossary. The print or HTML version of the glossary filename will be appended to this command.

\DeclareStringOption[]{GlossaryCmd}

**Opt** latexmk

Option \texttt{latexmk} tells \texttt{lwarp} to use \texttt{latexmk} when compiling documents.

\DeclareBoolOption[false]{latexmk}

**Opt** dvips

Option \texttt{dvips} tells \texttt{lwarp} to use \texttt{dvips} when compiling \texttt{dvi latex} documents.

\DeclareBoolOption[false]{dvips}

**Opt** dvipdfm

Option \texttt{dvipdfm} tells \texttt{lwarp} to use \texttt{dvipdfm} when compiling \texttt{dvi latex} documents.

\DeclareBoolOption[false]{dvipdfm}
lwarp

Option `dvipdfmx` tells `lwarpmk` to use `dvipdfmx` when compiling dvi `latex` documents.

```
\DeclareBoolOption[false]{dvipdfmx}
```

**Execute options**

Execute the package options, with the defaults which have been set just above:

```
\ProcessKeyvalOptions* \relax
```

### 29.1 Additional options support

Assign the `\BaseJobname` if the user hasn’t provided one:

```
\providecommand*{\BaseJobname}{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```
\ifcempty{LWR@HomeHTMLFilename}{
  \newcommand*{\HomeHTMLFilename}{\BaseJobname}
}{
  \csedef{\HomeHTMLFilename}{\LWR@HomeHTMLFilename}
}
\csedef{HTMLFilename}{\LWR@HTMLFilename}
```

Special handling for underscores in labels and filenames.

```
\LWR@sanitized
```

The sanitized version of what was given to `\LWR@sanitize`. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```
\newcommand*{\LWR@sanitize}{()}\LWR@sanitize{\LWR@BaseJobname}\edef{\LWR@BaseJobname}{\LWR@sanitized}
```

Sanitize some string options to neutralize underscores.

```
\LWR@sanitize{\LWR@BaseJobname}
\edef{\LWR@BaseJobname}{\LWR@sanitized}
```

```
\LWR@sanitize{\LWR@ImagesDirectory}
\edef{\LWR@ImagesDirectory}{\LWR@sanitized}
```

```
\LWR@sanitize{\LWR@ImagesName}
\edef{\LWR@ImagesName}{\LWR@sanitized}
```
\LWR@PrintIndexCmd and \LWR@HTMLIndexCmd are tested to see if they are empty. If so, they are set to a reasonable defaults for a single index using \texttt{makeindex}, then possibly set to defaults for \texttt{xindy} if the \texttt{lwp} \texttt{xindy} option was selected.

\begin{verbatim}
807 \ifdefempty{\LWR@PrintIndexCmd}{
808 \renewcommand{\LWR@PrintIndexCmd}{
809 \hspace{\jobname.idx}
810 }
811 \ifbool{\LWR@xindy}{
812 \renewcommand{\LWR@PrintIndexCmd}{
813 xindy
814 -M \LWR@xindyStyle \space
815 -L \LWR@xindyLanguage \space
816 -C \LWR@xindyCodepage \space
817 \jobname.idx
818 }
819 }()
820 }()
821 \ifdefempty{\LWR@HTMLIndexCmd}{
822 \renewcommand{\LWR@HTMLIndexCmd}{
823 \hspace{\jobname_html.idx}
824 }
825 \ifbool{\LWR@xindy}{
826 \renewcommand{\LWR@HTMLIndexCmd}{
827 xindy
828 -M \LWR@xindyStyle \space
829 -L \LWR@xindyLanguage \space
830 -C \LWR@xindyCodepage \space
831 \jobname_html.idx
832 }
833 }()
834 )()
835 }()
836 \ifdefempty{\LWR@LatexmkIndexCmd}{
837 \renewcommand{\LWR@LatexmkIndexCmd}{
838 }
839 \ifbool{\LWR@xindy}{
840 \renewcommand{\LWR@LatexmkIndexCmd}{
841 xindy
842 -M \LWR@xindyStyle \space
843 -L \LWR@xindyLanguage \space
844 -C \LWR@xindyCodepage
845 }
846 }()
847 )()
848 )()
\end{verbatim}

29.2 Conditional compilation

\warpprintononly }{(contents)}
Only process the contents if producing printed output.

\newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
\warpHTMLonly \{(contents)\}

Only process the contents if producing HTML output.

\newcommand{\warpHTMLonly}[1]{\ifbool{warpingHTML}{#1}{}}

Provides conditional code blocks.

Attempts to use versions or verbatim fail in some cases, and do not provide much of a speed benefit even when they do work.

\RequirePackage{comment}

Use comment_print.cut for print mode, and comment_html.cut for HTML mode. This helps \texttt{latexmk} to more reliably know whether to recompile.

\ifbool{warpingHTML}{
def\DefaultCutFileName{\def\CommentCutFileName{comment_html.cut}}
}{
def\DefaultCutFileName{\def\CommentCutFileName{comment_print.cut}}
}

Anything in the \texttt{warpall} environment will be generated for print or HTML outputs.

\includecomment{warpall}

Anything in the \texttt{warpprint} environment will be generated for print output only.

For HTML output:

\ifbool{warpingHTML}{\includecomment{warpHTML}}{\excludecomment{warpHTML}}%

\ifbool{warpingprint}{\includecomment{warpprint}}{\excludecomment{warpprint}}

Optionally generate a local copy of \texttt{lwarpmk}. Default to no.

\ifbool{LWR@creatinglwarpmk}{\includecomment{LWR@createalwarpmk}}{\excludecomment{LWR@createalwarpmk}}
30 Required packages

These packages are automatically loaded by \texttt{l\small{w}arp} when generating \texttt{html} output. Some of them are also automatically loaded when generating print output, but some are not.

\texttt{for\ html\ output:}

\texttt{\begin{warpHTML}}

\texttt{Load \texttt{fontspec} if necessary:}

\texttt{\ifxetexor/l.|Varuatex}
\texttt{\@ifpackage/l.|Varoadloaded{fontspec}{}{\usepackage[no-math]{fontspec}}}
\texttt{\end{warpHTML}}

The monospaced font is used for \texttt{html} tags, so turn off its \texttt{tex} ligatures and common ligatures:

\texttt{\defaultfontfeatures{\rmfamily}{Ligatures={NoCommon,\texttt{TeX}}}}
\texttt{\defaultfontfeatures{\sffamily}{Ligatures={NoCommon,\texttt{TeX}}}}
\texttt{\defaultfontfeatures{\ttfamily}{Ligatures={NoCommon}}}

\texttt{\e{warp}}

\texttt{Only pre-loaded if \texttt{pdflatex} is being used.}

\texttt{Pkg microtype}

\texttt{ligatures} Older browsers don’t display ligatures. Turn off letter ligatures, keeping \texttt{tex} dash and quote ligatures, which may fail on older browsers but at least won’t corrupt written words.

\texttt{\RequirePackage \{microtype\}}
\texttt{\microtypesetup{protrusion=false, expansion=false, tracking=false, kerning=false, spacing=false}}
\texttt{\DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}}

\texttt{\e{warp}}

\texttt{Pkg geometry Tactics to avoid unwanted page breaks and margin overflow:}

- Uses a very long and wide page to minimize page breaks and margin overflow.
- Uses a scriptsizel\texttt{e} font.
- Uses extra space at the margin to avoid \texttt{html} tag overflow off the page.
• Forces a new PDF page before some environments.
• Forces line break between major pieces of long tags.

\texttt{for HTML output:}
\begin{warpHTML}
\begin{thebibliography}{1}
  \bibitem{1}
  \end{thebibliography}
\end{warpHTML}

\texttt{for HTML output:}
\begin{warpHTML}
  \begin{verbatim}
  \begin{flushleft}
  \begin{tabular}{ll}
  \textbf{Pg} & \textbf{xparse} \\
  \end{tabular}
  \end{flushleft}
  \end{verbatim}
  \end{warpHTML}

\texttt{for HTML output:}
\begin{warpHTML}
  \begin{verbatim}
  \begin{flushleft}
  \begin{tabular}{ll}
  \textbf{Pg} & \textbf{calc} \\
  \end{tabular}
  \end{flushleft}
  \end{verbatim}
  \end{warpHTML}

\texttt{for HTML output:}
\begin{warpHTML}
  \begin{verbatim}
  \begin{flushleft}
  \begin{tabular}{ll}
  \textbf{Pg} & \textbf{expl3} \\
  \end{tabular}
  \end{flushleft}
  \end{verbatim}
  \end{warpHTML}

\texttt{for HTML output:}
\begin{warpHTML}
  \begin{verbatim}
  \begin{flushleft}
  \begin{tabular}{ll}
  \textbf{Pg} & \textbf{gettitlestring} \\
  \end{tabular}
  \end{flushleft}
  \end{verbatim}
  \end{warpHTML}
Pkg everyhook

`everyhook` is used to patch paragraph handling.

\@ifundefined{bxjs@everypar}{\let\everypar\bxjs@everypar}
\ RequirePackage{everyhook}
\end{warpHTML}

for HTML & PRINT:
\begin{warpall}

Pkg filecontents

Used to write helper files, done in print mode.

Patch to work with `morewrites`, per https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910

\ RequirePackage{filecontents}
\ifpackagelater{filecontents}{2011/10/09}{
\newwrite\fcwrite
\let\LWR@origfilecontents\filecontents
\def\filecontents{\def\chardef##1\write{\let\reserved@c\fcwrite}\LWR@origfilecontents}
\end{warpall}

for HTML output:
\begin{warpHTML}

Pkg xifthen

\ RequirePackage{xifthen}

Pkg verbatim

\ RequirePackage{verbatim}

Pkg refcount

Provides \setcounterref, \setcounterpageref, etc.

\ RequirePackage{refcount}

Pkg newfloat

\ RequirePackage{newfloat}

\end{warpHTML}
There was a short-term bug in `xstring` regarding `\IfInteger` which affected `lwarp`'s index generation. The updated version is requested here.

\RequirePackage{xstring}[2019/02/01]

Used to encapsulate math environments for re-use in HTML `<alt>` text.

\RequirePackage{environ}

Used to convert lengths for image width/height options.

\RequirePackage{printlen}

\LWR@printlength \{(length)\}

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

\newrobustcmd*{\LWR@printlength}[1]{% 
  \begingroup% 
  \uselengthunit{PT}% 
  \renewcommand*{\unitspace}{}% 
  \ifdim{#1}{10pt}{}% 
  \printlength{#1}% 
  \rndprintlength{#1}% 
  \}% 
  \endgroup% 
%

\end{warpHTML}

Used for print-mode `lateximage`.

\RequirePackage{varwidth}

\end{warpprint}

\section{Loading packages}

\begin{warpall}

\end{warpall}
Remember the original `\RequirePackage`:

```latex
\let\LWR@origRequirePackage\RequirePackage
\LWR@requirepackagenames
Stores the list of required package names.
\newcommand*{\LWR@requirepackagenames}{}
```

`\LWR@parsedrequirepackagenames` Stores the parsed list of required package names after spaces are removed and `lwarp-` is prepended.

```latex
\newcommand*{\LWR@parsedrequirepackagenames}{}
```

`\LWR@nullifycomment` Remove the preexisting comment environment. Certain packages define it for their own use.

```latex
\newcommand*{\LWR@nullifycomment}[]{\PackageInfo{lwarp}\%
\let\commentrelax%
\let\endcommentrelax%
}
```

`\LWR@findword` \([1: \text{separator}] \{2: \text{list}\} \{3: \text{index}\} \{4: \text{destination}\}\]

Note that argument 4 is passed directly to `\StrBetween`.

```latex
\newcommand*{\LWR@findword}[3][,]{\StrBetween[#3,#3+1]{#1#2#1}{#1}{#1}[]}
```

`\LWR@checkfilename` `{\text{filename}}` Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```latex
\newcommand*{\LWR@checkfilename}[1][% \LWR@checkloadnever[#1]{ae}{latinmodern} \LWR@checkloadnever[#1]{aecc}{latinmodern} \LWR@checkloadnever[#1]{alg}{algorithm2e, algorithmicx} \LWR@checkloadnever[#1]{algorithmic}{algorithm2e, algorithmicx} \LWR@checkloadnever[#1]{bitfield}{bytefield} \LWR@checkloadnever[#1]{boxedminipage}{boxedminipage2e} \LWR@checkloadnever[#1]{caption2}{caption} \LWR@checkloadnever[#1]{caption}{caption} \LWR@checkloadnever[#1]{colortab}{colortbl} \LWR@checkloadnever[#1]{doublespace}{setspace} \LWR@checkloadnever[#1]{epsf}{graphicx} \LWR@checkloadnever[#1]{fancyheadings}{fancyhdr} \LWR@checkloadnever[#1]{fncylab}{cleveref} \LWR@checkloadnever[#1]{glossary}{glossaries} \LWR@checkloadnever[#1]{hyper}{hyperref}
The following should only be loaded before \texttt{lwp}:

\begin{verbatim}
\LWR@checkloadnever{#1}\{newthm\}{ntheorem}
\LWR@checkloadnever{#1}\{pdfcprot\}{microtype}
\LWR@checkloadnever{#1}\{picinpar\}\{floatflt, wrapfig\}
\LWR@checkloadnever{#1}\{picins\}\{floatflt, wrapfig\}
\LWR@checkloadnever{#1}\{rplain\}\{fancyhdr\}
\LWR@checkloadnever{#1}\{si\}\{siunitx\}
\LWR@checkloadnever{#1}\{sistyle\}\{siunitx\}
\LWR@checkloadnever{#1}\{tlenc\}\{fontenc, inputenc, inputenx\}
\LWR@checkloadnever{#1}\{ucs\}\{inputenc, inputenx\}
\LWR@checkloadnever{#1}\{wasysym\}\{textcomp, amsmath, amssymb, \texttt{mnssymbol}, \texttt{fdsymbo/l.Var}, \texttt{ fdsymbo/l.Var}\}
\end{verbatim}

\LWR@lookforpackagename \{\langle index\rangle\}

If HTML, and if this is an \texttt{lwp}-supported package name, re-direct it to the \texttt{lwp} version by renaming it \texttt{lwp\-} followed by the original name.

Looks \texttt{index} deep into the list of package names, \texttt{\LWR@requirepackagenames}, and builds \texttt{\LWR@parsedrequirepackagenames} which is the modified list of names.

\begin{verbatim}
\newcommand*{\LWR@lookforpackagename}{\texttt{(index)}}
\end{verbatim}

Find the \texttt{index}'th package name from the list:

\begin{verbatim}
\LWR@findword{\LWR@requirepackagenames}{#1}\{\LWR@strresu/l.Vart\}
\end{verbatim}

Remove blanks. The original name with blanks is in \texttt{LWR@strresult} and the final name with no blanks goes into \texttt{LWR@strresulttwo}.

\begin{verbatim}
\StrSubstitute[100]{\LWR@strresult}{ }{\LWR@strresulttwo}
\end{verbatim}

See if the package name was found:

\begin{verbatim}
\IfStrEq{\LWR@strresulttwo}{}{\LWR@strresulttwo}{% no \texttt{filename}
\LWR@strresulttwo}{yes \texttt{filename was found}}
\end{verbatim}
Possible adjustments before loading the package. Maybe nullify the comment environment if the new package will be redefining it for a new purpose.

If HTML, check if the package should be loaded before lwpark, or never at all:

If HTML, and if found, and if an lwpark-equivalent name exists, use lwpark-* instead.

Otherwise, use the current package name.

For each of many package names in a comma-separated list, if an lwpark version of a package exists, select it instead of the LATEX version.

Redirect up to twenty names:{16}

{16}This was originally nine names, but then I came across a package which used twelve...
\RequirePackage depending on the options and version:

\IfValueTF{#1}%
\IfValueTF{#3}% version given?
{\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
{\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
\IfValueTF{#3}% no options given
{\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
{\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
\LetLtxMacro\usepackage\RequirePackage

\end{warpall}

\ProvidesPackagePass {⟨pkgname⟩} [[⟨version⟩]]

Uses the original package, including options.

\NewDocumentCommand{\ProvidesPackagePass}{m o}{
\PackageInfo{\l@Var}{Using package ‘#1’ and adding \l@Var modifications,\MessageBreak
including options,\%}
\IfValueTF{#2}\ProvidesPackage[\l@Var-#1][#2]\ProvidesPackage[\l@Var-#1]\Dec@areOption*{\PassOptionsToPackage{\CurrentOption}{#1}}\ProcessOptions\relax

\begin{warpHTML}
\LWR@ProvidesPackagePass {⟨pkgname⟩} [[⟨version⟩]]
\end{warpHTML}
In some cases, the following seems to be required to avoid an "unknown option" error, such as when loading \texttt{xcolor} with options.

\begin{verbatim}
\LWR@origRequirePackage{#1}[#2]\end{verbatim}

\DeclareOption{}{}
\ProcessOptions\relax

\LWR@ProvidesPackageDrop\{⟨\texttt{pkgname}⟩\}[⟨\texttt{version}⟩]

Ignores the original package and uses \texttt{l warp}'s version instead. Drops/discards all options.

\NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
\PackageInfo{ lwarp}{Replacing package '⟨\texttt{#1}⟩' with the lwarp version,\MessageBreak and discarding options,\%
\IfValueTF{#2}{\ProvidesPackage{lwarp-⟨\texttt{#1}⟩}[#2]}{\ProvidesPackage{lwarp-⟨\texttt{#1}⟩}}
\DeclareOption{}{}
\ProcessOptions\relax
\edef\@curroptions{}% /lwarp modification to \ProcessOptions
\@process@ptions\relax% from the original \ProcessOptions\}
\end{verbatim}

Ignore all options.

\DeclareOption{}{}

Nullifies then processes the options. Seems to be required when options contain curly braces, which were causing "Missing \begin{document}".

\begin{verbatim}
\ProcessOptions\relax% original LaTeX code
\let\@empty\empty% from the original \ProcessOptions
\def\curroptions{}% lwarp modification to \ProcessOptions
\process@ptions\relax% from the original \ProcessOptions
\end{verbatim}

\begin{verbatim}
\end{verbatim}

\section{32 Additional required packages}

\textbf{for HTML output}:

\begin{verbatim}
\begin{verbatim}
\LWR@origRequirePackage{caption}
\AtBeginDocument{\RequirePackage{lwarp-caption}}
\end{verbatim}
\end{verbatim}

\begin{verbatim}
\end{verbatim}
33  File handles

Defines file handles for writes.

\begin{warpall}
\LWR@quickfile  For quick temporary use only. This is reused in several places.
\newwrite\LWR@quickfile
\end{warpall}

\begin{warpHTML}
\LWR@lateximagesfile  For \texttt{<project>-images.txt}:
\newwrite\LWR@lateximagesfile
\end{warpHTML}

34  Include a file

During HTML output, \texttt{\include{<filename>}} causes the following to occur:

1. lwarp creates \texttt{<filename>_html_inc.tex} whose contents are:
   \begin{verbatim}
   \input <filename>.tex
   \end{verbatim}
2. \texttt{<filename>_html_inc.tex} is then \texttt{\include}d instead of \texttt{<filename>.tex}.
3. \texttt{<filename>_html_inc.aux} is automatically generated and used by \LaTeX.

\begin{warpHTML}
\begin{verbatim}
\include {⟨filename⟩}
\@include {⟨filename⟩} Modified to load _html_inc files.
\end{verbatim}
\end{warpHTML}

\begin{verbatim}
\def\@include#1 {%
\immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
\immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
\immediate\closeout\LWR@quickfile% lwarp
\LWR@origclearpage% \changed
\if@files
  \immediate\write\@mainaux{\string\input(#1_html_inc.aux)}% changed
\fi
\@tempswatrue
\end{verbatim}
\if@partsw
  \@tempswafalse
  \edef\reserved@b{#1}\
  \@for\reserved@a:=\@part/l.Varist\do
    \ifx\reserved@a\reserved@b\@tempswatrue\fi\
  \fi
  \if@tempswa
    \let\@auxout@partaux
  \if@filenamesw
    \immediate\openout\@partaux #1_htm/l.Var_inc.aux % changed
    \immediate\write\@partaux{e/l.Varax}\
    \fi
    \@input@{#1_htm/l.Var_inc.tex}% changed
    \LWR@origc/l.Varearpage% changed
    \@writeckpt{#1}\
    \if@filenamesw
      \immediate\closeout\@partaux
    \fi
  \else
    \deadcycles\z@
    \@nameuse{cp@#1}\
  \fi
  \fi\@auxout@mainaux%
\end{warpHTML}

\section{Copying a file}

\begin{warpHTML}
\LWR@copyfi/l.Vare \{⟨source filename⟩\} \{⟨destination filename⟩\}

Used to copy the .toc file to .sidetoc to re-print the toc in the sideroc navigation pane.

\end{warpHTML}
36 Debugging messages

**HTML comments**  To have the HTML output include additional HTML comments, such as which `<div>` is closing, use

    \booltrue{HTMLDebugComments}

**debugging information**  To have debug information written to the log, use

    \tracingl warp

**for HTML & PRINT:**

    \begin{warpall}

Bool LWR@tracingl warp  True if tracing is turned on.

    \newbool(LWR@tracingl warp)

\tracingl warp  Turns on the debug tracing messages.

    \newcommand(\tracingl warp)(\booltrue(LWR@tracingl warp))

LWR@traceinfo  If tracing is turned on, writes the text to the .log file.

    \newcommand(\LWR@traceinfo)[1][]{
    \ifbool(LWR@tracingl warp)%
    %
    \typeout(*** lwp: #1)%
    %
    %
    }%
    %
    %

Bool HTMLDebugComments  Add comments in HTML about closing `<div>`s, sections, etc.

    \newbool(HTMLDebugComments)
    \boolfalse(HTMLDebugComments)

    If \tracingl warp, show where preamble hooks occur:
37 Defining print and HTML versions of macros and environments

The following refers to defining objects inside lwarp, and is not for the user's document. Many macros and environments must be provided as both print and HTML versions. While generating the print version of a document, the original macros as defined by \LaTeX{} and its packages are used as-is.

While generating the HTML version of a document, the original macro or environment is redefined to call a new HTML version or a copy of the original print version. The new HTML versions of macros and environments are used most of the time. Copies of the print versions are used inside a \texttt{lateximage} environment, which draws and remembers an image of the printed output, and also several other places. The copies of the print versions may also be used by the HTML versions, such as when the HTML version merely encloses the print version inside HTML tags.

The general structure for providing print and HTML versions of a macro or environment is as follows:

For a preexisting macro, not defined with \texttt{xparse}: An HTML version is provided with a special name, inside a \texttt{warpHTML} environment, then \texttt{\LWR@formatted} is used to redefine and patch various macros:

\begin{verbatim}
\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may also use xparse
\LWR@formatted{name}
\end{warpHTML}
\end{verbatim}

\texttt{\LWR@formatted{name}} copies the original print version, then redefines \texttt{name} to use either the print or HTML version depending on which mode \texttt{lwarp} is using. \texttt{xparse} may be used to define the new HTML version, even if the original did not use \texttt{xparse}.

For a preexisting environment, not defined with \texttt{xparse}: The process is similar. Note the use of \texttt{\LWR@formattedenv} instead of \texttt{\LWR@formatted}.
\begin{warpHTML}
\newenvironment{\LWR@HTML@name}{...}% may also use xparse
\LWR@formattedenv{\name}
\end[warpHTML]

If the original used \texttt{xparse}: A copy must be made using a new name:

\begin{warpHTML}
\NewDocumentCommand{\LWR@print@name}{..}{..}% copy the original
\NewDocumentCommand{\LWR@HTML@name}{..}{..}% or use \texttt{\newcommand}
\LWR@formatted{\name}
\end[warpHTML]

Similar for an environment, using \texttt{\LWR@formattedenv}. (\texttt{\LWR@formatted} and \texttt{\LWR@formattedenv} use \texttt{\LetLtxMacro} to copy the original print definition, which may not work with macros and environments created by \texttt{xparse}, so the print version must be manually recreated in the \texttt{lwarp} source.)

For a new macro or environment, not using \texttt{xparse} for the print version:

\begin{warpall}
\newcommand{\name}{...}% NOT \texttt{xparse}!
\end[warpall]

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may use \texttt{xparse} for HTML
\LWR@formatted{\name}
\end[warpHTML]

Similar for an environment. The plain \texttt{\name} or environment \texttt{name} is used for the printed version, and is placed inside \texttt{warpall}. \texttt{xparse} may be used for the \texttt{\LWR@HTML@\langle\name\rangle} version.

For a new macro or environment, using \texttt{xparse}: It is possible to use \texttt{xparse} for an entirely new macro or environment by defining the \texttt{\LWR@print@\langle\name\rangle} version with \texttt{xparse}, along with \texttt{\name} defined without \texttt{xparse} to refer directly to the \texttt{\LWR@print} version:

\begin{warpall}
\NewDocumentCommand{\LWR@print@name}{...}{...}% -or-
\NewDocumentEnvironment{\LWR@print@name}{...}{...}{...}
\end[warpall]

% Simply a call to \texttt{\LWR@print@name}:
\newcommand{\name}{\LWR@print@name}% -or-
\newenvironment{\name}{\LWR@print@name}{\end\LWR@print@name}
In general, \LWR@formatted or \LWR@formattedenv are placed inside a warpHTML environment, and while producing an HTML document they do the following:

- Macros are modified:
  1. The pre-existing print version \name is saved as \LWR@print@<name>, unless \LWR@print@<name> is already defined.
  2. The original \name is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by \LWR@formatting, which is defined as either “print” or “HTML”.

- When lwarp is producing a print document, the original definitions are used, as well as any new definitions defined in warpall above.

- When lwarp is generating HTML output, \LWR@formatting is set to “HTML”, and \name is directed to \LWR@HTML@<name>.

- When lwarp is generating HTML output but enters a lateximage environment, or for some other reason needs to draw images using the original print definitions, \LWR@formatting is changed to “print” and \name is then redirected to \LWR@print@<name>, which was the original \name.

Since arguments are not handled by the new \name, any star and other arguments are processed by the print or HTML version.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a tabular, without which a “Misplaced \omit” error may occur.

\LWR@expandableformatted
\LWR@expandableformattedenv

(Older versions of lwarp used \LetltxMacro for everything, but this could fail when using macros defined by xparse. This older system is still in use for many definitions.)

\begin{warpHTML}
\LWR@formatting Remembers if selected print/HTML formatting.

Used while \LWR@restoreorigformatting, such as in a lateximage. May be set to either “print” or “HTML”.
\end{warpHTML}
\LWR@formatted \{ (macroname) \}   No backslash in the macro name.

If not yet defined, defines \LWR@print@\langle name\rangle as the original print-mode \langle name\rangle. Also redefines \langle name\rangle to use \LWR@\langle format\rangle@\langle name\rangle, where \langle format\rangle is set by \LWR@formatting, and is print or HTML.

\LWR@expandableformatted \{ (macroname) \}   No backslash in the macro name.

An expandable version of \LWR@formatted.

\LWR@formattedenv \{ (environmentname) \}

If not yet defined, defines the environment LWR@print@\langle name\rangle as the original print-mode \langle name\rangle. Also redefines the environment \langle name\rangle to use environment LWR@\langle format\rangle@\langle name\rangle, where \langle format\rangle is set by \LWR@formatting, and is print or HTML.
An expandable version of \texttt{LWR@formattedenv}.

\begin{Verbatim}
\newcommand*{\LWR@expandableformattedenv}[1]{%
  \ifcsundef{LWR@print@#1}{%
    \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname\csname#1\endcsname%
  \csnameendcsname%
  }{}
  \Dec{\Var\expandable\Var\DocumentEnvironment{#1}{}%}
  {\@nameuse{LWR@\Var\formatted@\Var\#1}}%
  {\@nameuse{endLWR@\Var\formatted@\Var\#1}}%
%
\end{Verbatim}

\section{HTML-conversion output modifications}

These booleans modify the HTML output in various ways to improve conversion to EPUB or word processor imports.

\textbf{for HTML \& PRINT:}\begin{Verbatim}
\begin{warp}{warpal}

38.1 User-level controls

<table>
<thead>
<tr>
<th>Bool</th>
<th>FormatEPUB</th>
<th>Changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default:</td>
<td>false</td>
<td></td>
</tr>
</tbody>
</table>

\begin{Verbatim}
\newbool{FormatEPUB}
\boolfalse{FormatEPUB}
\end{Verbatim}

<table>
<thead>
<tr>
<th>Bool</th>
<th>FormatWP</th>
<th>Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default:</td>
<td>false</td>
<td></td>
</tr>
</tbody>
</table>

\begin{Verbatim}
\newbool{FormatWP}
\boolfalse{FormatWP}
\end{Verbatim}

| Bool  | WPMarkFloats | Adds \begin{verbatim}=== begin table ===
\.
\.
\end{verbatim} |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Default:</td>
<td>false</td>
<td></td>
</tr>
</tbody>
</table>

\begin{Verbatim}
\newbool{WPMarkFloats}
\boolfalse{WPMarkFloats}
\end{Verbatim}
or

```latex
| begin figure | ...
| end | 
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.\(^{17}\)

\[\text{newbool}(\text{WPMarkFloats})\]
\[\text{boolfalse}(\text{WPMarkFloats})\]

| Bool WPMarkMinipages | Adds
|-----------------------|------------------|
| **Default: false**    | ```latex
| begin minipage | ...
| end minipage | ```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

\[\text{newbool}(\text{WPMarkMinipages})\]
\[\text{boolfalse}(\text{WPMarkMinipages})\]

| Bool WPMarkTOC | While formatting for word processors, adds
|-----------------|-------------------------------------------------|
| **Default: true** | ```latex
| table of contents | ```

where the Table of Contents would have been. This helps identify where to insert the actual toc.

*If set false, the actual toc is printed instead.*

\[\text{newbool}(\text{WPMarkTOC})\]
\[\text{booltrue}(\text{WPMarkTOC})\]

| Bool WPMarkLOFT | While formatting for word processors, adds
|-----------------|-------------------------------------------------|
| **Default: false** | ```latex
| list of figures | and/or
| list of tables | ```

where each of these lists would have been. This helps identify where to insert the actual lists.

*If set false, the actual lists are printed instead.*

\[\text{newbool}(\text{WPMarkLOFT})\]
\[\text{boolfalse}(\text{WPMarkLOFT})\]

| Bool WPMarkMath | While formatting for word processors, prints math as \LaTeX code instead of creating
|-----------------|-------------------------------------------------|
| **Default: false** | \footnote{Perhaps some day word processors will have HTML import options for identifying \texttt{<figure>} and caption tags for figures and tables.}

\[\text{newbool}(\text{WPMarkMath})\]
\[\text{boolfalse}(\text{WPMarkMath})\]
svg images or MATHJAX. This is useful for cut/paste into the LibreOffice Writer TeXMaths extension.

\newbool{WPMarkMath}
\boolfalse{WPMarkMath}

While formatting for word processors, true sets the document title to \texttt{<h1>}, which is expected for HTML documents, but also causes the lower-level section headings to start at Heading 2 when imported into LibreOffice. Set to false to cause the title to be plain text, and the section headings to begin at Heading 1.

See table 8 on page 181.

\begin{warpHTML}
\AtBeginDocument{
\ifbool{FormatWP}{
\ifundefined{chapter}{
\ifbool{WPTitleHeading}{% part and section starting at h2
\renewcommand*{\LWR@tagtit}{h1}
\renewcommand*{\LWR@tagtitend}{/h1}
\renewcommand*{\LWR@tagpart}{h2}
\renewcommand*{\LWR@tagpartend}{/h2}
\renewcommand*{\LWR@tagsection}{h3}
\renewcommand*{\LWR@tagsectionend}{/h3}
\renewcommand*{\LWR@tagsubsection}{h4}
\renewcommand*{\LWR@tagsubsectionend}{/h4}
\renewcommand*{\LWR@tagsubsubsection}{h5}
\renewcommand*{\LWR@tagsubsubsectionend}{/h5}
\renewcommand*{\LWR@tagparagraph}{h6}
\renewcommand*{\LWR@tagparagraphend}{/h6}
\renewcommand*{\LWR@tagsubparagraph}{span c/\varass=/quotedbl/\varass/quotedbl/\varass}
\renewcommand*{\LWR@tagsubparagraphend}{/span}{% WPTitleHeading
{% not WPTitleHeading, part and section starting at h1
\renewcommand*{\LWR@tagtit}{div c/\varass=/quotedbl/\varass/quotedbl/\varass}
\renewcommand*{\LWR@tagtitend}{/div}
\renewcommand*{\LWR@tagpart}{h1}
\renewcommand*{\LWR@tagpartend}{/h1}}}% WPTitleHeading
\}% not WPTitleHeading, part and section starting at h1
\renewcommand*{\LWR@tagtit}{div class="title"}
}\renewcommand*{\LWR@tagtitend}{/div}
\renewcommand*{\LWR@tagpart}{h1}
\renewcommand*{\LWR@tagpartend}{/h1}}
\end{warpHTML}
39 Remembering original formatting macros

for HTML output:

Remember original definitions of formatting commands. Will be changed to HTML commands for most uses. Will be temporarily restored to original meaning inside any lateximage environment. Also nullify unused commands.

Some packages redefine \#, which is used to generate HTML, so the original must be remembered here.

\chardef\LWR@origpound='\#

\let\LWR@origcomma\,
\let\LWR@origthinspace\thinspace\let\LWR@orignegthinspace\negthinspace\let\LWR@origenskip\enskip\let\LWR@origquad\quad\let\LWR@origfil\fil\let\LWR@orighss\hss\let\LWR@origllap\llap\let\LWR@origlap\lap\let\LWR@origfilneg\filneg\let\LWR@orighspace\hspace\let\LWR@origrule\rule\let\LWR@origmedskip\medskip\let\LWR@origbigskip\bigskip\let\LWR@origtextellipsis\textellipsis\let\LWR@orig@textquotedbl\textquotedbl\let\LWR@origrmfamily\rmfamily\let\LWR@orgbffamily\sffamily\let\LWR@origttfamily\ttfamily\let\LWR@origbfseries\bfseries\let\LWR@origmdseries\mdseries\let\LWR@origupshape\upshape\let\LWR@origshape\s\let\LWR@origscshape\scshape\let\LWR@origitshape\itshape\let\LWR@orem\em\let\LWR@orignormfont\normalfont\let\LWR@origonecolumn\onecolumn\let\LWR@origsp\sp\let\LWR@origsb\sb\let\LWR@origtextsuperscript\textsuperscript\let\LWR@origtextsubscript\textsubscript\AtBeginDocument{\let\LWR@origunderline\underline}\let\LWR@orignewpage\newpage
40 Accents

Native \LaTeX{} accents such as ‘\’ will work, but many more kinds of accents are available when using Unicode-aware XeLaTeX and LuaLaTeX.

For HTML output:

Without \AtBeginDocument, \texttt{\textbackslash t} was being re-defined somewhere.
The following are restored for print when inside a \texttt{lateximage}.

For Unicode engines, only \texttt{\textbackslash t} needs to be redefined:

\begin{verbatim}
\LetLtxMacro{\LWR@origt}{\textbackslash t}
\end{verbatim}

For pdft\TeX, additional work is required:

\begin{verbatim}
\ifPDFTeX \pdflatex or dvi latex
\LetLtxMacro{\LWR@origequa}{\textbackslash accent}\=
\LetLtxMacro{\LWR@origdotaccent}{.}
\LetLtxMacro{\LWR@origu}{\textbackslash u}
\LetLtxMacro{\LWR@origv}{\textbackslash v}
\LetLtxMacro{\LWR@origc}{\textbackslash c}
\LetLtxMacro{\LWR@origd}{\textbackslash d}
\LetLtxMacro{\LWR@origb}{\textbackslash b}
\fi
\end{verbatim}

The HTML redefinitions follow.

For pdft\TeX, Unicode diacritical marks are used:

\begin{verbatim}
\renewcommand*{\=}[1]{#1\HTMLunicode{0305}}
\renewcommand*{.}[1]{#1\HTMLunicode{0307}}
\renewcommand*{\u}[1]{#1\HTMLunicode{0306}}
\renewcommand*{\v}[1]{#1\HTMLunicode{030C}}
\renewcommand*{\c}[1]{#1\HTMLunicode{0327}}
\renewcommand*{\d}[1]{#1\HTMLunicode{0323}}
\renewcommand*{\b}[1]{#1\HTMLunicode{0331}}
\end{verbatim}

For all engines, a Unicode diacritical tie is used:

\begin{verbatim}
\def{\LWR@t#1#2}{#1\HTMLunicode{0361}#2}
\renewcommand*{\textbackslash t}[1]{\LWR@t#1}
\end{verbatim}

\texttt{\LWR@restoreorigaccents} Called from \texttt{\restoreoriginalformatting} when a \texttt{lateximage} is begun.

\begin{verbatim}
\ifPDFTeX \pdflatex or dvi latex
\newcommand*{\LWR@restoreorigaccents}{% \LetLtxMacro{\=}{\textbackslash origequa}\=
\LetLtxMacro{\.}{\textbackslash origdotaccent}.\LetLtxMacro{\u}{\textbackslash origu}\u\LetLtxMacro{\v}{\textbackslash origv}\v\LetLtxMacro{\c}{\textbackslash origc}\c\LetLtxMacro{\d}{\textbackslash origd}\d\LetLtxMacro{\b}{\textbackslash origb}\b% \else XeLaTeX, LuaLaTeX:
\newcommand*{\LWR@restoreorigaccents}{% \LetLtxMacro{\textbackslash t}{\textbackslash origt}\textbackslash t% \fi%\AtBeginDocument
\end{verbatim}
41 Configuration files

41.1 Decide whether to generate configuration files

Configuration files are only written if processing the print version of the document, and not processing a pstool image. pstool uses an additional compile for each image using the original document's preamble, which includes \lwarptex, so the \lwarptex configuration files are turned off if \-pstool is part of the \jobname.

Default to no configuration files:
\excludecomment{LWRwriteconf}

Generate configuration files if print mode and not \-pstool:

\begin{warpprint}
\fullexpandarg%
\IfSubStr*{\jobname}{-pstool}
{
  \textout{\lwarptex: jobname with -pstool is found,}
  \textout{\space\space not generating configuration files.}\%
}
{
  \textout{\lwarptex: generating configuration files}
  \includecomment{LWRwriteconf}
}
\end{warpprint}

41.2 \project\_htm\_\tex

File \_*\_htm\_\tex Used to allow an \*htm\* version of the document to exist alongside the print version.

\begin{LWRwriteconf}
\immediate\openout{LWR@quickfile=\jobname_html.tex}
\immediate\write{LWR@quickfile}{%}
\detokenize{\PassOptionsToPackage}{warpHTML,BaseJobname=\jobname}{\lwarptex}
\}
\immediate\write{LWR@quickfile}{%}
\detokenize{\string{\jobname.tex\string}}
\}
\immediate\closeout{LWR@quickfile}
\end{LWRwriteconf}
41.3  \textit{lwarpmk} configuration files

\texttt{\LaTeX} configuration files

\begin{verbatim}
\begin{LWRwriteconf}
The version number of the configuration file, allowing \textit{lwarpmk} to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the \textit{lwp} version number.)
\end{LWRwriteconf}
\end{verbatim}

41.3.1 Helper macros

\begin{verbatim}
\LWR@shell\texttt{escapecmd} The \LaTeX\ compile option for shell escape, if used.
\LWR@compilecmd新手 to form the basic compilation command for a document, adding the optional shell escape.

Engine is \texttt{pdflatex}, etc. Suffix is empty or \texttt{.html}

\LWR@add\texttt{compilecmd}新手 to the compilation command.

Cmd is \texttt{dvipdfmx}, etc. Suffix is empty or \texttt{.html}

\LWR@unknownengine Error message if not sure which \LaTeX\ engine is being used.
\end{verbatim}
\LWR@latexmkkvar \{(varname)\} \{(value)\}

Adds a \texttt{latexmk} variable assignment.

\begin{verbatim}
1510 \newcommand*{\LWR@latexmkkvar}[2]{
1511 -e \LWR@quote
1512 \LWR@do/l.Var/l.Varar \#1=q/#2/\quote
1513 }
\end{verbatim}

\LWR@latexmkcmd \{(latexmk options)\}

Sets a call to \texttt{latexmk} with the given options, possibly adding \texttt{--shell-escape}, and also adding the indexing program.

\begin{verbatim}
1516 \newcommand*{\LWR@latexmkcmd}[1]{
1517 \latexmk \space \LWR@shellescapecmd \space \#1 \space
1518 \space \LWR@latexmkkvar{makeindex}{\LWR@LatexmkIndexCmd
1519 }
1520 }
\end{verbatim}

\LWR@latexmkdvipdfm \{(dvipdfm or dvipdfmx)\}

Adds the options settings for \texttt{dvipdfm} or \texttt{dvipdfmx}.

\begin{verbatim}
1521 \newcommand*{\LWR@latexmkdvipdfm}[1]{
1522 -pdfdvi \space
1523 \LWR@latexmkkvar{dvipdf}{
1524 \@percentchar O
1525 -o \@percentchar D
1526 \@percentchar S%
1527 }
1528 }
\end{verbatim}

\LWR@compileuplatex Sets compile options for \upTEX with \texttt{ujarticle} or related classes.

\begin{verbatim}
1530 \newcommand*{\LWR@compileuplatex}{
1531 \def\LWR@tempprintlatexcmd{%
1532 \LWR@compilecmd{uplatex}{
1533 \LWR@addcompilecmd{dvipdfmx}{}
1534 }
1535 \def\LWR@tempfHTMLlatexcmd{%
1536 \LWR@compilecmd{uplatex}{\_html}
1537 \LWR@addcompilecmd{dvipdfmx}{\_html}
1538 }
1539 }
\end{verbatim}

\LWR@PrintLatexCmd \LWR@HTMLLatexCmd If not set by the user, the following sets the command to use to compile the source to PDF form.
If using \texttt{latexmk}, a complicated string is created, eventually resulting in something such as:

For \texttt{xelatex} with \texttt{--shell-escape}:

\[
\texttt{[latexmk \ -xelatex \ --shell-escape \ -recorder} \\
\texttt{\quad -e '}$\texttt{makeindex = q/makeindex -s lwpark.ist/ <jobname>_html']]
\]

For \texttt{dvipdfmx}:

\[
\texttt{[latexmk \ -pdfdvi \ -e '}$\texttt{dvipdf=q/dvipdfmx \%O -o \%D \%S/} \\
\texttt{\quad -recorder} \\
\texttt{\quad -e '}$\texttt{makeindex=q/makeindex -s lwpark.ist/ <jobname>_html']}
\]

For the following, temporary values are computed, but the permanent values are only set if the originals were not assigned by the user.

\begin{verbatim}
\ifbool{LWR@latexmk}{
  For \texttt{latexmk} with \texttt{pdflatex} or \texttt{lualatex}:
\begin{verbatim}
\ifpdf \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}} \else \def\LWR@latexcmd{\LWR@latexcmd{-/lua/latex}} \fi
\end{verbatim}
\fi
\end{verbatim}

For \texttt{latexmk} with \texttt{pdflatex}:

\begin{verbatim}
\ifPDFTeX \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}} \else \def\LWR@latexcmd{\LWR@latexcmd{-/lua/latex}} \fi
\end{verbatim}

For \texttt{latexmk} with \texttt{lualatex}:

\begin{verbatim}
\ifLuaTeX \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}} \else \def\LWR@unknownengine \fi
\end{verbatim}

For \texttt{latexmk} with \texttt{xelatex} or \texttt{dvilatex}:

\begin{verbatim}
\ifXeTeX \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}} \else \def\LWR@unknownengine \fi
\end{verbatim}

For \texttt{latexmk} with \texttt{xelatex}:

\begin{verbatim}
\def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}} \else \ifXeTeX \fi
\end{verbatim}

For \texttt{latexmk} with \texttt{xelatex}:

\begin{verbatim}
\def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}} \else \ifXeTeX \fi
\end{verbatim}
For `latexmk` with `dvi latex`:

```latex
\ifbool{LWR@dvipdfm}{
  \def\LWR@latexcmd{
    \LWR@latexmkcmd{
      \LWR@latexmkdvipdfm{dvipdfm}\
    }\
  }
}\fi
```

The final assignment if `latexmk`:

```latex
\def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
\def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
% latexmk
```

Without `latexmk`, the compiling command is simply the compiler name and the optional shell escape:

```latex
% not /\LWR@latexmk
\ifpdf
```

For `pdflatex` or `lualatex`:

```latex
\ifPDFTeX
  \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdf\LWR@latex}{}\
  }
  \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdf\LWR@latex}{_html}}
\fi\LWR@unknownengine
```

For `pdflatex`:

```latex
\ifPDFTeX
  \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
  \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
\else\fi\LWR@unknownengine
```

For `lualatex`:

```latex
\def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
\def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
\else\LWR@unknownengine\fi\LWR@unknownengine

\fi
\ifpdf
```

```
```
For \texttt{dvilatex} or \texttt{xelatex}:
\begin{verbatim}
\ifXeTeX
\end{verbatim}

For \texttt{xelatex}:
\begin{verbatim}
\def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}()
\def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
\else
\end{verbatim}

For \texttt{dvilatex}. Default to \texttt{dvips}, unless told to use \texttt{dvipdfm} or \texttt{dvipdfmx}:
\begin{verbatim}
\ifbool{LWR@dvipdfm}{
\end{verbatim}

For \texttt{dvilatex} with \texttt{dvipdfm}:
\begin{verbatim}
\ifbool{LWR@dvipdfm}{
\end{verbatim}

For \texttt{dvilatex} with \texttt{dvipdfmx}:
\begin{verbatim}
\def\LWR@tempprintlatexcmd{\LWR@compilecmd{latex}()
\def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{latex}{_html}}
\else
\end{verbatim}

For \texttt{dvilatex} with \texttt{dvips} and \texttt{ps2pdf}:
\begin{verbatim}
\def\LWR@tempprintlatexcmd{\LWR@compilecmd{latex}()
\def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{latex}{_html}}
\else
\end{verbatim}

\fi% \ifXeTeX
For \texttt{ujarticle}, \texttt{utarticle}, and related, using \texttt{upLATEX} and \texttt{dvipdfmx}:

\begin{verbatim}
\@ifclassloaded{ujarticle}{\LWR@compi/l.Vareup/l.Varatex}{}
\@ifclassloaded{ujbook}{\LWR@compi/l.Vareup/l.Varatex}{}
\@ifclassloaded{ujreport}{\LWR@compi/l.Vareup/l.Varatex}{}
\@ifclassloaded{utarticle}{\LWR@compi/l.Vareup/l.Varatex}{}
\@ifclassloaded{utbook}{\LWR@compi/l.Vareup/l.Varatex}{}
\@ifclassloaded{utreport}{\LWR@compi/l.Vareup/l.Varatex}{}
\end{verbatim}

Only make the setting permanent if the original was empty:

\begin{verbatim}
\ifdefempty{\LWR@PrintLatexCmd}{
  \def{\LWR@PrintLatexCmd}{\LWR@tempprint/l.Varatexcmd}
}{
\ifdefempty{\LWR@HTMLLatexCmd}{
  \def{\LWR@HTMLLatexCmd}{\LWR@tempHTML/l.Varatexcmd}
}{
\LWR@writeconf {\langle filename \rangle}

Common code for each of \texttt{lwrpmk.conf} and <project>.lwrpmkconf. Each entry is a variable name, the equal sign, and a quoted string inside [[ and ]], which are lua's long quote characters, allowing the use of single and double quotes inside.

\begin{verbatim}
\newcommand{\LWR@writeconf}[1]{
  \ifcsdef{LWR@quickfile}{
    \newwrite{\LWR@quickfile}
  }{
    \immediate\openout{\LWR@quickfile}=#1
  }
  \immediate\write{\LWR@quickfile}{confversion = [[\LWR@lwrpmkconfversion]]}
  \ifbool{usingOSWindows}{
    \immediate\write{\LWR@quickfile}{opsystem = [[Windows]]}
  }{
    \immediate\write{\LWR@quickfile}{opsystem = [[Unix]]}
  }
  \immediate\write{\LWR@quickfile}{sourcename = [[\jobname]]}
  \immediate\write{\LWR@quickfile}{homehtmlfilename = [[\HomeHTMLFilename]]}
  \immediate\write{\LWR@quickfile}{htmlfilename = [[\HTMLFilename]]}
  \immediate\write{\LWR@quickfile}{imagesdirectory = [[\ImagesDirectory]]}
  \immediate\write{\LWR@quickfile}{imagesname = [[\ImagesName]]}
  \immediate\write{\LWR@quickfile}{latexmk = [[\ifbool{\LWR@latexmk}{true}{false}]]}
  \immediate\write{\LWR@quickfile}{printlatexcmd = [[\LWR@PrintLatexCmd]]}
  \immediate\write{\LWR@quickfile}{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
  \immediate\write{\LWR@quickfile}{printindexcmd = [[\LWR@PrintIndexCmd]]}
  \immediate\write{\LWR@quickfile}{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
  \immediate\write{\LWR@quickfile}{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
  \immediate\write{\LWR@quickfile}{glossarycmd = [[\LWR@glossarycmd]]}
  \immediate\write{\LWR@quickfile}{pdftotextenc = [[\LWR@pdftotextEnc]]}
  \immediate\closeout{\LWR@quickfile}
}
\end{verbatim}

\end{verbatim}
41.3.2  lwpark.conf

File  lwpark.conf  lwpark.conf is automatically (re-)created by the lwpark package when executing pdflatex <project.tex>, or similar for xelatex or lualatex, in print-document generation mode, which is the default unless the warpHTML option is given. lwpark.conf is then used by the utility lwarpmk.

Config file:
\begin{LWRwriteconf}
\AtBeginDocument{\LWR@writeconf{lwpark.conf}}
\end{LWRwriteconf}

41.3.3  <project>.lwpark.conf

File  project.lwpark.conf  A project-specific configuration file for lwpark.

The makeindex and xindy options have already been handled for lwpark.conf.

Config file:
\begin{LWRwriteconf}
\AtBeginDocument{\LWR@writeconf{\jobname.lwpark.conf}}
\end{LWRwriteconf}

41.4  lwpark.css

File  lwpark.css  This is the base css layer used by lwpark.

This must be present both when compiling the project and also when distributing the HTML files.

Config file:
\begin{LWRwriteconf}
\begin{fi/l.Varecontents*}{lwpark.css}
/*
CSS stylesheet for the LaTeX lwpark package
Copyright 2016-2018 Brian Dunn --- BD Tech Concepts LLC
*/

/* a fix for older browsers: */
header, section, footer, aside, nav, main,
article, figure { display: block; }

A:link { color:#000080 ; text-decoration: none ; }
A:visited { color:#800000 ; }
A:hover { color:#000080 ; text-decoration: underline ;}
A:active { color:#800000 ; }
\end{fi/l.Varecontents*}
\end{LWRwriteconf}
span.textit, div.textit { font-style: italic; }
span.textmd, div.textmd { font-weight: normal; }
span.textsc, div.textsc {
  font-variant: small-caps;
  font-variant-numeric: oldstyle-nums;
}
span.textsi, div.textsi {
  font-style: italic;
  font-variant: small-caps;
  font-variant-numeric: oldstyle-nums;
}
span.textsl, div.textsl { font-style: oblique; }
span.textup, div.textup {
  font-style: normal;
  font-variant: normal;
  font-variant-numeric: normal;
}
span.textrm, div.textrm {
  font-family: "DejaVu Serif", "Bitstream Vera Serif", "Lucida Bright", Georgia, serif;
}
span.textsf, div.textsf {
  font-family: "DejaVu Sans", "Bitstream Vera Sans", Geneva, Verdana, sans-serif;
}
span.textcircled { border: 1px solid black; border-radius: 1ex; }
span.underline {
  text-decoration: underline;
  text-decoration-skip: auto;
}
span.overline {
  text-decoration: overline;
  text-decoration-skip: auto;
}
/* for vertical text: */
div.verticalrl { writing-mode: vertical-rl }
div.horizontaltb { writing-mode: horizontal-tb }
/* for diagbox */
div.diagboxtitleN { border-bottom: 1px solid gray }
div.diagboxtitleS { border-top: 1px solid gray }
larp

1806
div.diagboxE {
1807    padding-left: 2em ;
1808    text-align: right ;
1809}
1810
div.diagboxW {
1811    padding-right: 2em ;
1812    text-align: left ;
1813}
1814
1815
1816
1817
1818
1819
1820    /* For realscripts */
1821    .supsubscript {
1822        display: inline-block;
1823        text-align: left ;
1824    }
1825
1826    supsubscript sup,
1827    supsubscript sub {
1828        position: relative;
1829        display: block;
1830        font-size: .5em;
1831        line-height: 1;
1832}
1833
1834    supsubscript sup {
1835        top: .5em;
1836}
1837
1838    supsubscript sub {
1839        top: .5em;
1840}
1841
div.attribution p {
1842    text-align: right ;
1843    font-size: 80%
1844}
1845
1846    span.poemtitle {
1847        font-size: 120% ; font-weight: bold;
1848}
1849
1850    pre.tabbing {
1851        font-family: "Linux Libertine Mono O", "Lucida Console",
1852        "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1853        "Liberation Mono", "FreeMono", "Andale Mono",
1854        "Nimbus Mono L", "Courier New", monospace;
1855}
1856
1857    blockquote {
1858        display: block ;
1859        margin-left: 2em ;
1860        margin-right: 2em ;
/* quotchap is for the quotchap package */

/* qauthor is for the quotchap package */

/* epigraph is for the quotchap package */

/* dictum is for the quotchap package */

/* copyrightbox package */
div.copyrightbox { margin: .5ex .5em }
div.copyrightbox p {margin: 0px .5em ; padding: 0px}
div.copyrightboxnote {text-align: left ; font-size: 60%}
/* lettrine package */
span.lettrine { font-size: 4ex ; float: left ; }
span.lettrinetext { font-variant: small-caps ; }
/* ulem, soul, umoline packages */
span.u { text-decoration: underline ;
text-decoration-skip: auto ;
text-decoration-style: double ;
}
span.uwave {
text-decoration: underline ;
text-decoration-skip: auto ;
text-decoration-style: wavy ;
}
span.sout {
text-decoration: line-through ;
}
span.o { text-decoration: overline ;
text-decoration-skip: auto ;
}
span.xout {
text-decoration: line-through ;
}
span.dashu {
text-decoration: underline ;
text-decoration-skip: auto ;
text-decoration-style: dashed ;
}
span.dotu { text-decoration: underline ;
text-decoration-skip: auto ;
text-decoration-style: dotted ;
}
```html
html body {
    margin: 0;
    line-height: 1.2;
}

body div {
    margin: 0ex;
}

h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph {
    font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
    "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
    "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
    "Times New Roman", serif;
    font-style: normal;
    font-weight: bold;
    text-align: left;
}

h1 { /* title of the entire website, used on each page */
    text-align: center;
    font-size: 2.5em;
    padding: .4ex 0em 0ex 0em;
}

h2 { font-size: 2.25em }

h3 { font-size: 2em }

h4 { font-size: 1.75em }

h5 { font-size: 1.5em }

h6 { font-size: 1.25em }

span.paragraph { font-size: 1em; font-variant: normal;
    margin-right: 1em; }

span.subparagraph { font-size: 1em; font-variant: normal;
    margin-right: 1em; }

div.minisec {
```
/* Remove footnote top border in the title page. */

/* Remove footnote top border in the title page. */

ul, ol {
  margin: 1ex 1em 1ex 0em;
  line-height: 1.2;
}

body dir, body menu {
  margin: 3ex 1em 3ex 0em;
  line-height: 1.2;
}

li { margin: 0ex 0em 1ex 0em; }

html {
  margin: 0;
  padding: 0;
}

.programlisting {
  margin: 1ex 0ex 1ex 0ex ;
  padding: .5ex 0pt .5ex 0pt ;
  overflow-x: auto;
}

section.textbody>pre.programlisting {
  border-top: 1px solid silver ;
  border-bottom: 1px solid silver ;
}

div.displaymath {
  text-align: center ;
}

div.displaymathnumbered {
  text-align: right ;
  margin-left: 5% ;
margin-right: 5%;
min-width: 2.5in;
}

@media all and (min-width: 400px) {
    div.displaymathnumbered {
        margin-left: 10%;
        margin-right: 10%;
    }
}

@media all and (min-width: 800px) {
    div.displaymathnumbered {
        margin-right: 20%;
    }
}

@media all and (min-width: 1200px) {
    div.displaymathnumbered {
        margin-right: 30%;
    }
}

.inlinelisting {
    font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
    "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
    "Courier New", monospace;
    overflow-x: auto;
}

span.listinglabel {
    display: inline-block;
    font-size: 70%;
    width: 4em;
    text-align: right;
    margin-right: 2em;
}

div.abstract {
    margin: 2em 5% 2em 5%;
    padding: 1ex 1em 1ex 1em;
    /* font-weight: bold; */
    font-size: 90%;
    text-align: left;
}

div.abstract dl { line-height: 1.5; }

div.abstract dt { color: #304070; }

div.abstracttitle{
    font-family: "URW Classico", Optima, "Linux Biolinum O",
    "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
    "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
    font-weight: bold;
/* Word processor format output: */
div.wpfigure { border: 1px solid red; margin: .5ex; padding: .5ex; }
div.wpminipage { border: 1px solid green; margin: .5ex; padding: .5ex; }

/* Minipage environments, vertically aligned to top, center, bottom: */
.minipage, .fminipage, .fcolorminipage {
  /* display: inline-block; */
  /* Mini pages which follow each other will be tiled. */
  margin: .25em .25em .25em .25em;
  padding: .25em .25em .25em .25em;
  display: inline-flex;
  flex-direction: column;
  overflow: auto;
}

.inlineminipage {
  display: inline-block;
  text-align: left
}

/* Paragraphs in the flexbox did not collapse their margins. */
/* Have not yet researched this. */
.minipage p { margin: .75ex 0em .75ex 0em; }

.fbox, .fboxBlock { border: 1px solid black; }
.fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock, .fminipage, .fcolorminipage
  {display: inline-block}

.shadowbox, .shabox {
  border: 1px solid black;
  box-shadow: 3px 3px 3px #808080;
  border-radius: 0px;
  padding: .4ex .3em .4ex .3em;
  margin: 0pt .3ex 0pt .3ex;
  display: inline-block;
}

doublebox {
  border: 3px double black;
  border-radius: 0px;
  padding: .4ex .3em .4ex .3em;
  margin: 0pt .3ex 0pt .3ex;
display: inline-block;
}

.ovalbox, .Ovalbox {
  border: 1px solid black;
  border-radius: 1ex;
  padding: .4ex .3em .4ex .3em;
  margin: 0pt .3ex 0pt .3ex;
  display: inline-block;
}

.Ovalbox { border-width: 2px; }

.framebox {
  border: 1px solid black;
  border-radius: 0px;
  padding: .3ex .2em 0ex .2em;
  margin: 0pt .1ex 0pt .1ex;
  display: inline-block;
}

.mdframed {
  padding: 0ex;
  margin: 2ex 0em 2ex 0em;
}

.mdframed p { padding: 0ex .5em 0ex .5em; }

.mdframed dl { padding: 1ex .5em 0ex .5em; }

.mdframedtitle {
  padding: .5ex 0pt 0pt 0pt;
  border-radius: 10pt 10pt 0pt 0pt;
  display: block;
  margin-bottom: 1ex;
}

.mdframedsubtitle {
  display: block;
}

.mdframedsubsubtitle {
  display: block;
}

.mdtheorem {
  padding: 0ex .5em 0ex .5em;
  margin: 3ex 5% 3ex 5%;
}

/* framed package */
.framed, pre.boxedverbatim, fcolorbox {
  margin: 3ex 0em 3ex 0em;
border: 1px solid black;
    border-radius: 0px ;
    padding: .3ex 1em 0ex 1em ;
    display: block ;
}

.shaded {
    margin: 3ex 0em 3ex 0em ;
    padding: .3ex 1em .3ex 1em ;
    display: block ;
}

.snugframed {
    margin: 3ex 0em 3ex 0em ;
    border: 1px solid black;
    border-radius: 0px ;
    display: block ;
}

.framedleftbar {
    margin: 3ex 0em 3ex 0em ;
    border-left: 3pt solid black;
    border-radius: 0px ;
    padding: .3ex .2em .3ex 1em ;
    display: block ;
}

.framedtitle {
    margin: 0em ;
    padding: 0em ;
    font-size: 130%
}

.framedtitle p { padding: .3em }

/* For the niceframe package: */

div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
    padding: 1ex ;
    margin: 2ex auto ;
    border-radius: 2ex ;
}

div.niceframe {
    border: 6px groove black ;
}

div.curlyframe {
    border-left: 3px dotted black ;
    border-right: 3px dotted black ;
    border-radius: 6ex ;
}

div.artdecoframe {
div generator {
  border: 6px groove black;
}

dl {
  margin: 1em 2em 1em 0em;
  line-height: 1.3;
}

dl dt {
  display: block;
  float: left;
  font-weight: bold;
  padding-right: 1em;
}

dl dd {
  display: block;
}

dl dd:after {
  content: "";
  display: block;
  clear: both;
}

dl dd p {
  margin-top: 0em;
}

ddl ul, dd ol, dl dd {
  clear: both;
  padding-top: 1em;
}

nav {
  font-family: "URW Classico", Optima, "Linux Biolinum O",
  "DejaVu Sans", "Bitstream Vera Sans",
  Geneva, Verdana, sans-serif;
  margin-bottom: 4em;
}

nav p {
  line-height: 1.2;
  margin-top: .5ex;
  margin-bottom: .5ex;
  font-size: .9em;
}

img, img.hyperimage, img.borderimage {
  max-width: 600px;
  border: 1px solid silver;
  box-shadow: 3px 3px 3px #808080;
  padding: .5ex;
  margin: .5ex;
  background: none;
/* To have each section float relative to each other: */

/* To automatically center images in figures: */

/* To automatically center minipages in figures: */

figure div.minipage, figure div.minipage div.minipage {
  margin: 1ex auto 1ex auto;
  display: block;
}

figure figure { margin: 0pt }

figure div.minipage p { font-size: 85%; }

figure.subfigure, figure.subtable {
  display: inline-block; margin: 3em 1em 3em 1em;
}

div.figurecaption .minipage { margin:0; padding: 0 }

div.minipage figure { border: none; box-shadow: none; }

div.minipage figure.table { margin: 0ex }

div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }

div.floatrow { text-align: center; }

div.floatfoot { font-size: .85em;
  border-top: 1px solid silver; line-height: 1.2; }

div.figurecaption, .lstlistingtitle {
  font-size: .85em;
  text-align: center;
  font-weight: bold;
  margin-top: 1ex;
  margin-bottom: 1ex;
}

figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
  border-bottom: none; background: none;
}

div.nonfloatcaption {
  margin: 1ex auto 1ex auto;
  font-size: .85em;
  text-align: center;
  font-weight: bold;
}

/* For a \RawCaption inside a minipage inside a figure's floatrow: */

figure div.floatrow div.minipage div.figurecaption {
  border: none;
  background: none;
}
/* For packages such as float, rotfloat, and algorithm2e: */

figure.boxed, figure.boxru/l.Vared {
  border: 1px solid black ;
}

figure.ruled {
  border-top: 1px solid black ;
  border-bottom: 1px solid black ;
  border-left: 0px ;
  border-right: 0px ;
  border-radius: 0px ;
  background: none ;
  box-shadow: none ;
}

figure.ruled div.figurecaption, figure.boxru/l.Vared div.figurecaption {
  border-top: 1px solid silver ;
  border-bottom: 1px solid silver ;
}

tab/l.Vare {
  margin: 1ex auto 1ex auto ;
  border-collapse: separate ;
  border-spacing: 0px ;
  line-height: 1.3 ;
}

td {
  padding: .5ex .5em .5ex .5em ;
}

tab/l.Vare td.td/l.Var { text-align: center ; vertical-align: middle ; }

tab/l.Vare td.tdc { text-align: center ; vertical-align: middle ; }

tab/l.Vare td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }

tab/l.Vare td.tdbang { text-align: center ; vertical-align: middle ; }

tab/l.Vare td.tdr { text-align: right ; vertical-align: middle ; }

tab/l.Vare td.tdp { text-align: left ; vertical-align: bottom ; }

tab/l.Vare td.tdm { text-align: left ; vertical-align: middle ; }

tab/l.Vare td.tdb { text-align: left ; vertical-align: top ; }

tab/l.Vare td.tdP { text-align: center ; vertical-align: bottom ; }

tab/l.Vare td.tdM { text-align: center ; vertical-align: middle ; }

tab/l.Vare td.tdB { text-align: center ; vertical-align: top ; }

/* for \h/l.Varine */

tr.h/l.Varine td { border-top: 1px solid #808080 ; margin-top: 0ex ;
  margin-bottom: 0ex ; } /* for \h/l.Varine */

tr.tbru/l.Vare td { border-top: 1px solid black ; margin-top: 0ex ;
  margin-bottom: 0ex ; } /* for \topru/l.Vare, \bottomru/l.Vare */

td td (padding: .5ex .5em .5ex .5em ;)
/* for cmidrules: */

table td.tdrule {
  border-top: 1px solid #A0A0A0 ;
}

table td.tdrulel {
  border-top-left-radius:.5em ;
  border-top: 1px solid #A0A0A0 ;
}

table td.tdruler {
  border-top-right-radius:.5em ;
  border-top: 1px solid #A0A0A0 ;
}

table td.tdrulelr {
  border-top-left-radius:.5em ;
  border-top-right-radius:.5em ;
  border-top: 1px solid #A0A0A0 ;
}

/* Margins of paragraphs inside table cells: */

td.tdp , td.tdprule p , td.tdP , td.tdPrule p ( padding-top: 1ex ;
  padding-bottom: 1ex ; margin: 0ex ; )

td.tdm , td.tmbrule p , td.tdM , td.tdMrule p ( padding-top: 1ex ;
  padding-bottom: 1ex ; margin: 0ex ; )

td.tdb , td.tdbrule p , td.tdB , td.tdBrule p ( padding-top: 1ex ;
  padding-bottom: 1ex ; margin: 0ex ; )

/* table notes: */

.tnotes {
  margin: 0ex 5% 1ex 5% ;
  padding: 0.5ex 1em 0.5ex 1em ;
  font-size:.80em ;
  text-align: left ;
}

.minipage .tnotes {
  margin: 0pt ;
  padding: 0pt ;
}
/* for colortbl and cell color */
div.cellcolor {
    width: 100% ;
    padding: .5ex .5em .5ex .5em ;
    margin: -.5ex -.5em -.5ex -.5em ;
}

/* for bigdelim */
.ldelim, .rdelim { font-size: 200% }

/* center, flushleft, flushright environments */
div.center{text-align:center;}
div.center table {margin-left:auto;margin-right:auto;}
div.flushleft{text-align:left;}
div.flushleft table {margin-left:0em ; margin-right:auto;}
div.flushright{text-align:right;}
div.flushright table {margin-left:auto ; margin-right: 0em ;}

/* Fancybox */
div.Btrivlist table tr td {
    padding: .2ex 0em ;
}

/* program listing callouts: */
span.callout {
    font-family: "DejaVu Sans", "Bitstream Vera Sans", Geneva, Verdana, sans-serif ;
    border-radius: .5em;  
    background-color:black;  
    color:white;  
    padding:0px .25em 0px .25em;  
    margin: 0 ;  
    font-weight: bold;  
    font-size:.72em ;
}

div.programlisting pre.verbatim span.callout{
    font-size: .85em ;
}

span.verbatim {
    font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",  
    "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",  
    "Courier New", monospace;
div.published
{
    text-align: center;
    font-variant: normal;
    font-style: italic;
    font-size: 1em;
    margin: 1ex 0em 1ex 0em;
}

div.subtitle
{
    text-align: center;
    font-variant: normal;
    font-style: italic;
    font-size: 1.25em;
    margin: 1ex 0em 1ex 0em;
}

div.subtitle p { margin: 1ex; }

div.author
{
    font-variant: normal;
    font-style: normal;
    font-size: 1em;
    margin: 1ex 0em 1ex 0em;
}

div.oneauthor {
    display: inline-block;
    margin: 0ex 1em 0ex 1em;
}

div.author table {
    margin: 1ex auto 0ex auto;
    background: none;
}

div.author table tbody tr td { padding: .25ex; }

*/

span.affiliation {font-size: .85em; font-variant: small-caps;}

div.titledate {
    text-align: center;
    font-size: .85em;
    font-style: italic;
    margin: 1ex 0em 1ex 0em;
}

*/
nav.topnavigation{
  text-align: left;
  padding: 0.5ex 1em 0.5ex 1em;
  /* margin: 2ex 0em 3ex 0em; */
  margin: 0;
  border-bottom: 1px solid silver;
  border-top: 1px solid silver;
  clear:both;
}

nav.botnavigation{
  text-align: left;
  padding: 0.5ex 1em 0.5ex 1em;
  /* margin: 3ex 0em 2ex 0em; */
  margin: 0;
  border-top: 1px solid silver;
  border-bottom: 1px solid silver;
  clear:both;
}

header {
  line-height: 1.2;
  font-size: 1em;
  border-bottom: 1px solid silver;
  margin: 0px;
  padding: 2ex 1em 2ex 1em;
  text-align:left;
}

footer {
  font-size: .85em;
  line-height: 1.2;
  margin-top: 1ex;
  border-top: 1px solid silver;
  padding: 2ex 1em 2ex 1em;
  clear:both;
  text-align:left;
}

a.linkhome { font-weight:bold; font-size: 1em;}

div.lateximagesource { padding: 0px; margin: 0px; display: none; }

img.lateximage{
  padding: 0pt;
  margin: 0pt;
  box-shadow: none;
  border: none;
  background: none;
  max-width: 100%;
  border-radius: 0ex;
border: none;
}

/* The -1px right margin compensates for the 1px right border. */
/* Without this -1px margin, the body container appears below instead */
/* of floating to the side. */

div.sidetoccontainer {
  font-family: "DejaVu Serif", "Bitstream Vera Serif",
  "Lucida Bright", Georgia, serif;
  float: left;
  width: 20%;
  margin: 0pt -1px 3ex 0pt;
  border-right: 1px solid silver;
  border-bottom: 1px solid silver;
  background: #FAF7F4;
  font-size: .9em;
  border-radius: 0px 0px 20px 0px;
}

div.sidetoccontents {
  overflow-y: auto;
  width: 100%;
  text-align: left;
}

nav.sidetoc p {line-height: 1.2; margin: 1ex .5em 1ex .5em;
  text-indent: 0; }
nav.sidetoc a {color:black; font-size: .7em;}

div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
  border-bottom: 1px solid silver; }

nav.sidetoc a:hover {text-decoration: underline; }

section.textbody { margin: 0ex 1em 0ex 1em; }

div.multicolsheading { -webkit-column-span: all;
  -moz-column-span: all; column-span: all; }
div.multicols { -webkit-columns: 3 380px;
  -moz-columns: 3 380px; columns: 3 380px; }
div.multicols p {margin-top: 0ex}

/* Used for xfrac and nicefrac: */
span.numerator {
  font-size: 60%;
  vertical-align: .4em;
}
/* Used for algorithm2e */
\begin{algorithm}
\begin{algorithmic}
\end{algorithm}
\end{algorithm}

/* Used for algorithmix */
\begin{algorithm}
\begin{algorithmic}
\end{algorithm}
\end{algorithm}

/* Native LaTeX theorems: */
\begin{theorems}
\begin{theorem}
\end{theorem}
\end{theorems}
/* theorem, amsthm, and ntheorem packages */

span.theoremheader,
span.theoremheaderplain,
span.theoremheaderdefinition,
span.theoremheaderbreak,
span.theoremheadermarginbreak,
span.theoremheaderchangebreak,
span.theoremheaderchange,
span.theoremheadermargin
{
  font-style:normal; font-weight:bold; margin-right:1em;
}

span.amsthmname,
span.amsthmnamedefinition,
span.amsthmnumber,
span.amsthmnumberdefinition
{
  font-style:normal; font-weight:bold;
}

span.amsthmnameremark,
span.amsthmnumberremark
{
  font-style:italic; font-weight:normal;
}

span.amsthmnote,
span.amsthmnotedefinition
{
  font-style:normal;
}

span.amsthmheaderremark,
span.amsthmheaderproof,
span.amsthmproofname
{
  font-style:italic; font-weight:normal; margin-right:1em;
}

span.theoremheadersc
{
  font-style:normal;
  font-variant:small-caps;
  font-weight:normal;
  margin-right:1em;
}

.theoremendmark {float:right}

div.amsthmbodyplain, div.amsthmbodyplain, div.amsthmbodynumberplain,
div.amsthmbodybreak, div.amsthmbodynumberbreak,
div.amsthmbodymarginbreak,
div.amsthmbodychangebreak,
div.amsthmbodychange,
div.amsthmbodymax
/* For the notes package: */

div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
  clear: both;
  margin: 2ex 2em 2ex 2em;
  border: 1px solid silver;
}

div.notesicon {
  float: left;
  display: inline-block;
  background: gold;
  padding: 0ex 1em 0ex 1em;
  margin-right: 1em;
  font-weight: bold;
}

div.notescontents { font-style: italic }

/* Based on spacing demonstrated by the metafont package. */

.latexlogofont {
  font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
              "Hoefler Text", Times, "Times New Roman", serif;
  font-variant: normal;
}

.latexlogo {
  font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
              "Hoefler Text", Times, "Times New Roman", serif;
  font-size: 1.1em;
}

.latexlogosup {
  text-transform: uppercase;
/* Only display top and bottom navigation if a small screen: */
nav.topnavigation { display:none; }
nav.botnavigation { display:none; }

/* Only display the sidetoc's webpage title if a small screen */
span.sidetocthetitle { display: none }

@media screen and (max-width: 50em) {
  div.sidetoccontainer {
    float: none;
    width: 100%;
    padding: 0;
    border-radius: 0;
    border-bottom: 1px solid black;
    border-top: 1px solid black;
    box-shadow: none;
  }
  span.sidetocthetitle { display: inline }
  nav.botnavigation { display:block }
  div.bodycontainer { width: 100% }
  .marginpar {
    max-width: 100%;
    float: none;
    display:block ;
    margin: 1em 1em 1em 1em ;
  }
}

@media print {
  body {
  }
  div.sidetoccontainer { display: none; }
  nav.topnavigation { display: none; }
  nav.botnavigation { display: none; }
  div.bodycontainer { width: 100% }
}

@media handheld {
  div.sidetoccontainer { display: none; }
  nav.topnavigation { display: block }
  nav.botnavigation { display: block }
  div.bodycontainer { width: 100% }
}

@media projection {
  div.sidetoccontainer { display: none; }
  nav.topnavigation { display: block }
}
An optional css which may be used for a semi-modern appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

```css
h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph {
  font-variant: small-caps;
  font-weight: normal;
  color: #304070;
  text-shadow: 2px 2px 3px #808080;
}

h1 {
  /* title of the entire website, used on each page */
  font-variant: small-caps;
  color: #304070;
  text-shadow: 2px 2px 3px #808080;
  background-color: #F7F7F0;
  background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
}

h2 {
  border-bottom: 1px solid #304070;
  /* border-top: 2px solid #304070; */
}
```
background-color: #F7F7F0 ;
background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
}
}
}
}
div.abstract {
  background: #f5f5eb ;
  background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
  border: 1px solid silver;
  border-radius: 1em ;
}
}
div.abstract dl {line-height:1.5;}
div.abstract dt {color:#304070;}
div.abstract dtitle{
  font-family: "URW Classico", Optima, "Linux Biolinum O",
  "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
  "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
  font-weight:bold;
  font-variant: small-caps ;
  font-size:1.5em;
  border-bottom: 1px solid silver ;
  color: #304070 ;
  text-align: center ;
  text-shadow: 1px 1px 2px #808080;
}
}
span.abstractrunintitle{
  font-family: "URW Classico", Optima, "Linux Biolinum O",
  "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
  "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
  font-weight:bold;
}

div.epigraph, div.dictum {
  background: #f5f5eb ;
  background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
  border: 1px solid silver ;
  border-radius: 1ex ;
  box-shadow: 3px 3px 3px #808080 ;
}
}
.example {
  background-color: #f5f5eb ;
  background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
}
}
div.example dttitle{
div.fboxBlock div.minipage { box-shadow: none; }

.framed .minipage, .framedleftbar .minipage {
  border: none;
  background: none;
  padding: 0ex;
  margin: 0ex;
}

figure.figure .minipage, div.figurecaption .minipage { border: none; }

div.marginblock div.minipage, div.marginparblock div.minipage {
  border: none;
}

figure, div.marginblock {
  background-color: #e8e8e8;
  border: 1px solid silver;
  border-radius: 1ex;
  box-shadow: 3px 3px 3px #808080;
}

figure figure {
  border: 1px solid silver;
  margin: 0em;
  box-shadow: none;
}

/*
div.figurecaption {
  border-top: 1px solid silver;
  border-bottom: 1px solid silver;
  background-color: #e8e8e8;
}
*/

div.table {
  box-shadow: 3px 3px 3px #808080;
}

/*
.tnotes {
  background: #e8e8e8;
  border: 1px solid silver;
}
*/

nav.topnavigation{
  background-color: #b0b8b0;
  background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0);
}
An optional \texttt{/warp_forma/warp.css} which may be used for a more formal appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

\textbf{Config file:}

\begin{verbatim}
\begin{filecontents*}{warp_forma/warp.css}
@import url("warp.css");
\end{filecontents*}
\end{verbatim}

\section{41.6 \texttt{warp_formal.css}}
body {
  font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
  "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
  "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
  "Times New Roman", serif;
  background: #fffcf5;
}

span.textrm {
  font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
  "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
  "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
  "Times New Roman", serif;
}

span.textsf {
  font-family: "DejaVu Sans", "Bitstream Vera Sans",
  Geneva, Verdana, sans-serif;
}

h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph {
  font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
  "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
  "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
  "Times New Roman", serif;
  color: #800000;
  text-shadow: none;
}

h1, h2 {
  background-color: #fffcf5;
  background-image: none;
  border-bottom: 1px solid #808080;
  /* border-top: 2px solid #808080; */
}

div.abstracttitle {
  font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
  "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
  "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
  "Times New Roman", serif;
  color: black;
  text-shadow: none;
}
The project-specific file. Use with \CSSFile{sample_project.css}.

If used, this must be present both when compiling the project and also when distributing the HTML files.

File sample_project.css

The project-specific css file. Use with \CSSFile{sample_project.css}.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```latex
\begin{LWRwriteconf}
\begin{filecontents*}{sample_project.css}
/* ( --- Start of project.css --- ) */
/* ( --- A sample project-specific CSS file for lwp --- ) */
uncomment one of the following: */
@import url("lwp.css");
@import url("lwp_formal.css"); */
@import url("lwp_sagebrush.css"); */
/* Project-specific CSS setting follow here. */
... */
\end{LWRwriteconf}
```

41.7 sample_project.css
41.8 lwarp.ist

**File lwarp.ist**  Used to modify the index for lwarp.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The page compositor line is for memoir's \specialindex.

**Config file:**

```latex
\begin{LWRwriteconf}
\begin{filecontents*}{lwarp.ist}
preamble
"\begin{theindex}
\providecommand*\lettergroupDefault[1]{}
\providecommand*\lettergroup[1]{%\par\textbf{#1}\par\nopagebreak}
\end{theindex}
headings_flag 1
heading_prefix "
\lettergroup("\nheading_suffix "\n\lettergroup("\n\hyperindexref("\n\hyperindexref("\n\hyperindexref("\n\hyperindexref("\n\hyperindexref("\n\hyperindexref("\n page_compositor "."
}\end{filecontents*}
\end{LWRwriteconf}
```

41.9 lwarp.xdy

**File lwarp.xdy**  Used to modify the index for lwarp.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

See:

https://tex.stackexchange.com/questions/80300/
  how-can-i-convince-hyperref-and-xindy-to-play-together-nicely

**Config file:**
lwarp

\begin{LWRwriteconf}
\begin{filecontents*}{lwarp.xdy}
\begin{fi/l.Varecontents*}{/l.Varwarp.xdy}
\end{fi/l.Varecontents*}
\end{filecontents*}
\end{LWRwriteconf}

\begin{verbatim}


\end{verbatim}

\end{LWRwriteconf}

41.10 lwarp_one_limage.cmd

File lwarp_one_limage.cmd

Used by lwarp to help make lateximages when using WINDOWS.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The arguments are each of the three fields from <project>-images.txt, and also the base name of the source file.

MiKTeX does not allow file lwarp_one_limage.cmd to be created directly by lwarpmk, so lwarp_one_limage.txt is created instead, then copied to lwarp_one_limage.cmd by lwarpmk. This occurs each time lwarpmk used to create lateximages.

Config file:

\begin{verbatim}
\begin{Verbatim}
\end{Verbatim}
\end{verbatim}

\begin{verbatim}

\end{verbatim}

\end{verbatim}
The default MathJax script used by lwarp when using M/A.sc/T.sc/H.sc/A.sc/X.sc. A recent version of MathJax is used, as served by the recommended repository. Adjustments are made to allow \LaTeX to control the equation tags.

\MathJaxFi/l.Varname determines which script file is copied into the HTML pages, and defaults to lwarp_mathjax.txt. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

custom script To generate a custom script, such as to use a local repository, copy lwarp_mathjax.txt to a new file, make changes while keeping lwarp's adjustments for equation numbering, and use \MathJaxFi/l.Varname to select new filename.

Config file

```latex
\begin{LWRwriteconf}
\begin{filecontents*}{lwarp_mathjax.txt}
<-- https://groups.google.com/forum/#!topic/mathjax-users/jUtewUcE2bY -->
MathJax.Hub.Register.StartupHook("\TeX AMSmath Ready",function () {
  var seteqsectionDefault = {name: "", num: 0};
  var seteqsections = {}, seteqsection = seteqsectionDefault;
  var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
  var AMS = MathJax.Extension["\TeX/AMSmath"];
  TEX.Definitions.Add({
    macros: {
      seteqsection: "mySection",
      seteqnumber: "mySetEqNumber"
    }
  });

  PARSE.Augment({
    mySection: function (name) {
      seteqsection.num = AMS.number;
      var n = this.GetArgument(name);
      if (n === "") {
        seteqsection = seteqsectionDefault;
      } else {
        if (!seteqsections["_\+n"])
          seteqsections["_\+n"] = {name:n, num:0};
        seteqsection = seteqsections["_\+n"];
      }
    }
  });
}\end{filecontents*}
\end{LWRwriteconf}
```

41.11 lwarp_mathjax.txt

File lwarp_mathjax.txt The default MathJax script used by lwarp when using MathJax. A recent version of MathJax is used, as served by the recommended repository. Adjustments are made to allow \LaTeX to control the equation tags.

\MathJaxFi/l.Varname determines which script file is copied into the HTML pages, and defaults to lwarp_mathjax.txt. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

custom script To generate a custom script, such as to use a local repository, copy lwarp_mathjax.txt to a new file, make changes while keeping lwarp's adjustments for equation numbering, and use \MathJaxFi/l.Varname to select new filename.

Config file

```latex
\begin{LWRwriteconf}
\begin{filecontents*}{lwarp_mathjax.txt}
<-- https://groups.google.com/forum/#!topic/mathjax-users/jUtewUcE2bY -->
MathJax.Hub.Register.StartupHook("\TeX AMSmath Ready",function () {
  var seteqsectionDefault = {name: "", num: 0};
  var seteqsections = {}, seteqsection = seteqsectionDefault;
  var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
  var AMS = MathJax.Extension["\TeX/AMSmath"];
  TEX.Definitions.Add({
    macros: {
      seteqsection: "mySection",
      seteqnumber: "mySetEqNumber"
    }
  });

  PARSE.Augment({
    mySection: function (name) {
      seteqsection.num = AMS.number;
      var n = this.GetArgument(name);
      if (n === "") {
        seteqsection = seteqsectionDefault;
      } else {
        if (!seteqsections["_\+n"])
          seteqsections["_\+n"] = {name:n, num:0};
        seteqsection = seteqsections["_\+n"];
      }
    }
  });
}\end{filecontents*}
\end{LWRwriteconf}
```
AMS.number = seteqsection.num;
},
mySetEqNumber: function (name) {
    var n = this.GetArgument(name);
    if (!n || !n.match(/^[0-9]+$/))
        n = ";
    else
        n = parseInt(n)-1;
    <!-- $ syntax highlighting -->
    if (n === '' || n < 1)
        TEX.Error
            ('Argument to "name" should be a positive integer');
    AMS.number = n;
}
});
MathJax.Hub.Config({
    TeX: {
        equationNumbers: {
            formatTag: function (n) {
                <!-- if not numeric, don't include the chapter -->
                if (!n.match(/^[0-9]+$/))
                    <!-- $ syntax highlighting -->
                    return "+"+n.replace(/\./,"\."+"
                        }
            formatID: function (n) {
                n = (seteqsection.name+"+"+"\."+");"+n.replace(/\./,"\."+"
                    return 'mjx-eqn-"+n;
            }
    },
    extensions: ['auto-load-all.js'],
    equationNumbers: {
        autoNumber: "AMS"
    }
});
</script>
<!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
<script type="text/x-mathjax-config">
MathJax.Ajax.config.path["Contrib"] =
    "https://cdn.mathjax.org/mathjax/contrib";
</script>
</script>
<script type="text/x-mathjax-config">
MathJax.Hub.Config({
</script>
<!-- Alternative CDN provider: -->
lwarp

41.12 lwarpmk.lua — lwarpmk option

Opt lwarpmk

Prog lwarpmk

Command-line utility to process lwarp files and images.

parallel processing

latex images and SVG math images are generated using multiple processes in parallel. For UNIX and LINUX, every 32 images the wait command is issued to wait for the previous batch of images to finish processing before starting a new batch. For WINDOWS, every 32 images one task is dispatched with

```
START /B /WAIT /BELOWNORMAL
```

which causes the operating system to wait until this lesser-priority tasks finishes, hopefully also waiting for the normal priority tasks which were already in progress to also complete. Afterwards, the next batch of images is started.

The following is only generated if the lwarpmk option was given to lwarp.

```
\begin{LWR@create/lwarpmk}
\begin{filecontents*}{lwarpmk.lua}
#!/usr/bin/env texlua

-- Copyright 2016-2018 Brian Dunn

printversion = "v0.70"
requiredconfversion = "2" -- also at *lwarpmk.conf

function printhelp ()
  print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
end

function printusage ()
  --
  -- Print the usage of the lwarpmk command:
```
lwarp

3855 --
3856 print ( [[
3857 lwarpmk print [-p project]: Compile the print version if necessary.
3858 lwarpmk print1 [-p project]: Forced single compile of the print version.
3859 lwarpmk printindex [-p project]: Process print indexes.
3860 lwarpmk printglossary [-p project]: Process the glossary for the print version.
3861 lwarpmk html [-p project]: Compile the HTML version if necessary.
3862 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
3863 lwarpmk htmlindex [-p project]: Process HTML indexes.
3864 lwarpmk htmlglossary [-p project]: Process the glossary for the HTML version.
3865 lwarpmk again [-p project]: Touch the source code to trigger recompliles.
3866 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
3867 lwarpmk pdftohtml [-p project]:
3868 lwarpmk pdftosvg </list of file names>: Converts each PDF file to SVG.
3869 lwarpmk epstopdf </list of file names>: Converts each EPS file to PDF.
3870 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
3871 * .idx, *.ind, *.log, *.html_inc.*, .gl*
3872 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
3873 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
3874 lwarpmk --h: Print this help message.
3875 lwarpmk --help: Print this help message.
3876
3877 -- printconf ()
3878 end
3879
3880 function splitfile (destfile,sourcefile)
3881 -- Split one large sourcefile into a number of files,
3882 -- starting with destfile.
3883 -- The file is split at each occurrence of "!|--Start file|newfilename|*
3884 --
3885 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
3886 local sfile = io.open(sourcefile)
3887 io.output(destfile)
3888 for line in sfile:lines() do
3889 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*)") ;
3890 if ( (i=nil) and (copen == "!|--") and (cstart == "Start file") ) then
3891 -- split the file
3892 io.output(newfilename) ;
3893 else
3894 -- not a splitpoint
3895 io.write (line .. "\n") ;
3896 end
3897 end -- do
3898 io.close(sfile)
3899 end -- function
3900
3901 function cvalueerror ( line, linenum , cvalue )
3950 --
3951 -- Incorrect value, so print an error and exit.
3952 --
3953 print("lwarpmk: ===")
3954 print("lwarpmk: " .. linenum .. " : " .. line ..
3956 "\" in lwarpmk.conf.\n"
3958");
3959 print("lwarpmk: ===")
3960 -- printconf () ;
3961 os.exit(1) ;
3962 end
3963
3964 function ignoreconf ()
3965 -- Global argument index
3966 argindex = 2
3967 end
3968
3969 function loadconf ()
3970 -- Load settings from the project's "lwarpmk.conf" file:
3971 --
3972 -- Default configuration filename:
3973 local conffile = "lwarpmk.conf"
3974 local confroot = "lwarpmk"
3975
3976 -- Global argument index
3977 argindex = 2
3978
3979 -- Optional configuration filename:
3980 if ( arg[argindex] == "-p" ) then
3981 argindex = argindex + 1
3982 conffile = arg[argindex]
3983 end
3984
3985 -- Additional defaults:
3986 confversion = "0"
3987 opsystem = "Unix"
3988 imagesdirectory = "lateximages"
3989 imagesname = "image-"
3990 latexmk = "false"
3991 printlatexcmd = ""
3992 HTMLlatexcmd = ""
3993 printindexcmd = ""
3994 HTMLindexcmd = ""
3995 latexmkindexcmd = ""
3996
3997 -- to be removed:
3998 indexprog = "makeindex"
3999 -- makeindexstyle = "lwarps.ist"
4000 -- xindylanguage = "english"
4001 -- xindycodepage = "utf8"
4002 -- xindystyle = "lwarps.xdy"
4003 -- pdftotextenc = "UTF-8"
4004 glossarycmd = "makeglossaries"
-- Verify the file exists:

if (lfs.attributes(conffile,"mode")==nil) then
  -- file not exists
  print ("lwarp: ===")
  print ("lwarp: File ".. conffile .." does not exist.")
  print ("lwarp: Move to the project's source directory,")
  print ("lwarp: recompile using pdflatex, xelatex, or lualatex,"
  print ("lwarp: then try using lwarp again.")
  if ( arg[argindex] ~= nil ) then
    print ("lwarp: (".. confroot .."
    print ("lwarp: " does not appear to be a project name.")"
  end
  print ("lwarp: ===")
  printhelp () ;
  os.exit(1) -- exit the entire lwarp script
else -- file exists

-- Read the file:

print ("lwarp: Reading ".. conffile ..".")
local cfile = io.open(conffile)

-- Scan each line, parsing each line as: name = [[string]]
local linenum = 0
for line in cfile:lines() do -- scan lines
  linenum = linenum + 1
  i,j,cvarname,cvalue = string.find (line,"([%w-_%]*)%s*=%s*[%([.*%])]*"]);
  if ( i == nil ) then
    print ("lwarp: ===")
    print ("lwarp: ".. linenum .. ": ".. line .. 
    print ("lwarp: Incorrect entry in ".. conffile ..".
    print ("lwarp: ===")
    printconf () ;
  os.exit(1) ;
  end -- nil

if ( cvarname == "confversion" ) then
  confversion = cvalue
elseif ( cvarname == "opsystem" ) then
  -- Verify choice of opsysten:
  if ( (cvalue == "Unix") or (cvalue == "Windows") ) then
    opsystem = cvalue
  else
    cvalueerror ( line, linenum, cvalue )
  end
elseif ( cvarname == "sourcename" ) then sourcename = cvalue
elseif ( cvarname == "homehtmlfilename" ) then homehtmlfilename = cvalue
elseif ( cvarname == "htmlfilename" ) then htmlfilename = cvalue
elseif ( cvarname == "imagesdirectory" ) then imagesdirectory = cvalue
elseif ( cvarname == "imagesname" ) then imagesname = cvalue
elseif ( cvarname == "latexmk" ) then latexmk = cvalue
elseif ( cvarname == "printlatexcmd" ) then printlatexcmd = cvalue
elseif ( cvarname == "HTMLlatexcmd" ) then HTMLlatexcmd = cvalue
elseif ( cvarname == "printindexcmd" ) then printindexcmd = cvalue
elseif ( cvarname == "HTMLindexcmd" ) then HTMLindexcmd = cvalue
elseif ( cvarname == "latexmkindexcmd" ) then latexmkindexcmd = cvalue
4060 elseif ( cvarname == "glossarycmd" ) then glossarycmd = cvalue
4061 elseif ( cvarname == "pdftotextenc" ) then pdftotextenc = cvalue
4062 else
4063   print ("lwrpmk: ===")
4064   print ("lwrpmk: " .. linenum .. " : " .. line .. ");
4065   print ("lwrpmk: Incorrect variable name \" .. cvarname .. \" in \"
4066         confile .. ".\n"
4067   );
4068   print ("lwrpmk: ===")
4069   -- printconf () ;
4070   os.exit(1) ;
4071 end -- cvarname
4072 end -- do scan lines
4073 io.close(cfile)
4074 end -- file exists
4075 -- Error if sourcename is "lwrp".
4076 -- This could happen if a local copy of lwrp has recently been recompiled.
4077 if sourcename=="lwrp" then
4078   print ("lwrpmk: ===")
4079   print ("lwrpmk: lwrp.sty has recently been recompiled in this directory,\")
4080   print ("lwrpmk: and \"lwrpmk.conf\" is no longer set for your own project.\")
4081   print ("lwrpmk: Recompile your own project using pdf/luaxelatex <projectname>.\")
4082   print ("lwrpmk: After a recompile, \"lwrpmk.conf\" will be set for your project,\")
4083   print ("lwrpmk: and you may again use lwrpmk.\")
4084   print ("lwrpmk: ===")
4085   os.exit(1)
4086 end -- sourcename of "lwrp"
4087 -- Select some operating-system commands:
4088 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4089   rmname = "rm"
4090   mvname = "mv"
4091   cpname = "cp"
4092   touchnamepre = "touch"
4093   touchnamepost = ""
4094   newtouchname = "touch"
4095   dirslash = "/
"
4096   opquote= "\""
4097   cmdgroupopenname = " ( 
"
4098   cmdgroupclosename = " ) "
4099   seqname = " && "
4100   bname = " &"
4101 elseif opsystem=="Windows" then -- For Windows
4102   rmname = "DEL"
4103   mvname = "MOVE"
4104   cpname = "COPY"
4105   touchnamepre = "COPY /b"
4106   touchnamepost = "+,,"
4107   newtouchname = "echo empty >"
4108   dirslash = "\\"
4109   opquote= "\\"
4110   cmdgroupopenname = ""
4111   cmdgroupclosename = ""
4112   seqname = " & "
4113   bname = ""
else
print("lwarpmk: ===")
print("lwarpmk: Select Unix or Windows for opsystem.")
print("lwarpmk: ===")
os.exit(1)
end --- for Windows

-- Warning if the operating system does not appear to be correct,
in case files were transferred to another system.
if ( (package.config:sub(1,1)) ~= dirs/l.Varash ) then
print("lwarpmk: ===")
print("lwarpmk: It appears that lwarpmk.conf is for a different operating system.")
print("lwarpmk: To adjust lwarpmk.conf for the current operating system,
recompile the original document using xe/luatex.")
print("lwarpmk: ")
print("lwarpmk: lwarpmk shall attempt to continue...")
print("lwarpmk: ===")
end

-- Error if the configuration file's version is not current:
if ( confversion ~= requiredconfversion ) then
print("lwarpmk: ===")
print("lwarpmk: The configuration files lwarpmk.conf and ..sourcename..lwarpmkconf")
print("lwarpmk: must be updated. To update the configuration files,
recompile ..sourcename..tex using xe/luatex,
then use lwarpmk again.")
print("lwarpmk: ===")
os.exit(1)
end
end -- loadconf

function executecheckerror ( executecommands , errormessage )
--
-- Execute an operating system call,
-- and maybe exit with an error message.
--
local err
err = os.execute ( executecommands )
if ( err ~= 0 ) then
print("lwarpmk: ===")
print("lwarpmk: " .. errormessage )
print("lwarpmk: ===")
os.exit(1)
end
end -- executecheckerror

function refreshdate ()
os.execute(touchnamepre .. " .. sourcename .. .tex " .. touchnamepost)
end

function reruntoget (fisource)
-- Scan the LaTeX log file for the phrase "Rerun to get",

local fsource = io.open(filesource)
for line in fsource:lines() do
  if ( string.find(line, "Rerun to get") == nil ) then
    io.close(fsource)
    return true
  end
end
io.close(fsource)
return false
end

function onetime (latexcmd, fsuffix)
  -- Compile one time, return true if should compile again.
  -- fsuffix is "" for print, "_.html" for HTML output.
  print("lwpwmk: Compiling with: " .. latexcmd)
  executecheckerror ( latexcmd ,
    "Compile error."
  )
  return (reruntoget(sourcename .. fsuffix .. "_.log") )
end

function manytimes (latexcmd, fsuffix)
  -- Compile up to five times.
  -- fsuffix is "" for print, "_.html" for HTML output
  if onetime(latexcmd, fsuffix) == true then
    if onetime(latexcmd, fsuffix) == true then
      if onetime(latexcmd, fsuffix) == true then
        if onetime(latexcmd, fsuffix) == true then
          if onetime(latexcmd, fsuffix) == true then
            end end end end end
          end
        end
      end
    end
  end
end

function verifyfi/l.Vareexists (fi/l.Varename)
  -- Exit if the given fi/l.Vare does not exist.
  if (/l.Varfs.attributes ( fi/l.Varename , "modification") == nil ) then
    print ("lwpwmk: ===")
    print ("lwpwmk: .. fi/l.Varename .. " not found." )
    os.exit (1)
  end
end

4170 -- indicating that the file should be compiled again.
4171 -- Return true if found.
4172 --
4173 local fsource = io.open(filesource)
4174 for line in fsource:lines() do
4175 if ( string.find(line,"Rerun to get") == nil ) then
4176 io.close(fsource)
4177 return true
4178 end -- if
4179 end -- do
4180 io.close(fsource)
4181 return false
4182 end
4183
4184
4185
4186 function onetime (latexcmd, fsuffix)
4187 --
4188 -- Compile one time, return true if should compile again.
4189 -- fsuffix is "" for print, "_.html" for HTML output.
4190 --
4191 print("lwpwmk: Compiling with: " .. latexcmd)
4192 executecheckerror ( latexcmd ,
4193 "Compile error."
4194 )
4195 return (reruntoget(sourcename .. fsuffix .. "_.log") )
4196 end
4197
4198
4199
4200 function manytimes (latexcmd, fsuffix)
4201 --
4202 -- Compile up to five times.
4203 -- fsuffix is "" for print, "_.html" for HTML output
4204 --
4205 if onetime(latexcmd, fsuffix) == true then
4206 if onetime(latexcmd, fsuffix) == true then
4207 if onetime(latexcmd, fsuffix) == true then
4208 if onetime(latexcmd, fsuffix) == true then
4209 if onetime(latexcmd, fsuffix) == true then
4210 end end end end end
4211 end
4212
4213
4214 function verifyfi/l.Vareexists (filename)
4215 --
4216 -- Exit if the given file does not exist.
4217 --
4218 if (lfs.attributes ( filename , "modification") == nil ) then
4219 print ("lwpwmk: ===")
4220 print ("lwpwmk: .. filename .. " not found." )
4221 print ("lwpwmk: ===")
4222 os.exit (1)
4223 end
4224 end
function pdftohtml ()
--
-- Convert <project>_html.pdf into HTML files:
--
-- Convert to text:
print ("lwarp: Converting " .. sourcename .. ".html.pdf to " .. sourcename .. ".html")
os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
 .. sourcename .. ".html.pdf " .. sourcename .. ".html")
-- Split the result into individual HTML files:
splitfile (homehtmlfilename .. ".html", sourcename .. ".html")
end

function removeaux ()
--
-- Remove auxiliary files:
-- All *.aux files are removed since there may be many bbl*.aux files.
--
os.execute ( rmname .. "*.aux "
 .. sourcename .. ".toc " .. sourcename .. ".lof "
 .. sourcename .. ".lot " .. sourcename .. ".lot "
 .. sourcename .. ".idx " ..
 .. sourcename .. ".ps " .. sourcename .. ".ps " ..
 .. sourcename .. ".log " .. sourcename .. ".log " ..
 .. sourcename .. ".gl* " .. sourcename .. ".gl* "
 .. ".html_inc.* "
)
end

function checkhtmlpdfexists ()
--
-- Error if the HTML document does not exist.
-- The lateximages are drawn from the HTML PDF version of the document,
-- so "lwarp: html" must be done before "lwarp: images".
--
local htmlpdffile = io.open(sourcename .. ".html.pdf", "r")
if ( htmlpdffile == nil ) then
print ("")
print ("lwarp: ==")
print ("lwarp: The HTML version of the document does not exist.")
print ("lwarp: Enter \"lwarp: html\" to compile the HTML version.")
os.exit(1)
end
io.close (htmlpdffile)
--
end -- checkhtmlpdfexists

function warnlimages ()

Warning of a missing <sourcename>-images.txt file:

print("lwarp: " "" ".. sourcename "-images.txt" does not exist.")
print("lwarp: Your project does not use SVG math or other lateximages.")
print("lwarp: or the file has been deleted somehow.")
print("lwarp: Use "lwarp html\" to recompile your project")
print("lwarp: and recreate ".. sourcename "-images.txt\".")
print("lwarp: If your project does not use SVG math or other lateximages,")
print("lwarp: then \".. sourcename "-images.txt\" will never exist, and")
print("lwarp: \"lwarp images\" will not be necessary.")
print("lwarp: " "")
end -- warnlimages

function warnlimagesrecompile ()

-- Warning if must recompile before creating images:
print(""")
print("lwarp: Cross-references are not yet correct.")
print("lwarp: The document must be recompiled before creating the lateximages.")
print("lwarp: Enter \"lwarp html\" again, then try \"lwarp images\" again.")
print("lwarp: " "")
end --warnlimagesrecompile

function checklimages ()

-- Check <sourcename>.txt to see if need to recompile first.
-- If any entry has a page number of zero, then there were incorrect images.
print("lwarp: Checking for a valid ".. sourcename "-images.txt file.")
local imagesfile = io.open(sourcename .. "-images.txt", "r")
if ( imagesfile == nil ) then
warnlimages ()
os.exit(1)
end

-- Track warning to recompile if find a page 0
local pagezerowarning = false

-- Scan <sourcename>.txt
for line in imagesfile:lines() do
 local lwpimpage = line
 local lwpimhash = false
 local lwpimage = string.find(line,"\[(.*)\]\.(.*)\]")
 -- For each entry:
 if (i=nil) then
 -- If the page number is 0, image references are incorrect
 -- and must recompile the source document:
 if (lwpimpage == 0) then
 pagezerowarning = true
 end
 end
if i=nil
end -- do
-- The last line should be |end|end|end|. 
-- If not, the compile must have aborted, and the images are incomplete.
if ( lwimgpage ~= "end" ) then
  warnimagesrecompile()
  os.exit(1);
end

if ( pagezerowarning ) then
  warnimagesrecompile()
  os.exit(1);
end -- pagezerowarning
end -- checkimages

4345

4346

4347 function createuniximage ( lwimgfullname )
4348 --
4349 -- Create one lateximage for Unix / Linux / Mac OS.
4350 --
4351 executecheckerror ( cmdgroupopenname ..
4352 "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " ..
4353 source .. "_html.pdf" ..
4354 imagesdirectory .. dirslash .. "lateximagingetemp-%d" .. ".pdf" ..
4355 seqname ..
4356 -- Crop the image:
4357 "pdfcrop -- hires " .. imagesdirectory .. dirslash .. "lateximagingetemp-"
4358 lwimgpage .. ".pdf" ..
4359 imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4360 seqname ..
4361 -- Convert the image to svg:
4362 "pdftocairo -svg - noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4363 imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
4364 seqname ..
4365 -- Remove the temporary files:
4366 rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. " .pdf" .. seqname ..
4367 rmname .. " " .. imagesdirectory .. dirslash .. "lateximagingetemp-" .. lwimgpage .. " .pdf" ..
4368 cmdgroupclose .. " >/dev/null " .. bgname
4369 ,
4370 "File error trying to convert " .. lwimgfullname
4371 )
4372 -- Every 32 images, wait for completion at below normal priority,
4373 -- allowing other image tasks to catch up.
4374 numimageprocesses = numimageprocesses + 1
4375 if ( numimageprocesses > 32 ) then
4376 numimageprocesses = 0
4377 print ( "lwarpmk: waiting" )
4378 executecheckerror ( "wait", "File error trying to wait." )
4379 end
4380 end -- createuniximage

4381

4382

4383

4384 function createwindowsimage ( lwimgfullname )
4385 --
4386 -- Create one lateximage for Windows.
4387 --
4388 -- Every 32 images, wait for completion at below normal priority,
4389 -- allowing other image tasks to catch up.
lwarp

numimageprocesses = numimageprocesses + 1
if ( numimageprocesses > 32 ) then
  numimageprocesses = 0
thiswaitcommand = "\WAIT\BELOWNORMAL"
print ( "lwarp\mk: waiting" )
else
  thiswaitcommand = ""
end
-- Execute the image generation command
executecheckerror ( 
  "\start/B \"thiswaitcommand \"\"lwarp_one\image\ ..\lwimpage .. \"\"lwimhash .. \"\"lwimname .. \"\"sourcename .. \"<\nul >\nul"
, 
  "\File error trying to create image."
) 
end -- createwindowsimage

function createonelateximage ( line ) 
-- Given the next line of <sourcename>.txt, convert a single image.
-- lwimpage is the page number in the PDF which has the image
-- lwimhash is true if this filename is a hash
-- lwimname is the lateximage filename root to assign for the image
-- For each entry:
if ( (i=nil) ) then
  -- Skip if the page number is 0:
  if ( lwimpage == "0" ) then
    pagezerowarning = true
  else if ( lwimpage == "end" ) then
  else
    -- Skip is this image is hashed and already exists:
    local lwimfullname = imagesdirectory .. dirslash .. lwimname .. ".\svg"
    if ( lwimhash == "true") or
       (lfs.attributes(lwimfullname,"mode")==nil) -- file not exists
    then -- not hashed or not exists:
      -- Print the name of the file being generated:
      print ( "lwarp\mk: \" .. lwimname )
      -- Touch/create the dest so that only once instance tries to build it:
      executecheckerror ( 
        newtouchname .. \" .. lwimfullname ,
        "File error trying to touch \" .. lwimfullname
      )
    -- Separate out the image into its own single-page pdf:
    if opsystem=="\Unix" then
      createuniximage (lwimfullname)
    elseif opsystem=="\Windows" then

function createlateximages ()

-- Create lateximages based on <sourcename>-images.txt:
checkimages ()

-- See if the document must be recompiled first:
checkhtmlpdfexists ()

-- Attempt to create the lateximages:
print ("lwpark: Creating lateximages.")
local limagesfile = io.open(sourcename .. "-images.txt", "r")
if ( limagesfile == nil ) then
  warnlimages ()
  os.exit(1)
end

-- Create the lateximages directory, ignore error if already exists
err = os.execute("mkdir .. imagesdirectory")

-- For Windows, create lwpark_one_limage.cmd from lwpark_one_limage.txt:
if opsystem=="Windows" then
  executecheckerror (
    cpname .. " lwpark_one_limage.txt lwpark_one_limage.cmd",
    "File error trying to copy lwpark_one_limage.txt to lwpark_one_limage.cmd"
  )
end

-- Track the number of parallel processes
numimageprocesses = 0

-- Track warning to recompile if find a page 0
pagezerowarning = false

-- Scan <sourcename>.txt
for line in limagesfile:lines() do
  createonelateximage ( line )
end

io.close(limagesfile)
print ("lwparklimages: ===")
print ("lwparklimages: Wait a moment for the images to complete")
print ("lwparklimages: before reloading the page.")
print ("lwparklimages: ===")
print ("lwparklimages: Done.")
if ( pagezerowarning == true ) then
  print ("lwparklimages: WARNING: Images will be incorrect.")
  print ("lwparklimages: Enter \lwpark\ cleanlimages\, then")
  print ("lwparklimages: recompile the document one more time, then")
  print ("lwparklimages: repeat \lwpark\ images\ again.")
end
end -- pagezerowarning
disable -- function
function convertepstopdf ()
--
-- Converts EPS files to PDF files.
-- The filenames are arg[argindex] and up.
-- arg[1] is the command "pdftosvg".
--
ignoreconf ()
for i = argindex , #arg do
  if (lfs.attributes(arg[i],"mode")==nil) then
    print ("lwpark: File \" .. arg[i] .. \" does not exist.")
  else
    print ("lwpark: Converting \" .. arg[i] .. \"")
    os.execute ( "epstopdf " .. arg[i] )
  end -- if
end -- do
end --function

function convertpdftosvg ()
--
-- Converts PDF files to SVG files.
-- The filenames are arg[argindex] and up.
-- arg[1] is the command "pdftosvg".
--
ignoreconf ()
for i = argindex , #arg do
  if (lfs.attributes(arg[i],"mode")==nil) then
    print ("lwpark: File \" .. arg[i] .. \" does not exist.")
  else
    print ("lwpark: Converting \" .. arg[i] .. \"")
    os.execute ( "pdftocairo -svg " .. arg[i] )
  end -- if
end -- do
end --function

-- Force an update and conclude processing:
function updateanddone ()
print ("lwpark: Forcing an update of \" .. sourcename ..\".tex.")
refreshdate ()
print ("lwpark: \" .. sourcename ..\".tex is ready to be recomplied.")
print ("lwpark: Done.")
end -- function

-- Start of the main code: --
lwpark --version :
if (arg[1] == "--version") then
  print ( lwpark: " .. printversion )
else -- not --version
lwarp

-- print intro:
print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX lwarp package.")

-- lwarpmk print:
if arg[1] == "print" then
  loadconf ()
if ( latexmk == "true" ) then
  print ("lwarpmk: Compiling with: " .. printlatexcmd)
  executecheckerror (
    printlatexcmd ,
    "Compile error."
  )
  print ("lwarpmk: Done.")
else -- not latexmk
  verifyfileexists (sourcename .. ".tex");
  See if up to date:
  if ( 
    ( lfs.attributes ( sourcename .. ".pdf" , "modification") == nil ) or
    ( lfs.attributes ( sourcename .. ".tex" , "modification") >
      lfs.attributes ( sourcename .. ".pdf" , "modification")
    )
  ) then
    -- Recompile if not yet up to date:
    manytimes(printlatexcmd, ")
    print ("lwarpmk: Done.");
  else
    print ("lwarpmk: " .. sourcename .. ".pdf is up to date.");
end
else -- not latexmk

-- lwarpmk print1:
elseif arg[1] == "print1" then
  loadconf ()
  verifyfileexists (sourcename .. ".tex");
onetime(printlatexcmd, ")
  print ("lwarpmk: Done.");

-- lwarpmk printindex:
elseif arg[1] == "printindex" then
  loadconf ()
os.execute ( printindexcmd )
  print ("lwarpmk: -------")
  updateanddone ()
-- lwarpmk printglossary:
-- Compile the glossary then touch the source
-- to trigger a recompile of the document:

elseif arg[1] == "printglossary" then
loadconf ()
print("lwarpmk: Processing the glossary.")

os.execute(glossarycmd .. " .. sourcename)
updateanddone ()

-- lwarpmk html:

elseif arg[1] == "html" then
loadconf ()
if ( latexmk == "true" ) then
    print("lwarpmk: Compiling with: " .. HTMLlatexcmd)
    executecheckerror (
        HTMLlatexcmd ,
        "Compile error."
    )
    pdftohtml ()
    print("lwarpmk: Done.")
else -- not latexmk
    verifyfileexists ( sourcename .. ".tex" );
    -- See if exists and is up to date:
    if ( (lfs.attributes ( homehtmlfilename .. ".html", "modification") == nil ) or
        ( lfs.attributes ( sourcename .. ".tex", "modification" ) >
        lfs.attributes ( homehtmlfilename .. ".html", "modification" )
    )
    -- Recompile if not yet up to date:
    manytimes(HTMLlatexcmd, ".html")
    pdftohtml ()
    print("lwarpmk: Done.")
else
    print("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
end

-- lwarpmk html1:

elseif arg[1] == "html1" then
loadconf ()
verifyfileexists ( sourcename .. ".tex" );
oneetime(HTMLlatexcmd, ".html")
pdftohtml ()
print("lwarpmk: Done.")
lwarp

4665
4666  -- lwarp: pdftohtml:
4667  elseif arg[1] == "pdftohtml" then
4668    loadconf ()
4669    pdftohtml ()
4670
4671
4672  -- lwarp: htmlindex:
4673  -- Compile the index then touch the source
4674  -- to trigger a recompile of the document:
4675
4676  elseif arg[1] == "htmlindex" then
4677    loadconf ()
4678    os.execute ( HTMLindexcmd )
4679    print ("lwarp: --------")
4680    updateanddone ()
4681
4682
4683  -- lwarp: htmlglossary:
4684  -- Compile the glossary then touch the source
4685  -- to trigger a recompile of the document.
4686  -- The <sourcename>.xdy file is created by the glossaries package.
4687
4688  elseif arg[1] == "htmlglossary" then
4689    loadconf ()
4690    print("lwarp: Processing the glossary.")
4691    os.execute(glossarycmd .. " " .. sourcename .. ".html")
4692    updateanddone ()
4693
4694
4695  -- lwarp: images:
4696  -- Scan the <sourcename>.txt file to create lateximages.
4697
4698  elseif arg[1] == "images" then
4699    loadconf ()
4700    print("lwarp: Processing images.")
4701    createlateximages ()
4702    print("lwarp: Done.")
4703
4704
4705  -- lwarp: again:
4706  -- Touch the source to trigger a recompile.
4707
4708  elseif arg[1] == "again" then
4709    loadconf ()
4710    updateanddone ()
4711
4712
4713  -- lwarp: clean:
4714  -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *.html_inc, *.gl*
4715
4716  elseif arg[1] == "clean" then
4717    loadconf ()
4718    removeaux ()
4719    print("lwarp: Done.")
elseif arg[1] == "cleanall" then
loadconf ()
removeaux ()
if os.execute ( rmname .. " .. sourcename .. ".pdf " .. sourcename .. ".html.pdf " .. sourcename .. ".dvi " .. sourcename .. ".html.dvi " .. "*.htm")
print ("lwarpmk: Done.")

elseif arg[1] == "cleanimages" then
loadconf ()
if os.execute ( rmname .. " .. imagesdirectory .. dirslash .. "*" )
print ("lwarpmk: Done.")

elseif arg[1] == "epstopdf" then
convertepstopdf ()
print ("lwarpmk: Done.")

elseif arg[1] == "pdftosvg" then
convertpdftosvg ()
print ("lwarpmk: Done.")

-- lwarpmk with no argument :

elseif (arg[1] == nil) then
printhelp ()

-- lwarpmk -h or lwarpmk --help :

elseif (arg[1] == "-h" ) or (arg[1] == "--help") then
printusage ()

-- Unknown command:

else
printhelp ()
42 Stacks

Stacks are used to remember how to close sections and list items. Before a new section is started, previously nested sections and items must be closed out (un-nested) in proper order. Note that starting a new section may close several levels of previously nested items at the same time. For example, starting a new \section would close any currently open subsection, subsubsection, and paragraph. General environments are not nested on the stack since they have their own close mechanism. List environments are nested, and items inside those environments are nested one level deeper still. List environments may be nested inside other list environments, and list items are nested inside list environments as well. Thus, the stack may have items which are not necessarily in order, since a description may contain an enumerate, for example. Depths to be recorded in \LWR@closedepthone, etc.

42.1 Assigning depths

initial depths for empty stack entries:

all sectioning depths are deeper than \LWR@depthfinished:

used by \itemize, \enumerate, \description:

used by \item:
42.2 Closing actions

A stack to record the action to take to close each nesting level: Add more levels of stack if necessary for a very deeply nested document, adding to `\pushclose` and `\popclose` as well.

\newcommand*{\LWR@closeone}{% top of the stack
\newcommand*{\LWR@closetwo}{}
\newcommand*{\LWR@closethree}{}
\newcommand*{\LWR@closefour}{}
\newcommand*{\LWR@closefive}{}
\newcommand*{\LWR@closesix}{}
\newcommand*{\LWR@closeseven}{}
\newcommand*{\LWR@closeeight}{}
\newcommand*{\LWR@closenine}{}
\newcommand*{\LWR@closeten}{}
\newcommand*{\LWR@closeeven}{}
\newcommand*{\LWR@closetwelve}{%

42.3 Closing depths

A stack to record the depth of each level:

⚠️ Note that nested \LaTeX structures may push depths which are non-sequential.

Ex:

\begin{itemize}
  \item A
  \begin{description}
    \item B
  \end{description}
\end{itemize}

\newcommand*{\LWR@closedepthone}{\LWR@depthnone} % top of the stack
\newcommand*{\LWR@closedephtwo}{\LWR@depthnone}
\newcommand*{\LWR@closedepththree}{\LWR@depthnone}
\newcommand*{\LWR@closedepthfour}{\LWR@depthnone}
\newcommand*{\LWR@closedepthfive}{\LWR@depthnone}
\newcommand*{\LWR@closedepthsix}{\LWR@depthnone}
\newcommand*{\LWR@closedepthseven}{\LWR@depthnone}
\newcommand*{\LWR@closedeptheight}{\LWR@depthnone}
\newcommand*{\LWR@closedeptnine}{\LWR@depthnone}
\newcommand*{\LWR@closedephten}{\LWR@depthnone}
\newcommand*{\LWR@closedepteven}{\LWR@depthnone}
\newcommand*{\LWR@closedeptwelve}{\LWR@depthnone}
42.4 Pushing and popping the stack

\pushclose \(\{\text{action}\}\) \(\{\text{depth}\}\)

Pushes one return action and its LaTeX depth onto the stacks.

\pushc/l.Varose \{\langle action\rangle\} \{\langle depth\rangle\}

Pops one action and its depth off the stacks.

\popc/l.Varose
43 Data arrays

These macros are similar to the arrayjobx package, except that \LWR@setexparray's argument is expanded only once when assigned.

name has no backslash, index can be a number or a text name, and an empty value must be \relax instead of empty.

To assign an empty value:

\LWR@setexparray{name}{index}{\relax}

for HTML output:

\begin{warpHTML}
\LWR@setexparray \{\langle \text{name} \rangle \} \{\langle \text{index} \rangle \} \{\langle \text{contents} \rangle \}
\end{warpHTML}

\LWR@getexparray \{\langle \text{name} \rangle \} \{\langle \text{index} \rangle \}

\begin{warpAll}
\newcommand*{\LWR@getexparray}[2]{\@nameuse{#1#2}}
\end{warpAll}

44 Localizing catcodes

for HTML & PRINT: \begin{warpAll}

Misplaced alignment tab character &

Place \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros or environments which include the tabular & character in their definitions.

The catcode of & must be changed before the definitions begin, and must be restored afterwards. Doing so avoids the error Misplaced alignment tab character &.

\StartDefiningTabulars

Place before defining something with & in it.

\StopDefiningTabulars

Place after defining something with & in it.

\StartDefiningMath

Place before defining something with $ in it.

\StopDefiningMath

Place after defining something with $ in it.

45 Localizing dynamic math

Inline svg math usually uses a hash of its contents to generate latex images which are reusable for multiple instances with the same contents. If the contents may change for
each use, such as depending on the current value of a counter, then `\texttt{\verb|\textbackslash inlinemathother|}` must be used before the inline math expression, and `\texttt{\verb|\textbackslash inlinemathnormal|}` must be used after.

For MathJax, the inline math expression is usually printed for MathJax to interpret. When marked as dynamic math, the following inline math expression will be displayed as an unhashed inline SVG image instead.

For existing code and packages, it may be possible to patch macros after they have been defined, using the `\texttt{xpatch}` package, which is pre-loaded by `\texttt{lwr}`:

\begin{verbatim}
\xpatchcmd{\macroname}
  {$math expression$}
  {\texttt{\textbackslash inlinemathother$math expression$\texttt{\textbackslash inlinemathnormal}}}
  {}
  {\texttt{\textbackslash typeout{Error patching macroname.}}}
\end{verbatim}

\texttt{\textbackslash inlinemathother} Place before using `$...$` or `( ... )` if the contents of the math are not static, depending on counters or dynamic macros.

\begin{verbatim}
\newcommand{\texttt{\textbackslash inlinemathother}}{%
  \LWR@traceinfo{\texttt{\textbackslash inlinemathother}}%
  \booltrue{LWR@dynamicmath}%
}
\end{verbatim}

\texttt{\textbackslash inlinemathnormal} Place after using `$...$` or `( ... )` with dynamic contents.

\begin{verbatim}
\newcommand{\texttt{\textbackslash inlinemathnormal}}{%
  \LWR@traceinfo{\texttt{\textbackslash inlinemathnormal}}%
  \boolefalse{LWR@dynamicmath}%
}
\end{verbatim}

46 HTML entities
HTML Unicode entities:
\begin{verbatim}
define \entitytag {
\def \entitytag {\entitytag}
}
\newcommand*{\entitytag}[1]{\entitytag {#1}}
\end{verbatim}

\begin{verbatim}
define \hex_unicode {
\def \hex_unicode {\hex_unicode}
}
\newcommand*{\hex_unicode}[1]{\hex_unicode {0x#1}}
\end{verbatim}

\begin{verbatim}
\renewrobustcmd{\&}{\entity{amp}}
\renewrobustcmd{\text}{\entity{/amp}}
\end{verbatim}

\begin{verbatim}
\renewrobustcmd{\textgreater}{\entity{gt}}
\end{verbatim}

\section{HTML filename generation}

The filename of the homepage is set to \texttt{\HomeHTMLFilename.html}. The filenames of additional sections start with \texttt{\HTMLFilename}, to which is appended a section number or a simplified section name, depending on FileSectionNames.

For HTML & PRINT:  
\begin{verbatim}
\begin{warp}
\providecommand*{\BaseJobname}{\jobname}
\end{verbatim}

The \jobname of the printed version, even if currently compiling the \texttt{html} version. I.e. this is the \jobname without \texttt{.html} appended. This is used to set \texttt{\HomeHTMLFilename} if the user did not provide one.
\HTMLFilename \ The prefix for all generated HTML files other than the home page, defaulting to empty. See section 8.4.1.

\HomeHTMLFilename \ The filename of the home page, defaulting to the \BaseJobname. See section 8.4.1.

\SetHTMLFileNumber \((\text{number})\) \n
Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

\Bool FileSectionNames \ Selects how to create HTML file names.

Defaults to use section names in the filenames.

\For HTML output: \begin{warpHTML}

\Ctr LWR@htmlfilenumber \ Records the number of each HTML file as it is being created. Number 0 is the home page.

\LWR@htmlsectionfilename \((\text{htmlfilenumber or name})\) \n
Prints the filename for a given section: \HTMLFilename\filenumber/name.html

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.
For a \LaTeX section named “Index” or “index” without a prefix, create a filename with a leading underscore to avoid colliding with the HTML filename index.htm:

\begin{verbatim}
\LWR@traceinfo(LWR@htmlsectionfilename C \LWR@sanitized)%
\ifndef{% 
  \equal(\HTMLFilename{}) \AND 
  \equal(\LWR@sanitized)(Index) \OR 
  \equal(\LWR@sanitized)(index)%
% 
% \LWR@traceinfo(Prefixing the index name with an underscore.)% 
  _\LWR@sanitized.html%
}%
\LWR@traceinfo(LWR@htmlsectionfilename Z)%
\end{verbatim}

Otherwise, create a filename with the chosen prefix:

\begin{verbatim}
\LWR@traceinfo(LWR@htmlsectionfilename \LWR@sanitized)%
\LWR@nullfonts to allow math in a section name.
\end{verbatim}


48 Homepage link

for HTML & PRINT:

\begin{warpall}
\linkhomename Holds the default name for the home link.
\newcommand{\linkhomename}{Home}
\end{warpall}

for HTML output:

\begin{warpHTML}
\LinkHome May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.
\newcommand*{\LinkHome}{%\LWR@subhyperrefc{\HomeHTMLFilename}{\linkhomename}{\linkhome}}%
\end{warpHTML}

for PRINT output:

\begin{warpprint}
\LinkHome May be used wherever you wish to place a link back to the homepage. For print output, if \texttt{hyperref} is available a hyperlink to the first page is used, named by \linkhomename. If \texttt{hyperref} is not available, a pageref is used instead.
\BaseJobname is included in the link label in case multiple documents are cross-referenced.
\AtBeginDocument{\@ifundefined{hyperref}{%\newcommand*{\LinkHome}{\linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}}%}{%\newcommand*{\LinkHome}{\hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}}%}}
\AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}
\end{warpprint}

for HTML output:

\begin{warpHTML}
\LWR@topnavigation Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideroc.
\LWR@topnavigation \newcommand*{\LWR@topnavigation}{\LWR@htm/l.Vare/l.Varementc/l.Varass/l.Varine{nav}{topnavigation}{\LinkHome}}\end{warpHTML}

\LWR@botnavigation Creates a link to the homepage at the bottom of the page for use when the window is too narrow for the sideroc.

\LWR@botnavigation \newcommand*{\LWR@botnavigation}{\LWR@htm/l.Vare/l.Varementc/l.Varass/l.Varine{nav}{botnavigation}{\LinkHome}}\end{warpHTML}

49 \LWRPrintStack diagnostic tool

Diagnostics tool: Prints the \LaTeX{} nesting depth values for the stack levels. \LWR@startpars is used before printing the stack, so that \LWRPrintStack may be called from anywhere in the normal text flow.

for HTML output: \begin{warpHTML} \LWRPrintStack Prints the closeddepth stack. \LWR@startpars \LWR@subprintstack \end{warpHTML}

for PRINT output: \begin{warpprint} \newcommand*{\LWRPrintStack}{} \end{warpprint}

50 Closing stack levels

for HTML output: \begin{warpHTML}
Close one nested level:

\newcommand*{\LWR@closeoneprevious}{% 
\LWR@closeone \popclose 
}

\LWR@closeprevious \((depth)\) Close everything up to the given depth:

\newcommand*{\LWR@closeprevious}[1]{% 
\LWR@traceinfo{\LWR@closeprevious to depth #1, depths are \LWR@subprintstack}% 
Close any pending paragraph:

\LWR@stoppars%

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

\whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{#1}}}{% 
\LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}% 
\LWR@closeoneprevious% 
\ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}#1}}{% 
\LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}% 
\LWR@closeoneprevious% 
}\fi% 
\LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}% 
}

\end{warpHTML}

51 PDF pages and styles

for HTML output:

\begin{warpHTML}
\LWR@forcenewpage New PDF page a before major environment.

This is used just before major environments, such as verse. Reduces the chance of an environment overflowing the HTML PDF output page.

\newcommand{\LWR@forcenewpage}{% 
\LWR@traceinfo{\LWR@forcenewpage}% 
\ifinner\e\LWR@stoppars\LWR@orignewpage\LWR@startpars% 
\fi% 
\}
\pagestyle, etc. are nullified for HTML output.

\pagestyle \{(style}\}
\thispagestyle \{(style)\}
\markboth \{(left)\} \{(right)\}
\markright \{(right)\}
\raggedbottom
\flushbottom
\sloppy
\fussy
\pagenumbering * \{(commands)\}
\end{warpHTML}

52 HTML tags, spans, divs, elements

for HTML output: \begin{warpHTML}

\begin{warpHTML}

5078 \end{warpHTML}
### 52.1 Mapping \LaTeX\ sections to HTML sections

```latex
\newcommand*{\LWR@tagtitle}{h1}
\newcommand*{\LWR@tagtitleend}{/h1}
\newcommand*{\LWR@tagpart}{h2}
\newcommand*{\LWR@tagpartend}{/h2}
\newcommand*{\LWR@tagchapter}{h3}
\newcommand*{\LWR@tagchapterend}{/h3}
\newcommand*{\LWR@tagsection}{h4}
\newcommand*{\LWR@tagsectionend}{/h4}
\newcommand*{\LWR@tagsubsection}{h5}
\newcommand*{\LWR@tagsubsectionend}{/h5}
\newcommand*{\LWR@tagparagraph}{span c/l.Vare=/quotedbl.Vareparagraph/quotedbl.Vare}
\newcommand*{\LWR@tagparagraphend}{/span}
\newcommand*{\LWR@tagsubparagraph}{span c/l.Vare=/quotedbl.Varesubparagraph/quotedbl.Vare}
\newcommand*{\LWR@tagsubparagraphend}{/span}
\newcommand*{\LWR@tagregu}{p}
```

### 52.2 Babel-French tag modifications

Adjust `babel-french` for HTML spaces. So far, this only works for `pdflatex` and `xelatex`.

*(Emulates or patches code by Danilo Filpo.)*

```latex
\providecommand*{\LWR@FBcancel}{}
\AtBeginDocument{\@ifundefined{frenchbsetup}{}{\frenchbsetup{FrenchFootnotes=false}}}
\let\LWR@FBcancel\NoAutoSpacing
\renewrobustcmd*{\FBco}{\begingroup\LWR@FBcancel\LWR@origampersand{}nbsp;\endgroup}
\renewrobustcmd*{\FBthinspace}{\begingroup\LWR@FBcancel\LWR@origampersand\LWR@origpound{}x202f; % \\
}\renewrobustcmd*{\FBguillemotleft}{\begingroup\LWR@FBcancel\LWR@origampersand\LWR@origpound{}x2018; % \\
```

5123 \}%
5124 \DeclareDocumentCommand{\FBmedkern}{[]}{%
5125 \begingroup%
5126 \LWR@FBcancel%
5127 \LWR@origampersand\LWR@origpound{\textbullet;}
5128 \endgroup%
5129 \}%
5130 \DeclareDocumentCommand{\FBthickkern}{[]}{%
5131 \begingroup%
5132 \LWR@FBcancel%
5133 \LWR@origampersand\textbullet; % ~
5134 \endgroup%
5135 \}%
5136 \renewrobustcmd{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
5137 \if\FBunicode
5138 \e\Vararse\Dec\VarareTextSymbol{\FBtexte\Varar}{\texte\Varar\textbullet;\textspace}%
5139 \Dec\VarareTextCommandDefault{\FBtextellipsis}{\textellipsis\textspace}%
5140 \fi%
5141 \%}
5142 }

\LWR@indentHTML

Newline and indent the output HTML code.

\LWR@htm\Varartagc {⟨tag⟩}

Break ligatures and use upright apostrophes in HTML tags.

\protect is in case the tag appears in TOC, LOF, LOT.

\LWR@htmltagc {⟨tag⟩}

\protect is in case the tag appears in TOC, LOF, LOT.
Env LWR@nestspan Disable minipage, `\parbox`, and HTML `<div>`s inside a `<span>`.

\begin{LWR@nestspan} must follow the opening `<span>` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

\end{LWR@nestspan} must follow the `<span>` or a `<p>` may appear inside the span.

\newcommand*{\LWR@nestspanitem}{\if@new/l.Varist\e/l.Varse{\LWR@htm/l.Vartagc{br /}}\fi\LWR@origitem}
\newenvironment*{LWR@nestspan}{\LWR@traceinfo{LWR@nestspan starting}}{\ifnumcomp{\va/l.Varue{LWR@l.Varateximagedepth}}{>}{0}{\LWR@traceinfo{LWR@nestspan: inside a lateximage}}{\LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}}{\addtocounter{LWR@spandepth}{1}\RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{\LWR@subhtm/l.Vare/l.Varementc/l.Varass{span}{in/l.Varineminipage}}{\LWR@htm/l.Vartagc{/span}}\RenewDocumentEnvironment{B/l.VarockC/l.Varass}{o m}{}{}\renewcommand{\B/l.VarockC/l.VarassSing/l.Vare}{##2}\renewcommand{\LWR@forcenewpage}{}\renewcommand{\LWR@/l.Variststart}{/l.Varet\item\LWR@nestspanitem}\LWR@/l.Varistend}{\LWR@htm/l.Vartagc{br /}\LWR@htm/l.Vartagc{br /}}}{\LWR@traceinfo{LWR@nestspan starting: done}}
\AfterEndEnvironment{LWR@nestspan}{\g/l.Varoba/l.Var/\LWR@c/l.Varoseparagraph}

\begin{LWR@nestspan} misog {⟨tag⟩}{⟨text⟩}
\end{LWR@nestspan}

\LWR@spandepth is used to ensure that paragraph tags are not generated inside a span.

The exact sequence of when to add and subtract the counter is important to correctly handle the paragraph tags before and after the span.
5198 \#2%
5199 \LWR@htmltagc(/#1)%
5200 end(LWR@nestspan)%
5201 }

\LWR@htmlspanclass \[(style]\} {(class)} {(text)}

5202 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5203 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
5204 \LWR@ensuredoingapar%
5205 \LWR@subhtmlclassname(span)[#1]{#2}%
5206 \begin{LWR@nestspan}%
5207 #3%
5208 \LWR@htmltagc(/span)%
5209 \LWR@traceinfo{LWR@htmlspanclass done}%
5210 end(LWR@nestspan)%
5211 }

\LWR@htmltag \{(tag)\}

Print an \texttt{HTML} tag: <tag>

5212 \newcommand*{\LWR@htmltag}{[%
5213 \LWR@traceinfo{LWR@htmltag !\detokenize{#1}!}%
5214 \LWR@htmltagb(#1)%
5215 \LWR@traceinfo{LWR@htmltagb: done}%
5216 ]}

52.5 Block tags and comments

In the following, \texttt{origttfamily} breaks ligatures, which may not be used for \texttt{HTML} codes:

\LWR@htmlopencomment
\LWR@htmlclosecomment

5217 \newcommand*{\LWR@htmlopencomment}{%  
5218 % \LWR@traceinfo{LWR@htmlopencomment}%  
5219 \begingroup%  
5220 \LWR@FBcancel%  
5221 \ifmmode\else\protect\LWR@origttfamily\fi%  
5222 \LWR@print@mbox{\LWR@origtextless{}!-/-}%  
5223 \endgroup%  
5224 %  
5225 }%  
5226 \}  
5227 \LWR@htmlclosecomment

5228 \newcommand*{\LWR@htmlclosecomment}{%  
5229 % \LWR@traceinfo{LWR@htmlclosecomment}%  
5230 \begingroup%
52.6 Div class and element class

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of \textquotedbl instead of " provides improved compatibility with xeCJK.
52.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:
52.8 HTML5 semantic elements

\LWR@htmlelement \{\langle element\rangle\}

\LWR@htmlelementend \{\langle element\rangle\}

52.9 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with CSS.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section 91.
\BlockClassSingle  {((class))} {((text))}  A single-line <div>, without a paragraph tag for the line of text.

\InlineClass  {((WP style))} {((style))} {((class))} {((text))}  

High-level interface for inline span classes.

{((WP style))} is css styling to add when formatting for a word processor import.

{((style))} is the css styling to add when not formatting for a word processor.

Ext \LWR@BlockClassWP  {((WPstyle))} {((HTMLstyle))} {((class))}  

Low-level interface for <div> classes with an automatic float ID. These are often used when \ifbool{FormatWP}.

The use of \textquotedbl instead of " provides improved compatibility with xeCJK.
for HTML output:
\begin{warpHTML}
\NewDocumentEnvironment{LWR@print@LWR@B/l.VarockC/l.VarassWP}{m m m}{}{}%  
\NewDocumentEnvironment{LWR@HTML@LWR@B/l.VarockC/l.VarassWP}{m m m}%
\% \LWR@stoppars%
\% ifbool{FormatWP}%
\% \addtocounter{LWR@thisautoidWP}{1}%
\% \LWR@htm/l.Vartag{div c/l.Varass=textquotedbl/l.Var#3\textquotedbl/l.Var \ % space
ind=textquotedbl\%  
\% \LWR@print@mbox{autoidWP-arabic{LWR@thisautoidWP}}%
\% \textquotedbl/l.Var%
\% ifb/l.Varank{#1}{}{ sty/l.Vare=textquotedbl/l.Var#1\textquotedbl/l.Var}%
\%}
\% not FormatWP
\% \LWR@htm/l.Vartag{div c/l.Varass=textquotedbl/l.Var%
\% ifb/l.Varank{#2}{}{ sty/l.Vare=textquotedbl/l.Var#2\textquotedbl/l.Var}%
\%}
\% not FormatWP
\% \LWR@startpars%
\end{warpHTML}

52.10 Closing HTML tags

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

\begin{warpHTML}
\newcommand*{\LWR@printclosepart}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
\newcommand*{\LWR@printclosechapter}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
\newcommand*{\LWR@printclosesection}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
\newcommand*{\LWR@printclosesubsection}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
\newcommand*{\LWR@printclosesubsubsection}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
\newcommand*{\LWR@printcloseparagraph}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
\newcommand*{\LWR@printclosesubparagraph}{
{\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}
Lists require closing HTML tags:

5383 \newcommand*{\LWR@printcloselistitem}{\LWR@htm/l.Vartag{//l.Vari}}
5384 \newcommand*{\LWR@printclosedesctitem}{\LWR@htm/l.Vartag{/dd}}
5386 \newcommand*{\LWR@printcloselistitem}{\LWR@htm/l.Vartag{/ul}}
5388 \newcommand*{\LWR@printclosenumber}{\LWR@htm/l.Vartag{/ol}}
5390 \newcommand*{\LWR@printclosedesctdescription}{\LWR@htm/l.Vartag{/d/l.Var}}
5392 \end{warpHTML}

53 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 54 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (\LWR@doingstartpars), tags are not generated until a \LaTeX{} paragraph is being used (\LWR@doingapar). LWR@lateximagedepth is used to prevent nesting tags inside a \LaTeX{} image. LWR@spandepth is used to prevent nesting paragraph tags inside a paragraph, which became important inside \fbox{} commands and other spans.

\begin{warpHTML}

5402 \newcounter{LWR@spandepth}
5403 \setcounter{LWR@spandepth}{0}
5404 \newboo/l.Var{LWR@spandepth}
5405 \newboo/l.Var{LWR@doingstartpars}
5406 \newboo/l.Var{LWR@doingapar}
5407 \newbool{LWR@spandepth}
5408 \newbool{LWR@doingstartpars}
5409 \newbool{LWR@doingapar}
5410 \global\boolfalse{LWR@doingapar}
5411 \LWR@ensuredoingapar

\end{warpHTML}
Redefined by \texttt{parnotes} to print paragraph notes at the end of each paragraph.

\begin{verbatim}
\def\PN@parnotes@auto{}%
\LWR@openparagraph

\newcommand*{\LWR@openparagraph}{% See if paragraph handling is enabled:
  \ifbool{\LWR@doingstartpars}%
  {% hand/l.Varing pars
    See if have already started a \texttt{lateximage} or a \texttt{<span>}. If so, do not generate nested paragraph tags.
    \ifbool{\LWR@expr}{% nested par tags?
      test \{\ifnumcomp{\va/LWR@lateximagedepth}{>}{0}} or
      test \{\ifnumcomp{\va/LWR@spandepth}{>}{0}}
    }% nested par tags?
    \}
  }% no nested par tags
  {%
    \ifbool{\LWR@expr}{% yes nest par tags
      \ifbool{\LWR@expr}{% yes nest par tags
        If \texttt{parnotes} is used, paragraph notes are inserted before starting the next paragraph:
        \PN@parnotes@auto% The opening paragraph tag:
        \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignew% Now have started a paragraph.
        \global\booltrue{\LWR@doingpar}%
        At the end of each paragraph, generate closing tag and do regular /par stuff. (Attempting to use the everyhook cr hook for \texttt{\LWR@closeparagraph} does not work well.)
        \let\par\LWR@closeparagraph%
        \}% end of yes nest par tags
    }% end of hand/l.Varing pars
  }% not handling pars
}\end{verbatim}
\LWR@closeparagraph@br

Add an HTML break if in a span, and not in a lateximage, and not in tabular metadata.
Factored from \LWR@closeparagraph.

5435 \newcommand*{\LWR@closeparagraph@br}
5436 {% \ifboolexpr{
5437 \test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
5438 \test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
5439 \notbool {LWR@intabularmetadata}
5440 }{% \unskip\LWR@htmltagc{br /}}%
5441 {}%
5442 }
\LWR@closeparagraph

5445 \newcommand*{\LWR@closeparagraph}
5446 {% \LWR@traceinfo{LWR@closeparagraph}%
5447 See if paragraph handling is enabled:
5448 \ifbool{LWR@doingapar}%
5449 If currently in paragraph mode:
5450 {% handling pars
5451 \ifboolexpr{
5452 \test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} or
5453 \test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5454 }%
5455 Add a parbreak if in a span, not in a lateximage, and not in table metadata.
5456 {% no nested par tags
5457 \LWR@closeparagraph@br%
5458 }% no nested par tags
5459 If have not already started a lateximage or a <span>:
5460 {% yes nest par tags
5461 Print a closing tag and some extra vertical space.
5462 \leavevmode\LWR@orignewline%
5463 \LWR@htmltagc{\LWR@tagregularparagraph}%
5464 \LWR@origpar%
5465 No longer doing a paragraph:
5466 }%
Disable the special minipage & \hspace interaction until a new minipage is found:
\global\boolfalse{\LWR@minipagethispar}

If \parnotes is used, paragraph notes are inserted after ending the previous paragraph:
\PN@parnotes@auto
% end of yes nest par tags
% end of handling pars

Add a parbreak if in a span, not in a lateximage, and not in table metadata.
\LWR@c/paragraph@br
% not handling pars
%
% not handling pars

In most cases, finish with a \LaTeX \par, but in the case of paragraphs between lines in a tabular fetch the next token instead:
\ifboolexpr{% not bool \LWR@doingapar and
 test {\ifnumcomp{\value{\LWR@tabulardepth}}{>}{0}} and
 test {\ifnumcomp{\value{\LWR@tabulardepth}}{=}{\value{\LWR@tabularpardepth}}
 ) and
 bool \LWR@intabularmetadata and
 not bool \LWR@tableparcell and
 test {\ifnumcomp{\value{\LWR@lateximagedepth}}{=}{}{}}
 %
 % \LWR@getmynexttoken%
 %\LWR@origpar%
 %}
}{
 \LWR@getmynexttoken%
 \LWR@origpar%
}
% end{warpHTML}

## 54 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 53 has the commands which actually generate the tags.

The everyhook package is used to generate the opening paragraph tags. The closing tags are generated by \par.

\begin{warpHTML}
\LWR@startpars \begin{itemize}
\item Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.
\end{itemize}

\LWR@stoppars \begin{itemize}
\item Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.
\end{itemize}
Ignore if inside a span:
\ifnumcomp{value(LWR@spandepth)}{>}{0}%
\ifnumcomp{value(LWR@spandepth)}{=}{0}%

See if currently handling HTML paragraphs:
\ifbool{LWR@doingapar}%

if currently in an HTML paragraph:
{%

Print a closing tag:
\leavevmode\LWR@orignew\LWR@htm\LWR@tagc{\LWR@tagregularparagraph}%
\LWR@orignew\LWR@htm\LWR@tagc{\LWR@tagregularparagraph}%

No longer have an open HTML paragraph:
\global\boolfalse{LWR@doingapar}%

Disable the special minipage & \hspace interaction until a new minipage is found:
\global\boolfalse{LWR@minipagethispar}
}
% an intentionally blank line

If was not in an HTML paragraph:
{%

See if currently allowing HTML paragraphs:
\ifbool{LWR@doingstartpars}%

If so: clear the par hook to no longer catch paragraphs:
{\ClearPreHook{par}}%

Else: Do nothing:
{%

No longer in paragraph mode:
\global\setbool{LWR@doingstartpars}{false}%

No <p> tag to undo:
\global\boolfalse{\LWR@doingpar}%
\% nestspan
}
\end{warpHTML}

\section{Indentfirst}

\pkg indentfirst \cmdindentfirst redefines \cmd@afterindentfalse to be \cmd@afterindenttrue. This is reversed \AtBeginDocument here.

\begin{warpHTML}
\AtBeginDocument{
\def\@afterindentfalse{\if@afterindent\fi}
\@afterindentfalse

\let\LWR@afterindent@syntaxhigh\fi\% syntax highlighting
\end{warpHTML}

\section{Page headers and footers}

% Pkg \indentfirst
\newcommand{\LWR@firstpagetop}{} % for the home page alone
\newcommand{\LWR@pagetop}{} % for all other pages
\newcommand{\LWR@pagebottom}{}

\HTMLFirstPageTop {((text and logos))}
\newcommand{\HTMLFirstPageTop}[1][1][%\renewcommand{\LWR@firstpagetop}[#1][%
\HTMLPageTop {((text and logos))}
\newcommand{\HTMLPageTop}[1][1][%\renewcommand{\LWR@pagetop}[#1][%
\HTMLPageBottom {((text and logos))}
57  css

for HTML output: \begin{warpHTML}
\LWR@currentcss  The css filename to use. This may be changed mid-document using \CSSFi/l.Varename, allowing different css files to be used for different sections of the document.

\newcommand*{\LWR@currentcss}[1]{\lwpreamble{warp.css}}

\CSSFi/l.Varename  Assigns the css file to be used by the following HTML pages.

\newcommand*{\CSSFi/l.Varename}[1]{\@one/l.Vareve/l.Var@sanitize\LWR@currentcss}
\end{warpHTML}

for PRINT output: \begin{warpprint}
\newcommand*{\CSSFi/l.Varename}[1]{}
\end{warpprint}

58  MathJax script

for HTML output: \begin{warpHTML}
Default: lwpreamble{warp_mathjax.txt}
\LWR@mathjaxfilename  The MathJax script filename to use. This file is copied into the head of each HTML page. This may be changed mid-document using \MathJaxFi/l.Varename, allowing the use of a custom MathJax script, such as for a local repository, or different MathJax script files to be used for different sections of the document.

\newcommand*{\LWR@mathjaxfilename}[1]{\lwpreamble{warp_mathjax.txt}}

\MathJaxFi/l.Varename  Assigns the MathJax script file to be used by the following HTML pages.

\newcommand*{\MathJaxFi/l.Varename}[1]{%
\newcommand{\LWR@mathjaxfilename}{#1}
\@onelevel@sanitize\LWR@mathjaxfilename
\end{warpHTML}

\begin{warpprint}
newcommand*{\MathJaxFi/l.Varename}{1}{}
\end{warpprint}

\begin{warpHTML}
tit/l.Vare\{\langle title\rangle\}
Modified to remember \thetit/l.Vare, which is used to set the HTML page titles.
\let\LWR@origtit/l.Vare\tit/l.Vare
\renewcommand*{\tit/l.Vare}{1}{\LWR@origtit/l.Vare{#1}}
\begingroup
\renewcommand{\thanks}{1}{}
\protected@xdef{\thetit/l.Vare}{#1}
\endgroup
\end{warpHTML}

\begin{warpa/l.Var/l.Var}
\HTMLTit/l.Vare\{\langle Titlename\rangle\}
The Title to place into an HTML meta tag. The default is to use the
document \tit/l.Vare’s setting.
\providecommand{\thetitle}{}
\newcommand{\theHTMLTitle}{\thetitle}
\newcommand{\HTMLTitle}{1}{\renewcommand{\theHTMLTitle}{#1}}
\HTMLAuthor\{\langle authorname\rangle\}
The author to place into an HTML meta tag. If none given, the
default is \theauthor, which is empty unless the titling package is used.
\providecommand{\theauthor}{}
\newcommand{\theHTMLAuthor}{\theauthor}
\newcommand{\HTMLAuthor}{1}{\renewcommand{\theHTMLAuthor}{#1}}

59 Title, HTML meta author, HTML meta description

for HTML output: \begin{warpHTML}
\title\{(title)\}
\let\LWR@origtitle\title
\renewcommand{\title}{1}{\LWR@origtitle{#1}}
\begingroup
\renewcommand{\thanks}{1}{}
\protected@xdef{\thetit}{#1}
\endgroup
\end{warpHTML}

for HTML & PRINT: \begin{warpa/l.Var/l.Var}
\HTMLTit\{\langle Titlename\rangle\}
The Title to place into an HTML meta tag. The default is to use the
document \tit/l.Vare’s setting.
\providecommand{\thetitle}{}
\newcommand{\theHTMLTitle}{\thetitle}
\newcommand{\HTMLTitle}{1}{\renewcommand{\theHTMLTitle}{#1}}
\HTMLAuthor\{\langle authorname\rangle\}
The author to place into an HTML meta tag. If none given, the
default is \theauthor, which is empty unless the titling package is used.
\providecommand{\theauthor}{}
\newcommand{\theHTMLAuthor}{\theauthor}
\newcommand{\HTMLAuthor}{1}{\renewcommand{\theHTMLAuthor}{#1}}

for PRINT output: \begin{warpprint}
newcommand*{\MathJaxFi/l.Varename}{1}{}
\end{warpprint}
This is placed inside an HTML meta tag at the start of each file. This may be changed mid-document using \HTMLDescription, allowing different HTML descriptions to be used for different sections of the document.

⚠️ **HTML author** Do not use double quotes, and do not exceed 150 characters.

\HTMLDescription \{ ⟨New HTML meta description.⟩ \} Assigns the HTML file's description meta tag.

\texttt{5593 \newcommand{\LWR@currentHTMLDescription}{}}
\texttt{5594 5595 \newcommand{\HTMLDescription}{\%}
\texttt{5596 \renewcommand{\LWR@currentHTMLDescription}{\%}
\texttt{5597 }}
\texttt{5598 5599 \end{warpall}}

### 60 Footnotes

\texttt{lwarf} uses native \LaTeX{} footnote code, although with its own \texttt{\Box} to avoid the \LaTeX{} output routine. The usual functions mostly work as-is.

#### footnote numbering
To have footnote numbers reset each time footnotes are printed:

\texttt{\setcounter{footnoteReset}{1}}

For bigfoot, manyfoot, or perpage:

\texttt{\MakePerPage{footnoteX}}
— or —
\texttt{\MakeSortedPerPage{footnoteX}}

The footnotes are reset when they are printed, according to section level as set by FootnoteDepth, which is not necessarily by HTML page. This is recommended for \texttt{\alph, \Alph, or \fnsymbol} footnotes, due to the limited number of symbols which are available.

#### footmisc
The footmisc stable option is emulated by \texttt{lwarf}.

⚠️ **sectioning commands** When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the footmisc package with the stable option, provide a short \texttt{TOC} entry, and \texttt{protect} the \texttt{\footnote}:

\texttt{\usepackage[stable]{footmisc}}
...\texttt{\subsection[Subsection Name]
  \{Subsection Name\protect\footnote{A footnote.}}}
Do not use a starred sectioning command. As an alternative, it may be possible to adjust \secnumdepth instead.

Several kinds of footnotes are used: in a regular page, in a minipage, or as thanks in the titlepage. Each of these handle differently.

### 60.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on FootnoteDepth, using the \LaTeX box \LWR@footnotebox. Using this instead of the original \footins box avoids having footnotes be printed by the output routine, since footnotes should be printed per HTML page instead of per PDF page.

See section 60.4 for the implementation.

### 60.2 Minipage footnotes

See section 60.5 for how minipage footnotes are gathered. See section 90.3 for how minipage footnotes are placed into the document.

### 60.3 Titlepage thanks

See section 67.7 for titlepage footnotes.

### 60.4 Regular page footnote implementation

**for HTML & PRINT:**

\begin{warpa/l.Var/l.Var}

\PassOptionsToPackage{stable}{footmisc}
\usepackage[lwarp]

\begin{warpa/l.Var/l.Var}

Determines how deeply to place footnotes in the HTML files, similar to \tocdepth. The default of 3 places footnotes before each \subsubsection or higher. See table 9 for a table of LaTeX section headings.

\newcounter{FootnoteDepth}
\setcounter{FootnoteDepth}{3}

If non-zero, the footnote counter is reset to this value each time the footnotes are printed, as controlled by FootnoteDepth. For the \texttt{manyfoot} and \texttt{bigfoot} packages, additional counters such as \texttt{footnote<suffix>Reset} will be defined as well. These counters may be set non-zero by the user, and are also set if the perpage’s \MakePerPage or \MakeSortedPerPage macros are used for the footnote or footnote<suffix> counters.
The name is not capitalized because it is made from the counter’s name with “Reset” appended.

```latex
\newcounter{footnoteReset}
\setcounter{footnoteReset}{0}
\end{warpa/l.Var/l.Var}
```

For HTML output:

```latex
\begin{warpHTML}
\LWR@footnotebox
```

Patch \LaTeX\footnotes to use a new \box instead of an insert for \larp\ footnotes. This avoids having the original \footins appear at the bottom of a \lateximage, which is on its own new page.

```latex
\newbox\LWR@footnotebox
```

Much of the following has unneeded print-mode formatting removed.

```latex
\@makefntext{\langle text\rangle}
\@makefnmark
```

```latex
\def\@makefnmark{%
\textsuperscript{\@thefnmark}%
}
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or \lateximage, in which case paragraph tags must be added manually.

In a \lateximage during HTML output, the \lateximage is placed inside a print-mode minipage, but the footnotes are broken out by:

```latex
\def\mpfn{footnote}
\def\thempfn{\thefootnote}
\@footnotetext\LWR@footnotetext
```

```latex
\LWR@@footnotetext{\langle text\rangle}{\langle footnote box name\rangle}
```

Factored to allow multiple footnote boxes for manyfoot.

```latex
\long\def\LWR@@footnotetext#1#2{%
\LWR@traceinfo{LWR@footnotetext}%
\gobble\setbox\csname #2\endcsname=\vbox{%
Add to any current footnotes:

```latex
\uvbox\csname #2\endcsname%
```
Remember the footnote number for \ref:

\protected@edef\@currentlabel{%  
  \csname p@footnote\endcsname@thefnmark%  
}% \@currentlabel

Open a group:

\color@begingroup

Use HTML superscripts in the footnote even inside a lateximage:

\renewrobustcmd{\textsuperscript}{\LWR@htm{\span{sup}{##1}}}

Use paragraph tags if in a tabular data cell or a lateximage:

\ifthenelse{%  
  \boolean{LWR@doingstartpars} \AND%  
  \cnttest{\value{LWR@lateximagedepth}}{=}0%  
}{}{%  
  \LWR@htm{\tagc{\LWR@tagregu{arparagraph}}\LWR@orignew{ine}}%

Append the footnote to the list:

@makefntext(#1)%

Closing paragraph tag:

\ifthenelse{%  
  \boolean{LWR@doingstartpars} \AND%  
  \cnttest{\value{LWR@lateximagedepth}}{=}0%  
}{}{%  
  \LWR@htm{\tagc{\LWR@tagregu{arparagraph}}}\LWR@orignew{ine}%

Close the group:

\color@endgroup%

Paragraph handling:

LWR@ensuredoingapar%

\LWR@footnotetext{({text})}

\long\def\LWR@footnotetext#1{\LWR@footnotetext(#1)(LWR@footnotebox)}
60.5 Minipage footnote implementation

Patch \LaTeX minipage footnotes to use a new \verb|\box| instead of an insert for lwarp minipage footnotes. This avoids having the original \verb|\@mpfootins| appear at the bottom of a lateximage, which is on its own new page.

Use paragraph tags if in a tabular data cell or a lateximage:

```latex
\ifthenelse{\cnttest{\value{\LWR@lateximagedepth}}{>}{0}}{% 
  \LWR@htmtagc{\LWR@tagregularparagraph}\LWR@orignewline% 
}{
  \@makefntext{\ignorespaces#1}
 \}%
```

Don't add the closing paragraph tag if are inside a lateximage:

```latex
\ifthenelse{\cnttest{\value{\LWR@lateximagedepth}}{>}{0}}{% 
  %
  \LWR@htmtagc{\LWR@tagregularparagraph}\LWR@orignewline% 
}{
  \color@endgroup% 
}% vbox
```

Paragraph handling:
\input{lwarp}

\ref{\LWR@ensuredoingapar%}
\LWR@traceinfo{@mpfootnotetext: done}%

\empfootnote
\textit{Redefined to remove the }\textit{shape, which caused an obscure compiling error in some situations.}

\AtBeginDocument{
\def\empfootnote{@a/l.Varph\c@mpfootnote}
}

\section{Printing pending footnotes}

\LWR@printpendingfootnotes \{(\textit{footnote counter name})\}

\LWR@maybeprintpendingfootnotes \{(\textit{depth})\} Used to print footnotes before sections only if formatting for an \texttt{EPUB} or word processor:
Enclose the minipage footnotes in a class, print, then clear.

\LWR@printpendingmpfootnotes

\newcommand*{\LWR@printpendingmpfootnotes}{%
\reversemarginpar
\renewcommand*{\reversemarginpar}{}
\normalmarginpar
\renewcommand*{\normalmarginpar}{}
\end{warpHTML}

\begin{warpprint}
\marginparBlock \[\langle \textit{left} \rangle \] \{\langle \textit{right} \rangle \}
For use when the marginpar will be more than one paragraph, and/or contains more than simple text.
Print version.
\end{warpprint}

\section{Splitting HTML files}

- Files are split according to FileDepth and CombineHigherDepths.
- Filenames are sanitized by \LWR@filenamenoblanks.
- \LWR@newhtmfile finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

\begin{warpall}
\begin{Ctr} \textbf{FileDepth} \{(\textit{section depth})\} determines how deeply to break into new HTML files, similar to \texttt{tocdepth}. The default of -5 produces one large HTML file.
\newcounter{FileDepth}
\setcounter{FileDepth}{-5}

**Bool CombineHigherDepths** Combine higher-level sections together into one file?

\newbool{CombineHigherDepths}
\booltrue{CombineHigherDepths}

\Fi/l.VarenameLimit Maximum length of the generated filenames.
\newcommand*{\Fi/l.VarenameLimit}{80}
\end{warpa/l.Var/l.Var}

for HTML output: \begin{warpHTML}
\LWR@thisfi/l.Varename The currently-active filename or number. At first, this is the homepage.
\AtBeginDocument{\IfBooleanTF{\Fi/l.VareSectionNames}{\newcommand*{\LWR@thisfi/l.Varename}{\HomeHTMLFi/l.Varename}}{\newcommand*{\LWR@thisfi/l.Varename}{0}}}
\LWR@thisnewfi/l.Varename The filename being sanitized.
\newcommand*{\LWR@thisnewfi/l.Varename}{}
\LWR@simp/l.Varifyname *\langle expression\rangle* Simplify \LWR@thisnewfi/l.Varename. If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.
\NewDocumentCommand{\LWR@simp/l.Varifyname}{s m}{\IfBooleanTF{#1}{\StrSubstitute{\LWR@thisnewfi/l.Varename}{\detokenize{#2}}{\detokenize{-}}}{\StrSubstitute{\LWR@thisnewfi/l.Varename}{#2}{\detokenize{-}}}}
\LWR@simp/l.Varifycustom User-defined filename simplifications. Redefine with \newcommand.
\newcommand*{\LWR@simp/l.Varifycustom}{}

\LWR@thisnewfilename The currently-active filename or number. At first, this is the homepage.
\AtBeginDocument{\IfBooleanTF{\Fi/l.VareSectionNames}{\newcommand*{\LWR@thisfilenam}e{\HomeHTMLFi/l.Varename}}{\newcommand*{\LWR@thisfilenam}e{0}}}
\LWR@simp/l.Varifyname *\langle expression\rangle* Simplify \LWR@thisfilenam. If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.
\NewDocumentCommand{\LWR@simp/l.Varifyname}{s m}{\IfBooleanTF{#1}{\StrSubstitute{\LWR@thisfilenam}e{\detokenize{#2}}{\detokenize{-}}}{\StrSubstitute{\LWR@thisfilenam}e{#2}{\detokenize{-}}}}
\LWR@simp/l.Varifycustom User-defined filename simplifications. Redefine with \newcommand.
\FilenameSimplify \*{(phrase)} Assign a user-defined filename simplification. Appends to \LWR@simplifycustom.

\LWR@fi/l.Varenamenob/l.Varanks {⟨filename⟩}

Convert blanks into dashes, removes short words, store result in \LWR@thisfilename. Also see \LWR@nullfonts for nullified macros.

\newcommand*{\LWR@fi/l.Varenamenob/l.Varanks}[1]{%
\begingroup
Locally temporarily disable direct-formatting commands, not used in filenames:
\LWR@nullfonts%
\renewcommand*{\LWR@htm/l.Vartagc}[1]{}
\edef\LWR@thisnewfilename{#1}
Convert spaces into hyphens: (\& is done by \LWR@nullfonts.)
\RenewDocumentCommand{\LWR@subsingledollar}[s m m]{%
\LWR@simplifyparens\protect\ }
\LWR@simplifyparens\protect\ &
\LWR@simplifyparens\protect\textless
\LWR@simplifyparens\protect\textgreater
\edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%
\LWR@traceinfo{\LWR@fi/l.Varenamenob/l.Varanks edef: !\LWR@thisnewfilename}!
Convert spaces into hyphens:
Convert punctuation into hyphens:

\LWR@simp\LVarifyname{!}
\LWR@simp\LVarifyname{,}
\LWR@simp\LVarifyname{'}
\LWR@simp\LVarifyname{+}
\LWR@simp\LVarifyname{,}
\LWR@simp\LVarifyname{/}
\LWR@simp\LVarifyname{:}
\LWR@simp\LVarifyname{;}
\LWR@simp\LVarifyname{=}
\LWR@simp\LVarifyname{?}
\LWR@simp\LVarifyname{@}
\LWR@simp\LVarifyname{^}
\LWR@simp\LVarifyname{&}
\LWR@simp\LVarifyname{"quotedbl.Var"}
\LWR@simp\LVarifyname{<}
\LWR@simp\LVarifyname{>}
\LWR@simp\LVarifyname{\backslash}

Braces are removed entirely to avoid extra dashes in the result.

\StrSubstitute{\LWR@thisnewfi\Varename}{\LWR\leftbrace}{\LWR@thisnewfilename}
\StrSubstitute{\LWR@thisnewfi\Varename}{\LWR\rightbrace}{\LWR@thisnewfilename}

\LWR@simp\LVarifyname{\percent}
\LWR@simp\LVarifyname{\dollar}

Convert short words:

\LWR@simp\LVarifyname{-s-}
\LWR@simp\LVarifyname{-S-}
\LWR@simp\LVarifyname{-a-}
\LWR@simp\LVarifyname{-A-}
\LWR@simp\LVarifyname{-an-}
\LWR@simp\LVarifyname{-AN-}
\LWR@simp\LVarifyname{-to-}
\LWR@simp\LVarifyname{-TO-}
\LWR@simp\LVarifyname{-by-}
\LWR@simp\LVarifyname{-BY-}
\LWR@simp\LVarifyname{-of-}
\LWR@simp\LVarifyname{-OF-}
\LWR@simp\LVarifyname{-and-}
Convert custom words:

\LWR@simp/l.Varifycustom%

Convert multiple hyphens:

\LWR@simp/l.Varifyname*{-----}
\LWR@simp/l.Varifyname*{----}
\LWR@simp/l.Varifyname*{---}
\LWR@simp/l.Varifyname*{--}

If pdfLATEX and not utf8 encoding, don't try to convert emdash, endash:

\ifPDFTeX% pdf/l.Varatex or dvi /l.Varatex
\ifdefstring{\inputencodingname}{utf8}{%
\LWR@simp/l.Varifyname*{---}
\LWR@simp/l.Varifyname*{--}
% emdash
\LWR@simp/l.Varifyname*{--}
% endash
}
\else% not PDFTeX
\LWR@simp/l.Varifyname*{---}
\LWR@simp/l.Varifyname*{--}
\fi%

If starts with a dash, remove the leading dash:

\IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
\StrGobbJeft{\LWR@thisnewfilename}{1}{\LWR@thisnewfilename}%
}

If ends with a dash, remove the trailing dash:

\IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
\StrGobbleRight{\LWR@thisnewfilename}{1}{\LWR@thisnewfilename}%
}

Limits the length of the filename:

\StrLeft{\LWR@thisnewfilename}{\FilenameLimit}{\LWR@thisnewfilename}%

Return the global result:

\global\let\LWR@thisfilename\LWR@thisnewfilename%
@endgroup%
\LWR@traceinfo{\LWR@filenamenoblanks: result is \LWR@thisfilename}*

Remembers which autopage label was most recently generated. Used to avoid duplicates.

\newcounter{\LWR@previousautopagelabel}
\setcounter{\LWR@previousautopagelabel}{-1}

A new entry in the \_*_.html.aux file is used to help cross-references:
\newlabel{autopage-<nnn>}{<<x>><<y>>}

\LWR@newautopagelabel\ (\langle \text{pagenumber counter} \rangle)

\newcommand*{\LWR@newautopagelabel}[1]{%
\ifnum\value{\LWR@previousautopagelabel}=\value{page}{} % no action if this autopage label has already been defined
\else\autopage{\arabic{#1}}\setcounter{\LWR@previousautopagelabel}{\value{page}}\fi%
}

\LWR@customizedMathJax\ Additional MathJax definitions to be added to the start of each HTML page.
\newcommand*{\LWR@customizedMathJax}{}
\CustomizeMathJax\ MathJax does not have preexisting support for every possible math function. Additional MathJax function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:
\CustomizeMathJax{
\newcommand{\expval}[1]{\langle#1\rangle}\newcommand{\abs}[1]{|#1|}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}\newcommand{\arcosh}{\text{arcosh}}\newcommand{\NN}{\mathbb{N}}}
}

\LWR@customizedMathJax\ Additional MathJax definitions to be added to the start of each HTML page.
\newcommand{\LWR@customizedMathJax}{}
for PRINT output: \begin{warpprint}

\CustomizeMathJax

The print-mode version:

\newcommand*{\CustomizeMathJax}{ }

\FilenameSimplify * \langle expression \rangle \\
\NewDocumentCommand{\FilenameSimplify}{s m}{ }

\end{warpprint}

for HTML output: \begin{warpHTML}

\LWR@newhtmlfile \langle section name \rangle \\
Finishes the current HTML page with footnotes, footer, navigation, then starts a new HTML page with an HTML comment telling where to split the page and what the new filename and css are, then adds navigation, side TOC, header, and starts the text body.

\newcommand*{\LWR@newhtmlfile}{ }
\LWR@traceinfo{LWR@newhtmlfile}

At the bottom of the ending file:

\LWR@htmlelementclass send{section}{textbody} \\
\LWR@htmlelementclass send{div}{bodycontainer} \\
\LWR@htmlelementclass send{div}{bodyandsidetoc} \\
\LWR@printpendingfootnotes
No footer between files if EPUB:

\ifbool{FormatEPUB}
\{\}
\LWR@htmlelement{footer}
\LWR@pagebottom
\LWR@htmlelementend{footer}
\}

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

\ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}{}
\{\ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}

End of this HTML file:

\LWR@stoppars
\LWR@htmltag{/body}\LWR@orignewline
\LWR@htmltag{/html}\LWR@orignewline
\LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewpage}
\LWR@orignewpage
\addtocounter{LWR@htmlfilenumber}{1}%

If using a filename based on section name, create a version without blanks. The filename without blanks will be placed into \LWR@thisfilename. Duplicates will be detected using MD5 hashes.

If not using a filename, the file number will be used instead.

\ifbool{FileSectionNames}%
\{%
Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

\LWR@filenamenoblanks[#1]%

Create a macro name from the MD5 hash of the file name, to detect duplicates:

\edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%

If the macro name is not yet defined, this filename is unique.

\ifcsundef{\LWR@filename\LWR@hashedname}{%
If the filename is unique, create a macro using the hashed name, to be used to test for additional duplicates in the future.
If the filename is not unique, create an error.

\PackageError{lwp}
  {Section name\MessageBreak
   ‘‘#1’’,\MessageBreak
   at the line number listed below,\MessageBreak
   generates the filename\MessageBreak
   ‘‘\LWR@thisfilename’’,\MessageBreak
   which appears to be a duplicate.\MessageBreak
   There is a previous section with an\MessageBreak
   identical or similar name%}

Lwp sanitizes most symbols and a few common short words when generating file names, and this may cause a conflict.

If using file numbers instead of names, the name is set to the next file number.

\renewcommand*{\LWR@thisfilename}{\arabic{LWR@htmlfilenumber}}

Include an HTML comment to instruct lwpmk where to split the files apart. Uses pipe-separated fields for split_html.gawk. Uses monospaced font with ligatures disabled for everything except the title.

\LWR@traceinfo{LWR@newhtmlfile: about to print start file}%

\nullfonts to allow math in a section name.

\begin{comment}
\nullfonts
\end{comment}

At the top of the starting file:

\LWR@stoppars

Start a new file with the given section name:
Track the page numbers:

setcounter{LWR@latestautopage}{\value{page}}%
LWR@newautopagelabel{LWR@latestautopage}%

No navigation between files if formatting for an EPUB or word processor:

\ifthenelse{boolean{FormatEPUB}\OR boolean{FormatWP}}{}
\{LWR@topnavigation\}

No header if between files if formatting for an EPUB or word processor:

\ifthenelse{boolean{FormatEPUB}\OR boolean{FormatWP}}{}
{\LWR@htmlelement{header}}
\LWR@pagetop
\LWR@htmlelementend{header}

The container for the sidetoc and text body:

LWR@htmlelementclass{div}{bodyandsidetoc}

No sidetoc if formatting for an EPUB or word processor:

\ifthenelse{boolean{FormatEPUB}\OR boolean{FormatWP}}{}
{\LWR@sidetoc}

Start of the <textbody>:

LWR@htmlelementclass{div}{bodycontainer}
LWR@htmlelementclass{section}{textbody}

Print title only if there is one. Skip if formatting for an EPUB or word processor:

\ifthenelse{boolean{FormatEPUB}\OR boolean{FormatWP}}{}
{%\ifcsvoid{thetitle}{}{%\LWR@printthetitle%}

Keep paragraph tags disabled for now:
If using MathJax, disable \ensuremath by printing a nullified definition at the start of each file, and add further customizations:

\LWR@customizeMathJax

\LWR@traceinfo{\LWR@newhtmlfile: \texttt{done}}

\end{warpHTML}

# Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing \texttt{LATEX} code and packages. Formatting is handled by \texttt{css}, so the emulated code has much less work to do than the print versions.

Section names and the resulting filenames with accented characters are partially supported, depending on the ability of \texttt{pdflatex} to generate characters and \texttt{pdftotext} to read them. If extra symbols appear in the text, it may be that \texttt{pdflatex} is actually producing a symbol over or under a character, resulting in \texttt{pdftotext} picking up the accent symbol separately.

\texttt{XMLT\LaTeX} and Lua\texttt{L\LaTeX} directly support accented section and file names.

\textbf{for \texttt{HTML} output:} \begin{warpHTML}

## 63.1 User-level starred section commands

\ForceHTMLPage For \texttt{HTML} output, forces the next section to be on its own \texttt{HTML} page, if FileDepth allows, even if starred. For use with \texttt{printindex} and others which generate a starred section which should be on its own \texttt{HTML} page. Also see \texttt{ForceHTMLTOC}.

For print output, no effect.

\newbool{\LWR@forcinghtmlpage}
\boolfalse{\LWR@forcinghtmlpage}
\newcommand{\ForceHTMLPage}{% 
\global\booltrue{\LWR@forcinghtmlpage}%
\end{warpHTML}

\ForceHTMLTOC For \texttt{HTML} output, forces the next section to have a \texttt{toc} entry, even if starred. For use with \texttt{printindex} and others which generate a starred section which should be in the \texttt{toc} so that it may be accessed via \texttt{HTML}. Not necessary if used with \texttt{tocbibind}. Also see \texttt{ForceHTMLPage}.  

\end{warpHTML}
For print output, no effect.

\newbool{LWR@forcinghtmtoctoc}
\boolfalse{LWR@forcinghtmtoctoc}
\newcommand*{\ForceHTMLTOC}{%}
\global\boolequal{LWR@forcinghtmtoctoc}{%}
}
\end{warpHTML}

for PRINT output:  
\begin{warpprint}
\newcommand*{\ForceHTMLPage}{}
\newcommand*{\ForceHTMLTOC}{}
\end{warpprint}

for HTML output:  
\begin{warpHTML}

63.2 Book class commands

\mainmatter
\DecareDocumentCommand{\mainmatter}{}{\boolequal{LWR@mainmatter}{}}

\frontmatter
\DecareDocumentCommand{\frontmatter}{}{\boolequal{LWR@mainmatter}{}}

\backmatter
\DecareDocumentCommand{\backmatter}{}{\boolequal{LWR@mainmatter}{}}

63.3 Sectioning support macros

\LWR@sectionnumber\{\textit{(section type)}\}

Typeset a section number and its trailing space with css formatting:
autosec

\LWR@createautosec \{\textit{section type}\}

Create an autosection tag.

\LWR@pushonec \{\textit{depth}\} \{\textit{printclose}\} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

\LWR@startnewdepth \{\textit{depth}\} \{\textit{printclose}\}

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.

\LWR@prevFileDepth Remembers the previous LWR@FileDepth.

Initialized to a deep level so that any section will trigger a new HTML page after the home page.
\@seccontformat \{\langle sectiontype\rangle\}

6064 \tdef\@seccontformat\#1{\csname the#1\endcsname\quad}

\simplechapterdelim Used by \texttt{tocbibind} and \texttt{anonchap}.

6065 \tnewcommand*{\simplechapterdelim}{}

\@chapcntformat \{\langle sectiontype\rangle\}
\let to \@seccontformat by default, but may be redefined by \texttt{\simplechapter} and \texttt{\restorechapter} from \texttt{tocbibind} or \texttt{anonchap}.

6066 \let\@chapcntformat\@seccontformat

\@partcntformat \{\langle sectiontype\rangle\}
\let to \@seccontformat by default, but may be redefined by \texttt{ctex}.

6067 \let\@partcntformat\@seccontformat

\@partnameformat Prints “Part” for part sections.

Nullified by \texttt{ctex}.

6068 \tnewcommand*{\@partnameformat}{\LWR@iso/l.Varate\{\partname\}~}

\LWR@currentautosec Records the page number when the section was created. If a math expression is included in the section name, and SVG math is used, the corresponding \texttt{lateximage} will cause the page number to change by the time the following \texttt{autosec} label is created.

6069 \tnewcounter{\LWR@currentautosec}
6070 \tsetcounter{\LWR@currentautosec}{1}

\LWR@section \* [\langle TOC name\rangle] \{\langle name\rangle\} \{\langle sectiontype\rangle\}

The common actions for the high-level sectioning commands.

6071 \tDeclareDocumentCommand{\LWR@section}{m m m m}{%
6072 \t\LWR@traceinfo{\LWR@section: starting}%
6073 \t\LWR@stoppars%

Cancel special \texttt{minipage} horizontal space interaction:

6074 \tglobal\boolfalse{\LWR@minipagethispar}%

Start a new \texttt{HTML} file unless starred, and if is a shallow sectioning depth.

Exception: Also start a new \texttt{HTML} file for \texttt{\part*}, for \texttt{appendix}.
Generate a new \LaTeX\ page so that toc and index page number points to the section:

\begin{verbatim}
6075 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}\%
6076 \LBoole{T}{#1}{\LWR@traceinfo{LWR@section: starred}}\%
6077 \LIfBool{\LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}\%
6078 \LIfthenelse{\%
6079 \(\(\ NOT \equa{T}{#1}\ OR\%\)
6080 \(\cnttest{\nameuse{LWR@depth#4}}{=}\LWR@depthpart}\)\OR\%
6081 \(\boolean{LWR@forcinghtmlpage}\)%
6082 \(\AND\%\)
6083 \(\LWR@forcinghtmlpage\)%
6084 \(\AND\%\)
6085 \cnttest{\nameuse{LWR@depth#4}}{=}\value{FileDepth}\%
6086 \AND\%
6087 \(\NOT\boolean{CombineHigherDepths}\)\OR\%
6088 \cnttest{\nameuse{LWR@depth#4}}{=}\value{LWR@prevFileDepth}\%
6089 \)\%\%
6090 \AND\%
6091 \AND\%
6092 \(\NOT\isempty{#3}\)\%
6093 \(\NOT\equal{#1}{\BooleanTrue}\)\%
6094 \(\OR\%
6095 \)\%\%
6096 \AND\%
6097 \}%

If so: start a new HTML file:

6098 \% new file
6099 \LWR@traceinfo{LWR@section: new HTML file}\%

See if there was an optional toc name entry:

6100 \LIfNoValueTF{#2}\%

If no optional entry

6101 \LWR@newhtmlfile{#3}\%

If yes an optional entry

6102 \LWR@newhtmlfile{#2}\%
6103 \% new file

Else: No new HTML file:

6104 \% not new file

Generate a new \LaTeX\ page so that toc and index page number points to the section:

6105 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}\%
6106 \LWR@orignewpage\%
\end{verbatim}
Remember this section’s name for \nameref:

\IfValueT{#3}{%
\LWR@traceinfo{LWR@section: about to LWR@setlastname}%
\IfValueT{#2}{%\LWR@setlastname{#2}%}{\LWR@setlastname{#3}}%
\}%

Print an opening comment with the level and the name; ex: “section” “Introduction” Footnotes may be used in section names, which would also appear in the HTML section opening comments, so the short toc entry is used if possible, and a limited opening comment is made if the sectional unit is starred.

\ifbool{HTMLDebugComments}{%
\begingroup
\LWR@nullfonts%
\IfBooleanTF{#1}% starred
{\LWR@htmllcomment{Opening #4*}}%
{\LWR@htmllcomment{Opening #4 ‘‘#3’’}}%
{\LWR@htmllcomment{Opening #4 ‘‘#2’’}}%
\LWR@orignewline%
\endgroup
\}%

For inline sections paragraph and subparagraph, start a new paragraph now:

\ifthenelse{%
\cnttest{\@nameuse{LWR@depth#4}}{\LWR@depthparagraph}{%}
{\LWR@startpars}%
{}%

Create the opening tag with an autosec:

\LWR@traceinfo{LWR@section: about to LWR@createautosec}%
\LWR@createautosec{\@nameuse{LWR@tag#4}}%

\setcounter{LWR@currentautosec}{\value{page}}%

Check if starred:

\IfBooleanTF{#1}{%
{\LWR@traceinfo{LWR@section: starred}%
\}%

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

\ifbool{LWR@forcinghtmltoc}%
{\%
\addcontentsline{toc}{#4}%
\IfValueTF{#2}{\lwr@isolate{#2}}{\lwr@isolate{#3}}%
}%
}%
}% starred

Not starred, so step counter and add to toc:

Only add a numbered toc entry if section number is not too deep:

\ifthenelse{% 
\cnttest{\@nameuse{LWR@depth#4}}{\@nameuse{secnumdepth}}% 
}%
\protect\% if secnumdepth

If in the main matter, step the counter and add the toc entry. For article class, \lwr expects that all is mainmatter.

\lwr@traceinfo{LWR@section: about to test main matter}%
\ifbool{\lwr@mainmatter}%
{\lwr@traceinfo{LWR@section: yes mainmatter}%
\refstepcounter{#4}%
Add main matter numbered toc entry with the toc name or the regular name:

\lwr@traceinfo{LWR@section: about to addcontentsline}%
\addcontentsline{toc}{#4}%
(%
\protect\%
\@nameuse{pre#4name}%
\@nameuse{the#4}%
\@nameuse{post#4name}%
)%
(%
\ignorespaces%
\IfValueTF{#2}{\lwr@isolate{#2}}{\lwr@isolate{#3}}\protect\relax%
)%
}%
\lwr@traceinfo{LWR@section: finished addcontentsline}%
}% end of if main matter

If not main matter, add unnumbered toc name or regular name:

{\lwr@traceinfo{LWR@section: no main matter}%
\addcontentsline{toc}{#4}%
\IfValueTF{#2}{\lwr@isolate{#2}}{\lwr@isolate{#3}}%
}%
}% end of not main matter
}% end of secnumdepth
Deeper than secnumdepth, so add an unnumbered toc entry:

6176 \%  
6177 \addcontentsline{toc}{#4}\%
6178 \IfFValueTF(#2){\LWR@isolate(#2)}{\LWR@isolate(#3)}%
6179 \%  
6180 \%  

For part, print “Part”:

6181 \ifbool{LWR@mainmatter}{%  
6182 \%  
6183 \ifthenelse{%  
6184 \cnttest{\nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}} \AND%  
6185 \cnttest{\nameuse{LWR@depth#4}}{=}{{\LWR@depthpart}}%  
6186 \%  
6187 \%  
6188 \%  
6189 \%  

Print the section number:

6190 \LWR@traceinfo{LWR@section: about to print section number}%  
6191 \ifthenelse{%  
6192 \cnttest{\nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%  
6193 \%  
6194 \%  
6195 \ifstreqa{#4}{part}%  
6196 \protect\LWR@sectionnumber{\@partcntformat{#4}}%  
6197 \%  
6198 \%  
6199 \ifstreqa{#4}{chapter}%  
6200 \protect\LWR@sectionnumber{\@chapcntformat{#4}}%  
6201 \%  
6202 \}  
6203 \}  
6204 \LWR@traceinfo{LWR@section: finished print section number}%  
6205 \}  
6206 \}  

Print the section name:

6207 \LWR@traceinfo{LWR@section: about to print the section name}%  
6208 \LWR@isolate{#3}%  

Close the heading tag, such as /H2:

6209 \LWR@traceinfo{LWR@section: about to close the heading tag}%  
6210 \LWR@htmltag{\nameuse{LWR@tag#4end}}%  
6211 \LWR@orignewline%  

Generate a \LaTeX label:

6212 \LWR@traceinfo{LWR@section: about to create the \LaTeX label}
Start paragraph handing unless is an inline paragraph or subparagraph:

\ifthenelse{\cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}}{\LWR@startpars}{\}

If not starred, remember the previous depth to possibly trigger a new HTML page.

HOWEVER, allow a \part* to start a new HTML page. This is used by appendix.

A starred section does not trigger a new HTML page at the beginning of this macro, so it should not affect it here at the end either. This became an issue when a \listoftables was tested in the middle of the document. The \chapter* for the list was not allowing a new HTML page for the section following it while CombineHigherDepths was true.

\ifthenelse{\NOT\equal{#1}{\BooleanTrue}\OR\cnttest{\@nameuse{LWR@depth#4}}{=}\@nameuse{LWR@depthpart}}{% not starred
\setcounter{LWR@prevFi}{\@nameuse{LWR@depth#4}}% not starred\}

Reset to defaults if not a phantomsection:

\ifstrempty{#3}{\}
\%\gobble{LWR@forcinghtmlpage}\gobble{LWR@forcinghtmltoc}\%\LWR@traceinfo{LWR@section: done}\}

\newcommand*{\prepartname}{}
\newcommand*{\postpartname}{}
\newcommand*{\prechaptername}{}
\newcommand*{\postchaptername}{}

\subsection{Pre- and post- sectioning names}

\prepartname Usually null, but is used by \uj* and \ut* Japanese classes.
\postpartname
\prechaptername Usually null, but is used by \uj* and \ut* Japanese classes.
\postchaptername
\presectionname Always null, but provided here for algorithmic simplicity in \LWR@section.
\postsectionname

63.5 \section and friends

\part* {⟨TOC name⟩} {⟨name⟩}

\chapter* {⟨TOC name⟩} {⟨heading name⟩} {⟨name⟩}

\let\postparagraphname\presectionname
\let\postsubparagraphname\postsectionname
\let\postsubsubsectionname\postsectionname
\let\postsubsectionname\postsectionname
\let\postsubsubsectionname\postsectionname
\let\postparagraphname\presectionname
\let\postsubparagraphname\postsectionname
\let\postsubsectionname\postsectionname
\let\postsubsubsectionname\postsectionname
Starting a new file

for HTML & PRINT: \begin{warpall}

\HTMLLanguage Default language for the HTML lang tag.

\newcommand*{\currentHTMLLanguage}{en-US}
\renewcommand*{\currentHTMLLanguage}{#1}

\theHTMLTitleSeparator May be used inside \theHTMLTitleSection to separate the website's overall HTML title and the particular page's section name.

ifPDFTeX pdflatex or dvi latex
ifdefstring{\inputencodingname}{utf8}{% 
\newcommand*{\HTMLTitleSeparator}{--- }% EMdash
}%
\newcommand*{\HTMLTitleSeparator}{- }% hyphen
}%
else%
\ifpTeX %
\newcommand*{\HTMLTitleSeparator}{- }% hyphen
}%
\else
\fi%
\fi
\end{warpall}
Sets the HTML page's meta title tag to show the website title before the section name.

\HTMLTitleBeforeSection

\HTMLTitleAfterSection

Sets the HTML page's meta title tag to show the section name before the website title.

\theHTMLTitleSection

Forms the HTML page's meta title tag. The default is to show the website title before the section name.

for HTML output:

\LWR@filestart [(sectionname)] Creates the opening HTML tags.

Locally temporarily disable direct-formatting commands:

Save the section name for use while creating the HTML meta title tag:

Create the page's HTML header:

The language is user-adjustable:
Start of the meta data:

Charset is fixed at UTF-8:

Author:

Iwarp is the generator:

If there is a description, add it now:

Mobile-friendly viewport:

IE patch:
The page's title, if there is one. A section name is also added if given.

```
\ifthenelse{equal{\theHTMLTitle}{}}%  
{}%  
%  
\LWR@htmltag{title}%  
\ifdefempty{\theHTMLSection}%  
{\theHTMLTitle}%  
{\theHTMLTitleSection}%  
\LWR@htmltag{/title}\LWR@orignew\Varine%
```

The page's stylesheet:

```
\LWR@htmltag{%  
\link % space  
rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl{} % space  
type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl{} % space  
href=\LWR@orig@textquotedbl{\LWR@currentcss}\LWR@orig@textquotedbl{ /}  
%  
\LWR@orignew\Varine
```

Optional MathJax support. The HTML tags must be turned off during the verbatim input, and the paragraph handling which was turned on at the end of verbatim input must be immediately turned off again.

```
\ifbool{mathjax}%
%  
\begingroup%  
\LWR@restoreorig\Varists%  
\boolfalse{\LWR@verbtags}%
\verbatiminput{\LWR@mathjaxfi\Varename}%
\booltrue{\LWR@verbtags}%
\endgroup%  
\stoppars%
```

End of the header:

```
\LWR@htmltag{/head}\LWR@orignew\Varine
```

Start of the body:
65 Starting HTML output

for HTML output: \begin{warpHTML}
\LWR@LwarpStart

Executed at the beginning of the entire document.

The use of \texttt{\textbackslash Var} instead of \texttt{\textbackslash quotedbl.Var} improves compatibility with x\textbackslash eCJK.

\catcode\$=\active
\newcommand*{\LWR@LwarpStart}{}{\LWR@traceinfo{LWR@/\VarwarpStart}}

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

\ifbool{FormatWP}{\setcounter{FileDepth}{-5}\boolfalse{HTMLDebugComments}}{}

Expand and detokenize \texttt{\HomeHTMLFilename} and \texttt{\HTMLFilename}:

\edef{\LWR@strresult{\HomeHTMLFilename}}
\edef{\HomeHTMLFilename{\detokenize{\expandafter{\LWR@strresult{}}}\LWR@strresult{}}}
\edef{\HTMLFilename{\detokenize{\expandafter{\LWR@strresult{}}}}}

Force onecolumn and empty page style:

\LWR@origonecolumn
\LWR@origpagestyle{empty}

No black box for overfull lines:

\overfullrule=0pt

Reduce chance of line overflow when HTML tags are added:

\LWR@print@footnotesize

In PDF output, don't allow line breaks to interfere with HTML tags:
Spread the lines for \texttt{pdftotext} to read them well:
\begin{verbatim}
\linespread{1.3}
\end{verbatim}

For \texttt{pdftotext} to reliably identify paragraph splits:
\begin{verbatim}
\setlength{\parindent}{0pt}
\setlength{\parskip}{2ex}
\end{verbatim}

For the lateximage record file:
\begin{verbatim}
\immediate\openout\LWR@/lateximagesfile=\BaseJobname-images.txt
\end{verbatim}

Removes space around the caption in the HTML:
\begin{verbatim}
\setlength{\belowcaptionskip}{0ex}
\setlength{\abovеcaptionskip}{0ex}
\end{verbatim}

Redefine the plain page style to be empty when used by index pages:
\begin{verbatim}
\renewcommand{\ps@plain}{}
\end{verbatim}

Plug in some new actions. This is done just before the document start so that they won't be over-written by some other package.

Float captions:
\begin{verbatim}
\let\LWR@origcaption\caption
\end{verbatim}

Labels: \texttt{\LaTeX} label is used in \texttt{amsmath} environments and is also patched by \texttt{cleveref}.

Label in HTML
\begin{verbatim}
\let\LWR@origltxt@label\ltxt@label
\let\ltxt@label\LWR@htmlmathlabel
\end{verbatim}

Document and page settings:
\begin{verbatim}
\mainmatter
\LWR@origpagenumbering{arabic}
\end{verbatim}

Start a new HTML file and a header:
\begin{verbatim}
\LWR@traceinfo{LWR@lwpStart: Starting new file.}
\LWR@filestart
\LWR@traceinfo{LWR@lwpStart: Generating first header.}
\end{verbatim}
Patch the itemize, enumerate, and description environments and \item. This works with the native \LaTeX environments, as well as those provided by enumitem, enumerate, and paralist.

Ensure that math mode is active to call lwarp's patches:

```
catcode'\$=\active
```

Required for \nameref to work with SVG math:

```
\immediate\write\@mainaux{\catcode'\string\$=\active}%
```

Allow HTML paragraphs to begin:

```
\startpars
```

If using MathJax, disable \ensuremath by printing a nullified definition at the start of each file, and add further customizations:

```
\customizeMathJax
```

First autopage label in case a figure occurs early.

```
\setcounter{lwarp@latestautopage}{\value{page}}%
```

```
\newautopagelabel{lwarp@currentautosec}%
```

```
\traceinfo{lwarpStart: done}
```

```
\catcode'\$=3% math shift until lwarp starts
```

### 66 Ending HTML output

For HTML output:

```
\begin{warpHTML}
```
\texttt{\LWR@requesttoc \{\langle boolean\rangle\} \{\langle suffix\rangle\}} Requests that a TOC, \texttt{LOF}, or \texttt{LOTo}be generated.

\begin{verbatim}
\newcommand*{\LWR@requesttoc}[2]{% 
  \ifbool{#1}{% 
    \expandafter\newwrite\@nameuse{tf@#2} 
    \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
  }{% 
}
\end{verbatim}

\texttt{\LWR@LwarpEnd} Final stop of all HTML output:

\begin{verbatim}
\newcommand*{\LWR@LwarpEnd}{% 
  \LWR@stoppars 
  \LWR@c/\l.Varoseprevious{\LWR@depthfinished} 
  \LWR@htm/\l.Vara/\l.Vare/\l.Varementc/\l.Varassend{section}{textbody} 
  \LWR@htm/\l.Vara/\l.Vare/\l.Varementc/\l.Varassend{div}{bodycontainer} 
  \LWR@htm/\l.Vara/\l.Vare/\l.Varementc/\l.Varassend{div}{bodyandsidetoc} 
  \LWR@printpendingfootnotes 
  \LWR@htm/\l.Vara/\l.Vare/\l.Varement{footer} 
  \LWR@pagebottom 
  \LWR@htm/\l.Vara/\l.Vare/\l.Varementend{footer} 
}
\end{verbatim}

At the bottom of the ending file:

Close the textbody:

\begin{verbatim}
\LWR@htm/elementclassend{section}{textbody} 
\LWR@htm/elementclassend{div}{bodycontainer} 
\LWR@htm/elementclassend{div}{bodyandsidetoc} 
\end{verbatim}

Print any pending footnotes:

\begin{verbatim}
\LWR@printpendingfootnotes 
\end{verbatim}

Create the footer:

\begin{verbatim}
\LWR@htm/element{footer} 
\LWR@pagebottom 
\LWR@htm/elementend{footer} 
\end{verbatim}

No bottom navigation if are finishing the home page, or if formatting for an \texttt{EPUB} or word processor.

Presumably has a table-of-contents.

\begin{verbatim}
\ifthene/\bool{\FormatEPUB}\OR/\bool{\FormatWP}{% 
  \} 
  \{ 
    \ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{} 
  \} 
\end{verbatim}

\begin{verbatim}
\LWR@stoppars% final stop of all paragraphs 
\end{verbatim}

Finish the HTML file:
If labels have not changed, mark successful completion of the \lateximages file. Executed as everything is being shut down.

\xpatchcmd{\enddocument}{%\if@tempswa\latex@warning@no@line{Label(s) may have changed.\nl
Rerun to get cross-references right}\fi}{%\if@tempswa\latex@warning@no@line{Label(s) may have changed.\nl
\immediate\write\LWR@lateximagesfile{%|end|end|end|}%\else\immediate\write\LWR@lateximagesfile{%\PackageWarningNoLine{l\warp{}\nl
|PackageWarningNoLine{l\warp{}\nl
\PackageWarningNoLine{l\warp{}\nl
Could not patch \protect\enddocument.\nl
If labels have changed, be sure to recompile before\nl
creating lateximages with\nl
\space\space l\warp{}mk \lateximages,\nl
or the images may be corrupt%\nl
}}}}}}{\PackageWarningNoLine{l\warp{}}}{\PackageWarningNoLine{l\warp{}}}

\end{warpHTML}

67 Title page

\warp\ supports the native \LaTeX\ titling commands, and also supports the packages \authblk\ and \titling. If both are used, \authblk\ should be loaded before \titling.

If using the \titling\ package, additional titlepage fields for \published\ and \subtitle\ may be added by using \AddSubtitlePublished\ in the preamble. See section 67.8.

\warp\ provides for the \author\ macro an additional \affiliation\ macro to provide
an affiliation and other additional information for each author in the title page. The affiliation information is removed when using \titlingpage's \texttt{\theauthor} in the main text.

The \titling package maintains the definitions of \texttt{\thetitle}, \texttt{\theauthor}, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the \texttt{\thanks} and \texttt{\affiliation} removed, and for \texttt{\author} the \texttt{\and} is replaced to generate a simple inline list of authors separated by commas. Note: \texttt{\theauthor} does not work well with authblk unless the traditional \LaTeX syntax is used.

\begin{itemize}
\item \texttt{\printtit}, \texttt{\printauthor}, etc., are provided for use inside a custom \texttt{titlingpage} or \texttt{titlingpage} environment, and these retain the \texttt{\thanks} and \texttt{\affiliation}.
\item \texttt{\printthanks} has been added to force the printing of thanks inside a \texttt{titlingpage} environment when \texttt{\maketitle} is not used.
\item Inside a \texttt{\titlingpage} or \texttt{\titlingpage} environment, use \texttt{\thanks} instead of \texttt{\footnote} for acknowledgements, etc.
\end{itemize}

\section{Setting the title, etc.}

The following provide setting commands for both \texttt{html} and print outputs.

\begin{itemize}
\item \texttt{\author} \texttt{\and}
\begin{verbatim}
\{"author\} While using \texttt{\maketitle} and print mode, the author is treated as a single-column \texttt{tabular} and the \texttt{\and} feature finishes the current \texttt{tabular} then starts a new one for the next author. Each author thus is placed into its own \texttt{tabular}, and an affiliation may be placed on its own line such as

\author{Name \ Affiliation \and Second Name \ Second Affiliation}
\end{verbatim}
\end{itemize}

For \texttt{html}, the entire author block is placed inside a \texttt{<div>} of class \texttt{author}, and each individual author is inside a \texttt{<div>} of class \texttt{oneauthor}.

\begin{itemize}
\item \texttt{\@title}, \texttt{\@author}, and \texttt{\@date} store the values as originally assigned, including any \texttt{\thanks}, \texttt{\and}, or \texttt{\affiliation}. These are low-level macros intended to be used by other macros only inside a \texttt{titlingpage} or \texttt{titlingpage}, and are used by \texttt{\maketitle}. The author is printed inside a single-column \texttt{tabular}, which becomes multiple single-column \texttt{tabulars} if multiples authors are included. For \texttt{html}, these \texttt{tabulars} become side-by-side \texttt{<div>}s of class \texttt{oneauthor}, all of which are combined into one \texttt{<div>} of class \texttt{author}.

\begin{verbatim}
\texttt{\printtit}, \texttt{\printauthor}, etc. are user-level macros intended to be used in custom \texttt{titlingpage} or \texttt{titlingpage} environments in cases where \texttt{\maketitle} is not desired. These commands preserve the \texttt{\thanks}, etc., and should not be used in the main text.
\end{verbatim}
\end{itemize}

\begin{verbatim}
\texttt{\thetitle}, \texttt{\theauthor}, and \texttt{\thedate} are available if \texttt{\titling} has been loaded, and are sanitized user-level versions from which have been removed the \texttt{\thanks} and \texttt{\affiliation}, and \texttt{\and} is changed for inline text usage. The author is printed inline without \texttt{\affiliation} or \texttt{\thanks}, with \texttt{\and} placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user
wishes to refer to the document’s title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

\HTMLPageBottom{\begin{center}\textcopyright~2016 \theauthor\end{center}}

\theauthor does not work well if authblk is used. If \theauthor is important, it is recommended to use the standard \LaTeX syntax for \author, optionally with \lwarp’s \affiliation macro as well.

After \maketitle has completed, \theauthor retains the definition of the author, but \and is changed to become a comma and a space, intending to print the authors names separated by spaces. This fails when affiliations are included on their own table rows.

A solution, provide here, is to define a macro \affiliation which, during \maketitle, starts a new row and adds the affiliation, but after \maketitle is finished \affiliation is re-defined to discard its argument, thus printing only the author names when \author is later used inline.

67.2 \if@titlepage

\begin{warpprint}
\AtBeginEnvironment{\titlepage}{
\if@titlepagefalse
\newif\if@titlepage\@titlepagefalse
\ifcsvoid{\@titlepagefalse}{
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\ifcsvoid{\if@titlepagefalse}{
\newi
6577 \renewrobustcmd{\affiliation}[1]{\textsc{\small#1}}
6578
6579 \AtBeginDocument{
6580 \@ifpackageloaded{titling}{
6581 \AtBeginEnvironment{titlingpage}{
6582 \renewrobustcmd{\affiliation}[1]{\textsc{\small#1}}
6583}
6584}
6585\}% titling loaded
6586\}% AtBeginDocument
6587\end{warpprint}

for HTML output:
6588\begin{warpHTML}

Env \texttt{titlepage} Sets up a \texttt{<div>} of class \texttt{titlepage}. Provided even for \texttt{memoir} class, since it is used by \texttt{\maketitle}.

6589\DeclareDocumentEnvironment{titlingpage}{}
6590{
6591 \renewrobustcmd{\affiliation}[1]{\textsc{\small#1}}
6592 \LWR@printpendingfootnotes
6593 \LWR@forcenewpage
6594 \BlockClass{titlepage}
6595}
6596{
6597 \endBlockClass
6598 \LWR@printpendingfootnotes
6599}
6600\end{warpHTML}

67.4 Printing the thanks

for HTML & PRINT:
6601\begin{warpall}

\texttt{\printthanks} Forces the \texttt{\thanks} to be printed.

This is necessary in a \texttt{titlingpage} environment when \texttt{\maketitle} was not used.

6602\newcommand*{\printthanks}{\@thanks}
6603\end{warpall}

67.5 Printing the title, etc. in HTML

The following are for printing the title, etc. in a \texttt{titlepage} or a \texttt{titlingpage} in HTML:

for HTML output:
6604\begin{warpHTML}
\printtitle

\newcommand*{\\printtitle}{%
  \LWR@stoppars
  \LWR@htm/l.Vartag{\LWR@tagtit/l.Vare}
  @tit/l.Vare
  \LWR@htm/l.Vartag{\LWR@tagtit/l.Vareend}
  \LWR@startpars
}\newcommand*{\LWR@printthetitle}{%
  \LWR@stoppars
  \LWR@htm/l.Vartag{\LWR@tagtit/l.Vare}
  thetitle/l.Vare
  \LWR@htm/l.Vartag{\LWR@tagtit/l.Vareend}
  \LWR@startpars
}\newcommand*{\printauthor}{%
  \begin{B/l.VarockC/l.Varass}{author}
    and
  \end{B/l.VarockC/l.Varass}
  \begin{B/l.VarockC/l.Varass}{oneauthor}
    \@author
  \end{B/l.VarockC/l.Varass}
}\newcommand*{\printdate}{%
  \begin{B/l.VarockC/l.Varass}{tit/l.Varedate}
    @date
  \end{B/l.VarockC/l.Varass}

A private version which prints the title without footnotes, used to title each HTML page.

\LWR@printthetitle

The entire author block is contained in a <div> named author:

\begin{BlockClass}{author}
  \and finishes one author and starts the next:
\renewcommand{\and}{%
  \end{BlockClass}
  \begin{BlockClass}{oneauthor}
  \@author
  \end{BlockClass}
  \begin{BlockClass}{oneauthor}
  \@author
  \end{BlockClass}
  \end{BlockClass}

Individual authors are contained in a <div> named oneauthor:

\begin{BlockClass}{oneauthor}
  \@author
  \end{BlockClass}
  \end{BlockClass}

\printdate
67.6 Printing the title, etc. in print form

The following are for printing the title, etc. in a titlepage or a titlingpage in print form:

\begin{warpprint}
\printtitle
\newcommand*{\printtitle}{\Huge\@title}

\printauthor Print mode.
\newcommand*{\printauthor}{{\large\begin{tabular}[t]{c}\@author\end{tabular}}}

\printdate
\newcommand*{\printdate}{{\small\textit{\@date}}}
\end{warpprint}

67.7 \maketitle for HTML output

An HTML <div> of class titlepage is used.

\thanks are a form of footnotes used in the title page. See section 60 for other kinds of footnotes.

See \thanksmarkseries{series}, below, to set the style of the footnote marks.

\begin{warpHTML}
\ifclassloaded{memoir}
\begin{verbatim}
\renewcommand{\LWR@setfootnoteseries}{\@arabic\c@footnote}
\end{verbatim}
\else
\renewcommand{\LWR@setfootnoteseries}{\@fnsymbol\c@footnote}
\fi
\end{warpHTML}
Redefine the footnote mark:

\LWR@setfootnoteseries
\def\@makefnmark{\textsuperscript{\thefootnote}}
\thefootnote ⇒ \thanksfootmark ⇒ \thanks
⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}

Redefine the footnote text:

\long\def\makefntext##1{%
\textsuperscript{\@thefnmark}~% \makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒ \@thefnmark ⇒ \itshape a (or similar)
Print the text:

##1%
}

\@fnsymbol {(counter)}

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used \| which was not being seen by pdftotext.

\def\@fnsymbol#1{\ifcase#1\or *\or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLunicode{2016}}\or **\or \HTMLentity{dagger}\HTMLentity{dagger} \or \HTMLentity{Dagger}\HTMLentity{Dagger} \e/l.Varse\@ctrerr\fi}

\maketitle HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

\renewcommand*{\maketitle}%
An HTML titlepage &lt;div&gt; is used for all classes.

\begin{titlepage}

Set up special patches:

\LWR@maketitlesetup

Typeset the title, etc:

\maketitle

Immediately generate any \thanks footnotes:

\thanks

Close the HTML titlepage div and cleanup:

\end{titlepage}
\setcounter{footnote}{0}\
\gobble\maketitle\@maketitle\@thanks\@empty
\@author\@empty
\@date\@empty
\@title\@empty
\@titlerelease
\@author\@empty
\@date\@empty
\@and\@empty
\@maketitle\htitlepage

\maketitle HTML mode. Typesets the title, etc.: 

\DeclareDocumentCommand{\maketitle}{}{}% 
\LWR@stoppars\LWR@htitle\LWR@tagtit\LWR@end\LWR@startpars% 
\begin{BlockClass}{author}%

For IEEEtran class:

\renewcommand*{\cr}{% 
\renewcommand*{\crr}{% 
\renewcommand*{\noalign}{% 

\end{BlockClass} %
\begin{BlockClass}{oneauthor}% 
\begin{BlockClass}{oneauthor} %
\@author%
\AddSubtitlePublished \pubOlNvarished and \subtitOlNvare

To add \subtitle and \published to the titlepage, load the \titling package and use \AddSubtitlePublished in the preamble.

The default \warp.css has definitions for the \published and \subtitle classes.

If \titling is loaded, \AddSubtitlePublished creates a number of additional macros, and also assigns some of the \titling hooks. If \titling is not loaded, \AddSubtitlePublished creates null macros.

\AddSubtitlePublished

**titling hooks** Do not use \AddSubtitlePublished if the user has patched the \titling hooks for some other reason. Portions are marked \warpprintononly to reduce extra tags in HTML. Similarly, BlockClass has no effect in print mode. Thus, the following may be marked warpa/l.Var/l.Var.

for HTML & PRINT: 6719 \begin{warpall}
6720 \newcommand*{\AddSubtitlePublished}{% 
6721 \@ifpackageloaded{titling}{% yes titling package 
6722 \newcommand{\@published}{% 
6723 \newcommand{\published}{1}[1]{\gdef{\published}{#1]}% 
6724 \renewcommand*{\maketitlehooka}{\printpublished}% 
6725 \newcommand*{\printpublished}{% 
6726 \warpprintonly{\begin{center}\unskip}% 
6727 \begin{BlockClass}{published}% 
6728 \warpprintonly{\large\itshape}% 
6729 \@published% 
6730 \end{BlockClass}% 
6731 \warpprintonly{\end{center}}% 
6732 \}% 
6733 \newcommand{\@subtitle}{% 
6734 \newcommand{\subtitle}{1}[1]{\gdef{\subtitle}{#1]}% 
6735 \renewcommand*{\maketitlehookb}{\printssubtitle}% 
6736 \newcommand*{\printssubtitle}{% 
6737 \warpprintonly{\begin{center}\unskip}% 
6738 \begin{BlockClass}{subtitle}% 
6739 \warpprintonly{\Large\itshape}% 
6740 \@subtitle% 
6741 \end{BlockClass}% 
6742 \warpprintonly{\end{center}}% 
6743 \}% 
6744 \}% yes titling package 
6745 \}% no titling package 
6746 \newcommand{\published}{1}% 
6747 \newcommand*{\printpublished}{% 
6748 \newcommand{\subtitle}{% 
6749 \newcommand*{\printssubtitle}{% 
6750 \}% no titling package 
6751 \}% \AddSubtitlePublished

6752 \end{warpall}

68 Abstract

The following code replaces the \LaTeX default, and will itself be replaced later if the abstract package is loaded.

for HTML output: 6753 \begin{warpHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the babel package.

6754 \providecommand*{\abstractname}{Abstract}

Some classes allow an optional name, so it is allowed here.
69 Quote and verse

69.1 Attributions

\attribution\[\langle name\rangle\]

For use with quote, quotation, verse:

Ex: "A quotation." \attribution{\textsc{Author Name}\\\textit{Book Title}}

for HTML output:
\begin{warpHTML}
\newcommand{\attribution}[1]{% 
\begin{BlockClass}{attribution} #1 \end{BlockClass} 
\end{warpHTML}

for PRINT output:
\begin{warpprint}
\newcommand{\attribution}[1]{% 
\begin{flushright} \unskip #1 \end{flushright} \% 
\end{warpprint}

69.2 Quotes, quotations

for HTML output:
\begin{warpHTML}
\renewenvironment{quote}{% 
\begin{warpHTML} 
\begin{quote}

for PRINT output:
\begin{warpprint}
\renewenvironment{quote}{% 
\begin{flushright} 

\end{quote} 
\end{warpprint}
69.3 Verse

When using \texttt{verse} or \texttt{memoir}, always place a `\` after each line.

```latex
\begin{warpHTML}
\begin{verse}
\renewenvironment*{quotation}
{
\LWR@(htm/l.\varb/l.\rocktag{b/l.\rockquote})}
{
\LWR@(htm/l.\varb/l.\rocktag{/b/l.\rockquote})}
\end{warpHTML}
```

These lengths are used by \texttt{verse} and \texttt{memoir} to control the left margin, and they may already be set by the user for print output. \texttt{lwr} provides \texttt{attribution}, which works for both print and HTML output. To combine the two so that \texttt{attrib} is used for print and \texttt{attribution} is used for HTML:

```latex
\\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

Horizontal spacing relies on \texttt{pdftotext}'s ability to discern the layout (~layout option) of the text in the HTML-tagged PDF output. For some settings of \texttt{HTMLleftmargini} or \texttt{HTMLleftskip} the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

### 69.3.1 \LaTeX core \texttt{verse} environment

\texttt{for HTML output:}

```latex
\begin{warpHTML}
\begin{verse}
\renewenvironment{verse}
```
69.3.2 verse and memoir

The following lengths are used by \texttt{verse} and \texttt{memoir}. They may be set in either print or HTML output, but are only used in HTML. This allows the user to set \verb|\leftskip| and \verb|\leftmargini| for print output, and optionally select different values for HTML.

\begin{Verbatim}
\verb|\leftskip| \texttt{Sets \verb|\leftskip| inside a verse environment in HTML.}
\end{Verbatim}

\begin{Verbatim}
\verb|\leftmargini| \texttt{Sets \verb|\leftmargini| inside a verse environment in HTML.}
\end{Verbatim}

\section{Verbatim and tabbing}

\begin{Verbatim}
\verb|\leftmargini| \texttt{Width to use in HTML Verbatim environment.}
\end{Verbatim}

This width is used when placing line numbers to the right. Ignored during print output.

\begin{Verbatim}
\verb|\leftmargini| \texttt{Used to temporarily turn off verbatim tags while doing \texttt{verbatiminput} in the HTML head.}
\end{Verbatim}
Encloses a verbatim environment with the given \texttt{class}.

The use of \texttt{textquotedbl} instead of ” improves compatibility with xeCJK.

Avoid excessive space between lines:

\begin{verbatim}
\setlength{\parskip}{0ex} \LWR@stoppars
\end{verbatim}

Create a new \texttt{pre} of the given class. The tags may temporarily be turned off for internal use, such as loading the \texttt{MATHJAX} script.

Use a mono-spaced font to preserve horizontal positioning. If horizontal alignment is important for the user, use a mono-spaced font in the \texttt{css} for the \texttt{verse} class.

Since inside a \texttt{<pre>}, restore the original list processing:

Turn off babel-french extra space before punctuation:

Do not produce HTML tags for \texttt{\hspace} inside a verse. Restore plain \texttt{\LaTeX} \texttt{\hspace} functionality:

\begin{verbatim}
\afterendverbatim
\end{verbatim}
Finishes enclosing a verbatim environment.

\verbatiminput{(filename)}

Patch \verbatiminput to add HTML tags:

\verbatiminput{(filename)}

\verbatiminput{(filename)}

\verbatiminput{(filename)}

The tabbing environment works, except that SVG math and \texttt{lateximage} do not yet work inside the environment.

If math is used inside tabbing, place tabbing inside a \texttt{lateximage} environment, which will render the entire environment as a single SVG image.
\section{Theorems}

A few minor changes are made to supply HTML tags.

- The entire theorem is placed into a \texttt{<div>} of class \texttt{theoremcontents}.
- The label for each theorem is placed inside a \texttt{<span>} of class \texttt{theorem/label}.
- The contents are placed inside a \texttt{<div>} of class \texttt{theoremcontents}.

**for HTML output:**

\begin{warpHTML}
\@begintheorem \{\langle \text{} \rangle\} \{\langle \text{} \rangle\}

\renewcommand{\@begintheorem}\[2\]{% 
\LWR@forcenewpage 
\B/l.VarockC/l.Varass{theoremcontents} 
\triv/l.Varist 
\item\[
\In/l.VarineC/l.Varass{theorem/label}{#1 \ #2\ }
\]itshape
\renewcommand*{\@endtheorem}{%}
\end{warpHTML}
72 Lists

The environments itemize, enumerate, and description are patched when lwarp is started. These patches support the standard \LaTeX environments, as well as those of enumerate, enumitem, and paralist, and at least the French version of babel. Additional patches are done on a package-specific basis.

The \LaTeX source for itemize and enumerate are found in source2e, but the source for description is found in article.cls, etc.

**empty item** To have an empty item, use \mbox{} or a trailing backslash. This forces a new line in print output, matching the new line which will appear in HTML output. Ex:

```latex
begin{itemize}
item \mbox{}
\begin{itemize}
... 
\end{itemize}
item \\
\begin{itemize}
... 
\end{itemize}
```

**\makelabel** While inside a list environment, lwarp nullifies a number of \LaTeX horizontal skip and fill commands, allowing the user to define \makelabel for print mode while HTML mode ignores those commands.

**⚠️ label font** When defining \makelabel in a list environment, use \textbf etc. instead of \bfseries.

### 72.1 List environment

**for HTML output:** \begin{warpHTML}

```latex
\LWR@printcloseitemize
```

May be locally redefined by enumerate or description.

\begin{warpHTML}

```latex
\LWR@printopenlist
```

May be locally redefined by enumerate or description.
\texttt{@mklab} Removes PDF spacing.

\texttt{@donoparitem} Modified for HTML output by replacing \TeX{} boxes with plain text. Also removes PDF spacing.

\texttt{@item} Modified for HTML output by replacing \TeX{} boxes with plain text. Also removes PDF spacing.
\addpenalty@itempenalty
\addvspace@itemsep
\fi
\global@inlabeltrue
\fi
\everypar{%
\@minipagefalse
\g@Varoba\@newfalse
\if@inlabelfalse
\setbox\z@\lastbox
\ifvoid\z@
\kern-\itemindent
\fi\box\@inlabel
\pena@true
\fi
\if@nobreak
\@nobreakfalse
\c@Varse@M
\e@Varse
\c@Varse @c@Varse
\everypar{}%
\fi}%
\if@noitemarg
\@noitemargfalse
\if@nmbrlist
\refstepcounter@listctr
\fi
\fi
\makelabel{#1} % extra space
\sbox@tempboxa{\makelabel{#1}}%
\global@setbox@labels\hbox{
\unhbox@labels
\hskip \itemindent
\hskip -\Varobe@Varsep
\ifdim \wd@tempboxa >\Varabe@Varsep
\box@tempboxa
\else
\hbox to\Varabe@Varsep {\unhbox@tempboxa}%
\fi
\ifdim \wd@tempboxa >\Varabe@Varsep
\hskip \Varabe@Varsep %
\else
\hskip -\Varabe@Varsep %
\fi
\ignorespaces%
}
\item handles item inside a list, itemize, or enumerate.

See \openparagraph where extra \hspace is used to leave room for the label while inside a list during paragraph construction.

\nulllistfills Nullifies various \TeX{} fill commands, in case they are used inside \makelabel. Problems are caused when these are nullified all the time.

\list Env
\newcommand*{\LWR@itemizeitem}{\langle label \rangle}

Handles \item inside an itemize or enumerate.

See \LWR@openparagraph where extra \hspace is used to leave room for the label while inside a list during paragraph construction.

\newcommand*{\LWR@itemizestart}{\renewcommand*{\LWR@printc/l.Varose/l.Varist}{\LWR@printc/l.Varoseitemize} \renewcommand*{\LWR@printopen/l.Varist}{u/l.Var sty/l.Vare=/quotedbl.Var\LWR@print@mbox{/l.Varist-sty/l.Vare-type:none}/quotedbl.Var} /l.Varet\item\LWR@itemizeitem\LWR@nu/l.Var/l.Var/l.Varistfi/l.Var/l.Vars}

\itemize

\enumerate

An HTML unordered list is used with customized \LaTeX-generated labels.
72.4 Description

\LWR@descitem \langle label \rangle \] Handles an item inside a description.

Temporarily disable \hspace, which \verbatim{article.cls, etc.} use per \verbatim{item} for descriptions only. This causes \texttt{larp} to mistakenly place an empty span between HTML list tags.

Process the original \verbatim{item} code:

\verbatim{\LWR@origitem[]}

Restore \verbatim{hspace} for use in the item text:

\verbatim{\LWR@select@html@nohspace%}

\verbatim{\LWR@htm{dt}#1\LWR@htm{/dt} }

\verbatim{\LWR@orignew\LWR@lst}%

\verbatim{\LWR@htm{dd} }

\verbatim{\LWR@startpars}

7061 \verbatim{\newcommand*{\LWR@descriptionstart}{%}
7062 \verbatim{\renewcommand*{\LWR@printc/l.Varose/l.Varist}{\LWR@printc/l.Varosedescription}}
7063 \verbatim{\renewcommand*{\LWR@printopen/l.Varist}{d/l.Var}}
7064 \verbatim{\let\item\LWR@/l.Varistitem%}
7065 \verbatim{\LWR@nulllistfills%}
7066 }

72.5 Patching the lists

\LWR@patchlists Patches list environments.

\LWR@patchlists remembers \verbatim{item} as defined by whatever packages have been loaded, then patches the itemize, enumerate, and description environments and \verbatim{item}. This works with the native \texttt{LaTeX} environments, as well as those provided by enumerate, and paralist.

\verbatim{\newcommand*{\LWR@patchlists}{%}
7067 \verbatim{\let\LtxMacro\item\LWR@listitem%}
\LWR@restoreoriglists  Restores the original trivlist environment.
73 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the \LaTeX core and the various tabular-related packages.

73.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, * column specifiers, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

Defining macros and environments:

⚠️ Misplaced alignment tab character &

• When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are are ignored in print mode.

\StartDefiningTabulars
<define macros or environments using tabular and & here>
\StopDefiningTabulars

⚠️ floatrow

This includes before and after defining any macro which used \ttabbox from floatrow.

⚠️ tabular inside another environment

• When creating a new environment which contains a tabular environment, lwarp’s emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

\StartDefiningTabulars % because & is used in a definition
newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars

Cell contents:

⚠️ macro in a table

• Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use \TabularMacro just before the macro. This is ignored in print mode.

\TabularMacro\somemacro & more row contents \\

Column specifiers:
* column specification

- * in a column specification is not used (so far). Repeat the column type the correct number of times.

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In \multirow cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the \multirow which do not appear in the HTML version.

\newcolumntype

- \newcolumntype is ignored; unknown column types are set to l.

Rules:

vertical rules

- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.

full-width rules

- \toprule, \midrule, \bottomrule, and \hline ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

- If you wish to use \midrule followed by \bottomrule, it may be necessary to use:
  \begin{verbatim}
  \midrule[2-3] \ [-2ex]
  \bottomrule
  \end{verbatim}
  The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.

\warpprintonly

- For \toprule and \bottomrule, when combined with a \warpprint or \warpHTML environment, if a “Misplaced \noalign” error occurs, change

  This & That \endhead

  to

  \warpprintonly{This & That \endhead}

  and likewise with the other \endheadings. Keep the \endfirsthead row unchanged, as it is still relevant to HTML output.

Other:

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.

longtable headings

- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly().

S columns

- For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside {} braces, including commands such as \multirow. While producing HTML output, though, anything placed inside braces is not seen by lwarp's tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

  \begin{verbatim}
  \warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \}
  \warpHTMLonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \}
  \end{verbatim}

for HTML output: \begin{warpHTML}
73.2 Temporary package-related macros

These macros are temporary placeholders for macros defined by various packages. If the relevant package is not loaded, these placeholders are used instead.

73.2.1 arydshln

Emulated by the original \LaTeX non-dashed versions.

\LetLtxMacro{hdash/l.Varine}{h/l.Varine}
\LetLtxMacro{cdash/l.Varine}{c/l.Varine}
\LetLtxMacro{firsthdash/l.Varine}{h/l.Varine}
\LetLtxMacro{lasthdashline/l.Varline}{h/l.Varline}

73.3 Token lookahead

Used by \LWR@futurenonspacetoken to look at the next token.

\LWR@mynexttoken

\newcommand{\LWR@mynexttoken}{relax}
\futurelet copies the next token then executes a function to analyze.
\LWR@futurenonspacetoken does the same, but ignores intervening white space.

Based on the booktabs style:

\LWR@futurenonspacetoken

\newcommand{\LWR@getmynexttoken}{%}
\LWR@traceinfo{\LWR@getmynexttoken}{%}
\LWR@futurenonspacetoken{\LWR@mynexttoken}{\LWR@tabl_alignedcolumn}

\LWR@getmynexttoken Looks ahead and copies the next token into \LWR@mynexttoken.
73.4 Tabular variables

**Bool** LWR@startedrow  
True if should print a row tag before this column.

7132 \newbool(LWR@startedrow)
7133 \boolfalse(LWR@startedrow)

**Bool** LWR@tablularcelladded  
True if have added a data cell for this position.

7134 \newbool(LWR@tablularcelladded)
7135 \boolfalse(LWR@tablularcelladded)

**Ctr** LWR@hlines  
Number of \hlines or \midrules above the next row.

7136 \newcounter(LWR@hlines)

**Ctr** LWR@hdashedlines  
Number of \arydshln dashed lines above the next row.

7137 \newcounter(LWR@hdashedlines)

**Bool** LWR@doingtbrule  
True if the next row will have a top/bottom rule above it.

7138 \newbool(LWR@doingtbrule)
7139 \boolfalse(LWR@doingtbrule)

**Bool** LWR@doingcmidrule  
True if the next row will have a cmidrule above it.

This is used by \LWR@tablularfinishrow to force a final empty row to create the border for the cmidrule.

7140 \newbool(LWR@doingcmidrule)
7141 \boolfalse(LWR@doingcmidrule)

**Bool** LWR@tableparcell  
True if are handling a paragraph inside a table cell, so must close the paragraph tag before moving on.

7142 \newbool(LWR@tableparcell)

**Bool** LWR@skippingmrowcell  
True if are doing an empty \multirow cell, and thus there is no data tag to close.

7143 \newbool(LWR@skippingmrowcell)

**Bool** LWR@skippingmcolrowcell  
True if are doing an empty \multicolumn row cell, and thus there is no data tag to close, and do not print @ and ! columns.

7144 \newbool(LWR@skippingmcolrowcell)

**Bool** LWR@usedmultirow  
Used to error if used \multirow or \multicolumn without using \mrowcell or \mcolrowcell.

7145 \newbool(LWR@usedmultirow)
Bool LWR@foundrowcell

Used to error if used \multirow or \multicolumn without using \rowcell or \mrowcell.

\newbool{LWR@foundrowcell}

Bool LWR@skipatbang

True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.

\newbool{LWR@skipatbang}

Bool LWR@emptyatbang

True if finishing a row and should print empty @ or ! column table data cells.

\newbool{LWR@emptyatbang}

Bool LWR@intabularmetadata

True if are in a tabular but not in a data cell. Used to prevent extra HTML breaks if not inside table data.

\newbool{LWR@intabularmetadata}

\boolfalse{LWR@intabularmetadata}

Ctr LWR@tabulardepth

Tracks whether & is being used inside a tabular.

\newcounter{LWR@tabulardepth}
\setcounter{LWR@tabulardepth}{0}

Ctr LWR@tabularpardepth

Tracks whether should look ahead at the next token when encountering a \par while processing tabular contents.

When LWR@tabularpardepth is deeper than LWR@tabulardepth then lwarp has started looking at the contents of the tabular, and thus any \pars encountered must be followed by another token lookahead.

\newcounter{LWR@tabularpardepth}
\setcounter{LWR@tabularpardepth}{0}

存在一定宽度的LWR@tablecolspec，不包含@和！列。

\newcommand*{LWR@tablecolspec}{}
\newcommand*{LWR@position}{}
\newcommand*{LWR@pleft}{}
\newcommand*{LWR@pright}{}

LWR@tablecolspec

Holds the parsed column specification, of total width LWR@tabletotalLaTeXcols, not counting @ and ! columns.

Will contain a string such as lllrrccpc, exactly one letter per \LaTeX table column, without @, !, >, <, or the vertical bar.

\newcommand*{LWR@strresult}{}
\newcommand*{LWR@strresulttwo}{}

\providecommand*{LWR@strresult}{}
\providecommand*{LWR@strresulttwo}{}
\LWR@origcolspec \ Hold the original column specs given to tabular.

\newcommand*{\LWR@origcolspec}{}

\LWR@tablecolspecwidth \ Hold the number of tokens in the table columns specification.
This is includes one for each @, !, <, > column, and also one for each of the parameters of p, @, !, <, > columns, and three for each \@ column.
(This is not the total \# of \LaTeX\ columns in the table.)

\newcounter{\LWR@tablecolspecwidth}

\LWR@tablecolspecindex \ While parsing the \LaTeX\ table column specification, starts at 1 and is incremented per token of the specification.

\newcounter{\LWR@tablecolspecindex}

\LWR@tablаТeXcolindex \ While producing the table, resets to 1 at the start of the table and also at each end of line, and is incremented by 1 by each ampersand.

\newcounter{\LWR@tablаТeXcolindex}

\LWR@tabletotalLaTeXcols \ While parsing a table column specification, begins at 0 and increments by 1 per \LaTeX\ table column. Eventually holds the final number of \LaTeX\ table columns in each row, not counting @ and ! columns. (In HTML, @ and ! cells become their own columns, but are not included in \LWR@tabletotalLaTeXcols.)

\newcounter{\LWR@tabletotalLaTeXcols}

\LWR@tabletotalLaTeXcolsnext \ Holds the next \LaTeX\ table column index while parsing, equal to one more than \LWR@tabletotalLaTeXcols.

\newcounter{\LWR@tabletotalLaTeXcolsnext}

\LWR@colatspec \ A data array of specifications for @ columns. The leftmost's index is leftedge, the others are counter values. See section 43.

\LWR@colbangspec \ A data array of specifications for ! columns. The leftmost's index is leftedge, the others are counter values. See section 43.

\LWR@colbeforespec \ A data array of specifications for > columns.

\LWR@colafterspec \ A data array of specifications for < columns.

\LWR@colbarspec \ A data array of specifications for vertical rules.

\section{73.5 Handling \&, @, !, and bar}

For technical discussion regarding problems redefining \&,
See: http://tex.stackexchange.com/questions/11638/where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860
\LWR@insertatbangcols

\newcommand*{\LWR@insertatbangcols}{%\ifbool{\LWR@skipatbang}{}{%\LWR@printatbang{at}{\arabic{\LWR@tab/l.Varindex}}\LWR@printatbang{bang}{\arabic{\LWR@tab/l.Varindex}}}\}

\LWR@closetabledatcell If \LWR@skippingmrowcell or \LWR@skippingmcolrowcell then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

\newcommand*{\LWR@closetabledatcell}{%\LWR@stoppars\global\booltrue{\LWR@intabuarmetadata}\ifbool{\LWR@exitingtabular}{}{%not exiting tabular\ifboolexpr{\booltrue{\LWR@skippingmrowcell} or \booltrue{\LWR@skippingmcolrowcell}}{If not skipping a \texttt{\multicolumn} cell, insert the @ and ! columns after this non-existant column.}{\LWR@insertatbangcols}}{%not skippingmrowcellInsert any < then any @ and ! column contents, unless muted for the \texttt{\bottomrule} or a \texttt{\multicolumn}:\unskip\ifboolexpr{\boolfalse{\LWR@tabularmutemods} or \boolfalse{\LWR@skipatbang} or \boolfalse{\LWR@emptyatbang}}{\LWR@getexparray{\LWR@coafter}{\arabic{\LWR@tab/l.Varindex}}}{%Close paragraphs:\ifbool{\LWR@tableparcell}{\LWR@stoppars}{}\global\boolfalse{\LWR@tableparcell}\Close the table data cell.
Close any color <\texttt{div}>s.\whileboolexpr{test \ifnumcomp{\value{\LWR@cellcolordepth}}{>}{0}}{\%}
Skip the @ and ! cells if are closing a multicolumn cell.

Color control. Column is set by >{} for each cell, so it must be cleared here.

When not used inside a tabular, & performs its original function as recorded here (with catcode 4).

73.5.1 Handling &

for HTML output:
Have not yet added data in this column:

\texttt{\global\boolfalse(LWR@tabularcelladded)}

Look at the next token to decide multi or single column data tag.

\texttt{\LWR@getmynexttoken}

If not inside a tabular, performs the original action:

\texttt{(\LWR@origampmacro)}

& is left with its original catcode for now.

\texttt{tikz} package seems to require & be left alone until after \texttt{tikz} has been loaded. Also, \texttt{cleveref} uses the ampersand in one of its options.

& is made active inside a \texttt{tabular}.

& is left alone when in math alignments.

### 73.5.2 Filling an unfinished row

\texttt{\LWR@tabularfinishrow} Adds empty table cells if necessary to finish the row.

At the end of the table, if any bottom rules are requested then an empty row must be generated to form the borders which show the rules.

\texttt{\newcommand*{\LWR@tabularfinishrow}{}}

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

\texttt{\ifboolexpr{\not \bool{LWR@exitingtabular}}{\bool{LWR@doingtbrule}}{\bool{LWR@doingcmidrule}}{\test{\ifnumcomp{\value{LWR@hlines}}{>}{0}}}{\test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}}{\bool{LWR@startedrow}}{}}

To temporarily turn off \texttt{LWR@exitingtabular} so that table data tags will still be generated:

If generating a final row for the \texttt{\bottomrule} borders, turn off the @, !, <, and > column output:

\texttt{\ifbool{LWR@exitingtabular}{\global\booltrue{LWR@tabularmutemods}}{}}
Locally reenable the table data tags until finished with the final row:

Generate table data tags and ampersands until the right edge:

The following is essentially \texttt{\LWR@tabularampersand} with \texttt{\LWR@emptyatbang} added to empty the following cells:

Starts the next cell:

Reenable the original \texttt{\LWR@exitingtabular} to close the entire table:
73.6 Handling

Inside tabular, is redefined to \LWR@tabularendofline

Throws away options \[\text{dim}\] or \[\text{**}\]

\LWR@tabularendofline

\NewDocumentCommand{\LWR@tabularendofline}{s o}{% Finish the row:
\fnumcomp{\value{\LWR@tableLaTeXcolindex}}{<}{\value{\LWR@tabletotalLaTeXcols}}{\LWR@tablefinishrow}{\Closetabledatascell}{\LWR@htmltag{/tr}\LWR@orignewline}
}

\xcolor row color support:

\rowc\ors\%

No longer inside a data cell:

\global\booltrue{\LWR@intabularmetadata}\%

Not yet started a table row:

\global\boolfalse{\LWR@startedrow}\%

Additional setup:

\setcounter{\LWR@hlines}{0}\%
\setcounter{\LWR@hdashedlines}{0}\%
\global\boolfalse{\LWR@doingtbrule}\%
\global\boolfalse{\LWR@doingcmidrule}\%
\LWR@clearmidrules\%
\gdef{\LWR@rowHTMLcolor{}}\%

Start at first column:

\setcounter{\LWR@tableLaTeXcolindex}{1}\%

Have not yet added data in this column:

\global\boolfalse{\LWR@tabularchelladded}\%

Allow \TeX to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

\LWR@stoppars
\LWR@origpar
Look at the next token to decide between single column data tag or a special case:

\LWR@getmynexttoken%}

### 73.7 Looking ahead in the column specifications

\LWR@columnspeclookahead \{\langle offset\rangle\}

Looks \texttt{offset} tokens ahead in the column specification, setting \LWR@strresulttwo. The \texttt{w} column alignment will be seen as a single unit such as \{c\}.

\newcommand*{\LWR@columnspeclookahead}[1]{% 
\setcounter{LWR@tempcountone}{\value{\LWR@tabcolspecindex}}% 
\addtocounter{LWR@tempcountone}{#1}% 
\fu{\LWR@expandafter}{\StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}}{\LWR@strresulttwo}% 
Get the contents of the first group in \LWR@strresulttwo:

\expandafter
\StrChar{\LWR@strresulttwo}{1}{\LWR@strresulttwo}% 
\noexpand
\StrChar{\LWR@strresulttwo}{1}{\LWR@strresulttwo}% 
\}

### 73.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

\newcommand*{\LWR@colparameter}{% 
\LWR@parseatcolumn Handles \texttt{@\{text\}} columns.

\newcommand*{\LWR@parseatcolumn}{% 
Move to the next token after the '@':

\LWR@traceinfo{at column}%
\addtocounter{\LWR@tablecolspecindex}{1}%

Read the next token into \LWR@colparameter, expanding once:

\LWR@traceinfo{about to read the next token:}%
\expandarg
\StrChar{\LWR@origcolspec}{\arabic{\LWR@tablecolspecindex}}{\LWR@colparameter}% 
\fullexpandarg
Store the result into a data array, expanding once out of \LWR@colparameter:

\LWR@traceinfo{have now read the next token}%
\ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}\z@%
\LWR@traceinfo{at the left edge}%
\LWR@setexparray{LWR@colatspec}{\{\text{leftedge}\}}{\LWR@colparameter}%
\LWR@traceinfo{at the left edge: %}
\LWR@getexparray{LWR@colatspec}{\{\text{leftedge}\}}%
}%
\ifnumcomp{\va{\text{LWR@tabletotalLaTeXcols}}}{=}\z@%
\LWR@traceinfo{at the \arabic{\text{LWR@tabletotalLaTeXcols}} edge}%
\LWR@setexparray{LWR@atspec}{\{\arabic{\text{LWR@tabletotalLaTeXcols}}\}}{\LWR@colparameter}%
\LWR@traceinfo{\arabic{\text{LWR@tabletotalLaTeXcols}} edge: %}
\LWR@getexparray{LWR@atspec}{\arabic{\text{LWR@tabletotalLaTeXcols}}}%
\}
\let\LWR@colparameter\relax%
\global\booltrue{LWR@validtablecol}%
\}

\LWR@parsebangcolumn Handles \texttt{!\{text\}} columns.

\newcommand*{\LWR@parsebangcolumn}{%}
\LWR@traceinfo{bang column}%
\addtocounter{LWR@tablecolspecindex}{1}%
\LWR@traceinfo{about to read the next token:}%
\expandarg%
\StrChar{\LWR@origcolspec}%
\{\arabic{\text{LWR@tablecolspecindex}}\}[\LWR@colparameter]
\fullexpandarg%

Store the result into a data array, expanding once out of \LWR@colparameter:

\LWR@traceinfo{have now read the next token}%
\ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}\z@%
\LWR@traceinfo{at the left edge}%
\LWR@setexparray{LWR@colbangspec}{\{\text{leftedge}\}}{\LWR@colparameter}%
\LWR@traceinfo{not at the left edge: %}
\LWR@setexparray{LWR@colbangspec}{\arabic{\text{LWR@tabletotalLaTeXcols}}}{\LWR@colparameter}%
\LWR@traceinfo{\arabic{\text{LWR@tabletotalLaTeXcols}} bang %}
\LWR@traceinfo{bang \arabic{\text{LWR@tabletotalLaTeXcols}}: %}
\LWR@setexparray{LWR@colbangspec}{\arabic{\text{LWR@tabletotalLaTeXcols}}}{\LWR@colparameter}%
\LWR@traceinfo{\arabic{\text{LWR@tabletotalLaTeXcols}} bang: %}
\LWR@setexparray{LWR@colbangspec}{\arabic{\text{LWR@tabletotalLaTeXcols}}}{\LWR@colparameter}%
\let\LWR@colparameter\relax%
\global\booltrue{LWR@validtablecol}%
\LWR@parsebeforecolumn Handles \{text\} columns.

\newcommand*{\LWR@parsebeforecolumn}{% 
  Move to the next token after the ‘>’: 
  \addtocounter{LWR@tab/l.Vareco/l.Varspecindex}{1} 
  Read the next token, expanding once into \LWR@colparameter:
  \expandarg \StrChar{\LWR@origcolspec}{\arabic{LWR@tab/l.Vareco/l.Varspecindex}}[\LWR@colparameter] 
  \LWR@setexparray{LWR@co/l.Varbeforespec} {\arabic{LWR@tab/l.Varetota/l.VarLaTeXco/l.Varsnext}}{\LWR@co/l.Varparameter} 
  \global\booltrue{LWR@va/l.Varidtab/l.Vareco/l.Var} }

\LWR@parseaftercolumn Handles <\{text\} columns.

\newcommand*{\LWR@parseaftercolumn}{% 
  Move to the next token after the ‘<’: 
  \addtocounter{LWR@tab/l.Vareco/l.Varspecindex}{1} 
  Read the next token, expanding once into \LWR@colparameter:
  \expandarg \StrChar{\LWR@origcolspec}{\arabic{LWR@tab/l.Vareco/l.Varspecindex}}[\LWR@colparameter] 
  \LWR@setexparray{LWR@co/l.Varafterspec} {\arabic{LWR@tab/l.Varetota/l.VarLaTeXco/l.Vars}}{\LWR@co/l.Varparameter} 
  \global\booltrue{LWR@va/l.Varidtab/l.Vareco/l.Var} }

\LWR@parsebarcolumn Handles vertical rules.

\newcommand*{\LWR@parsebarcolumn}{% 
  \LWR@traceinfo{LWR@parsebarcolumn} 
}
Remember the bar at this position:

\(\text{lwrparsecoloncolumn}\)

Handle vertical rules.

\(\text{lwrparsecoloncolumn}\)

Remember the bar at this position:
\LWR@parsesemicoloncolumn \quad \text{Handles vertical rules.}

7421 \newcommand*{\LWR@parsesemicoloncolumn}{% 
\quad \text{Treat } ; \text{ as a : column:}
7422 \LWR@parsecoloncolumn%
\quad \text{Skip the following width token:}
7423 \addtocounter{\LWR@tablecolspecindex}{1}%
7424 }

73.9 \quad \textbf{Parsing ‘l’, ‘c’, or ‘r’ columns}

\LWR@parsenormalcolumn \quad \langle (thiscolumn) \rangle
\quad \text{Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.}

7425 \newcommand*{\LWR@parsenormalcolumn}{[1]{% 
\quad \addtocounter{\LWR@tabletotalLaTeXcols}{1}%
7426 \quad \addtocounter{\LWR@tabletotalLaTeXcolsnext}{1}%
7427 \quad \LWR@setexparray{LWR@tablecolspec}{\arabic{\LWR@tabletotalLaTeXcols}}{#1}%
7428 \quad \LWR@traceinfo{normal column \arabic{\LWR@tabletotalLaTeXcols}: #1}%
7429 \quad \LWR@setexparray{LWR@tablecolatspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7430 \quad \LWR@setexparray{LWR@tablecolbangspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7431 \quad \LWR@setexparray{LWR@tablecolbeforespec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7432 \quad \LWR@setexparray{LWR@tablecol afterspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7433 \quad \LWR@setexparray{LWR@tablecal barspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
7434 \quad \global\booltrue{\LWR@validtablecol}%
7435 }
7436

73.10 \quad \textbf{Parsing ‘p’, ‘m’, or ‘b’ columns}

\LWR@parsepcolumn \quad \langle (thiscolumn) \rangle \quad \text{The width will be ignored.}

7437 \newcommand*{\LWR@parsepcolumn}{[1]{% 
\quad \LWR@parsenormalcolumn[#1]{% 
\quad \addtocounter{\LWR@tablecolspecindex}{1}%
\quad }
7439 \quad }
73.11 Parsing ‘w’ columns

\LWR@parsewcolumn The width will be ignored.

\newcommand*{\LWR@parsewcolumn}{%\LWR@co/l.Varumnspec/l.Varookahead{1}\expandafter{\LWR@parsenorma/l.Varco/l.Varumn}{\LWR@strresult}{two}%
Skips the following width and alignment tokens:
\addtocounter{LWR@tab/l.Vareco/l.Varspecindex}{2}%}

73.12 Parsing ‘*’ columns

\LWR@parsestarcolumn

\newcommand*{\LWR@parsestarcolumn}{\PackageError{lwr}{The tabular star column specifier\MessageBreak *{xx}{yy}\MessageBreak is not yet supported by lwr}%
\addtocounter{LWR@tablecolspecindex}{2}%}

73.13 Parsing ‘D’ columns

From the dcolumn package.

\LWR@parseDcolumn \{(thiscolumn)\} The three parameters will be ignored.

\newcommand*{\LWR@parseDcolumn}[1]{%Converts to the given column type.
\LWR@parsenormalcolumn[#1]%
Skips the following three parameters.
\addtocounter{LWR@tablecolspecindex}{3}%}
Table 10: Tabular baseline

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>l</td>
<td>p</td>
<td>m</td>
<td>b</td>
<td>r</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>bot</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>par</td>
<td>mid</td>
<td>bot</td>
<td>r</td>
</tr>
<tr>
<td></td>
<td>par</td>
<td>mid</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>par</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

73.14 Parsing the column specifications

⚠️ tabular baselines HTML CSS cannot exactly match the LaTeX concept of a baseline for a table row. Table 10 shows the LaTeX results for various vertical-alignment choices, with the baseline of the first column drawn across all the columns for comparison. See the p column specification in Table 11 for details.

Table 11 describes how each kind of column is converted to HTML.

 Bool LWR@validtablecol True if found a valid table column type.

\newbool{LWR@validtablecol}

 Bool LWR@opttablecol True if found a table column optional argument.

\newbool{LWR@opttablecol}

\LWR@parsetab[1]{⟨colspecs⟩}

Scans the column specification left to right.

Builds \LWR@tablecolspec with the final specification, one LaTeX column per entry. The final number of LaTeX columns in each row is stored in LWR@tabletotalLaTeXcols, which is the number of & and \ in each line, but which does not include @, !, <, > specifications in the count.

\newcommand*{\LWR@parsetablecols}[1]{%Remember the original supplied column spec:
\renewcommand*{\LWR@origcolspec}{#1}%

Remove spaces:

\expandarg
\StrSubstitute{\LWR@origcolspec}{ }{}{\LWR@origcolspec}%

The parsed column spec data array, LWR@tablecolspec, will be overwritten with new values.
Table 11: Tabular HTML column conversions

l, r, c: Converted to table cells without paragraph tags. Uses css vertical-align:middle so that top or bottom-aligned cells may go above or below this cell.

p: Converted to table cells with paragraph tags. Ref: Table 10. \LaTeX{} places the top line of a parbox aligned with the rest of the text line, so css vertical-align:bottom is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the css may be desired, changing td.tdp, td.tdP, td.tdprule, and td.tdPrule to vertical-align: middle. Another possibility is to change L,R,C, and P to vertical-align: top and not worry about the alignment of B and M cells or trying to approximate \LaTeX{} baselines.

m: With paragraph tags, css vertical-align:middle.

b: With paragraph tags, css vertical-align:top so that the bottom of the text is closest to the middle of the text line.

P, M, B: Horizontally-centered versions.

S: Converted to 'r'. Ignores optional argument. From the siunitx package.

D: Converted to 'c'. From the dcolumn package.

@, !, >, <: One each, in that order.

\: Vertical rule.

Unknown: Converted to 'l'.

\newcolumn: Currently treated as unknown.
Total number of columns found so far. Also pre-initialize the first several columns of specs:

\setcounter{LWR@tablotalaTeXcols}{0}\%
\setcounter{LWR@tablotalaTeXcolsnext}{1}\%
\LWR@setexparray{LWR@colatspec}{leftedge}\%
\LWR@setexparray{LWR@colatspec}{1}\%
\LWR@setexparray{LWR@colatspec}{2}\%
\LWR@setexparray{LWR@colatspec}{3}\%
\LWR@setexparray{LWR@colbangspec}{leftedge}\%
\LWR@setexparray{LWR@colbangspec}{1}\%
\LWR@setexparray{LWR@colbangspec}{2}\%
\LWR@setexparray{LWR@colbangspec}{3}\%
\LWR@setexparray{LWR@colbeforespec}{1}\%
\LWR@setexparray{LWR@colbeforespec}{2}\%
\LWR@setexparray{LWR@colbeforespec}{3}\%
\LWR@setexparray{LWR@colafterspec}{1}\%
\LWR@setexparray{LWR@colafterspec}{2}\%
\LWR@setexparray{LWR@colafterspec}{3}\%
\LWR@setexparray{LWR@colbarspec}{leftedge}\%
\LWR@setexparray{LWR@colbarspec}{1}\%
\LWR@setexparray{LWR@colbarspec}{2}\%
\LWR@setexparray{LWR@colbarspec}{3}\%

Starting at the first column specification:

\setcounter{LWR@tablecolspecindex}{1}\%

Place the colspecs string length into \LWR@strresult, and remember the number of characters in the column specification:

\expandarg\%
\StrLen{\LWR@origcolspec}{\LWR@strresult}\%
\fullexpandarg\%
\LWR@traceinfo{original column spec length: \LWR@strresult}\%
\setcounter{LWR@tablecolspecwidth}{\LWR@strresult}\%

Haven't seen any optional arguments so far

\global{boolfalse{\LWR@opttablecol}}\%

Scan through the column specifications:

\whileboolexpr{not test}{\%
\ifnumcomp{\value{LWR@tablecolspecindex}}{>}{\%
\ifnumcomp{\value{LWR@tablecolspecwidth}}{\%
\}
\}%
\}%

Place the next single-character column type into \LWR@strresult:

\expandarg\%
<table>
<thead>
<tr>
<th>Line</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>7502</td>
<td>\StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}][\LWR@strresult]%</td>
</tr>
<tr>
<td>7503</td>
<td>\LWR@traceinfo(position \arabic{LWR@tablecolspecindex}: \LWR@strresult)%</td>
</tr>
<tr>
<td>7504</td>
<td>\fullexpandarg%</td>
</tr>
</tbody>
</table>

Not yet found a valid column type:

7505 \global\boolfalse{LWR@validtablecol}%

Skip over any optional arguments, such as siunitx S column:

7506 \IfStrEq{\LWR@strresult}{[}{\global\booltrue{LWR@opttablecol}}{}%

Throw away anything found inside the optional argument:

7507 \ifbool{LWR@opttablecol}%
7508 {}% inside an optional argument
7509 {}% not an optional tabular argument

Not inside an optional argument, so consider the column type:

7510 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn(l)}{}
7511 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn(c)}{}
7512 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn(r)}{}
7513 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn(l)}{}
7514 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn(c)}{}
7515 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn(r)}{}
7516 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn(l)}{}
7517 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn(c)}{}
7518 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn(c)}{}
7519 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{}%
7520 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{}%
7521 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{}%
7522 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{}%
7523 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{}%
7524 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{}%
7525 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{}%
7526 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn(p)}{}%
7527 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn(m)}{}%
7528 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn(b)}{}%
7529 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn}{}%
7530 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn}{}%

Error if found a star column:

7531 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn}{}%

From the dcolumn package:

7532 \IfStrEq{\LWR@strresult}{D}{\LWR@parsedcolumn(c)}{}%
From the \texttt{tabularx} package. X column has no parameter, but will be given paragraph tags.

\begin{verbatim}
733 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn(X)}{}

---

Many people define centered versions "P", "M", and "B":

\begin{verbatim}
\newcolumntype{P}[1]{>{\centering\arraybackslash}p{#1}}
\end{verbatim}

---

734 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn(P)}{}
735 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn(M)}{}
736 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn(B)}{}

If this column was an invalid column type, convert it to an \texttt{l} column:

\begin{verbatim}
737 \ifbool{LWR@va/l.Varidtab/l.Vareco/l.Var}{}{%
738 \LWR@traceinfo{inva/l.Varid co/l.Varumn type: \LWR@strresult}%
739 \LWR@parsenormalcolumn(l)}%
740 \}% not an optional column argument

If read the closing bracket, no longer inside the optional argument:

\begin{verbatim}
742 \IfStrEq{\LWR@strresult}{[]}{\global\boolfalse{LWR@opttablecol}}{}

Move to the next character:

\begin{verbatim}
743 \addtocounter{LWR@tab/l.Vareco/l.Varspecindex}{1}%
744 }% whilendo
745 }%
\end{verbatim}

\section{73.15 \texttt{colortbl} and \texttt{xparse} tabular color support}

These macros provide a minimal emulation of some \texttt{colortbl} macros which might appear between table cells. If \texttt{colortbl} is loaded, these macros will be replaced with functional versions.

For each of the \texttt{HTML} colors below, the text for the \texttt{HTML} color is set if requested, but the macro is empty if none has been set.

\begin{verbatim}
\rownum Reserve a counter register.
746 \@ifundefined{rownum}{\newcount\rownum}{}

\@rowcolors Emulated in case \texttt{xcolor} is not used.
747 \newcommand*{\@rowcolors}{}
\end{verbatim}
\@rowc@rors  Emulated in case xcolor is not used.

\newcommand*{\@rowc@rors}{}

\LWR@xcolorrowHTMLcolor  Emulated xcolor row color.

\newcommand*{\LWR@xcolorrowHTMLcolor}{}

\LWR@columnHTMLcolor  HTML style code for the column color.

\def{\LWR@columnHTMLcolor}{}

\LWR@rowHTMLcolor  HTML style code for the row color.

\def{\LWR@rowHTMLcolor}{}

\LWR@cellHTMLcolor  HTML style code for the cell color.

\def{\LWR@cellHTMLcolor}{}

\LWR@ruleHTMLcolor  HTML style code for the cell color.

\newcommand*{\LWR@ruleHTMLcolor}{}

\rowcolor  Print version. The HTML version is in lwarp-colortbl. Used before starting a tabular data cell, thus \LWR@getmynexttoken.

\newcommand*{\rowcolor}{\LWR@getmynexttoken}\%

\arrayrulecolor  

\arrayrulecolornexttoken  Print versions for use outside and inside a tabular:

\newcommand{\arrayrulecolor}[2][named]{}
\newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}

\doublerulesepcolor  

\doublerulesepcolornexttoken  Print versions for use inside and outside a tabular:

\newcommand{\doublerulesepcolor}[2][named]{}
\newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
73.16 Starting a new row

\LWR@maybenewtablerrow

If have not yet started a new table row, begin one now. Creates a new row tag, adding a class for hline or tbrule if necessary.

\newcommand*{\LWR@maybenewtablerrow}{%  
\ifbool{LWR@startedrow}{% started the row
{}% not started the row

Remember that now have started the row:

\global\booltrue{LWR@startedrow}%

Create the row tag, with a class if necessary.

\global\booltrue{LWR@intabularmetadata}%
\ifboolexpr{%
\test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
\test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}%}
{
\LWR@htm{tr c/quotedbl hline/quotedbl }% 
\LWR@orignew%}
{% not doing hline
\ifdefvoid{\LWR@ru\HTMLcolor}{% 
\LWR@htm{tr c/quotedbl tbrule/quotedbl }% 
{%}
\LWR@htm{%
tr class=tb rule % space
style=border-top: 1px solid % space
\LWR@origpound\LWR@ru\HTMLcolor %
}%
}\LWR@orignew%
}{% end of not doing hline
\LWR@htm{tr}\LWR@orignew%
}{% end of not started the row
}

73.17 Printing vertical bar tags

\LWR@printbartag \((index)\)%

Adds to a tabular data cell an HTML class name for a left/right vertical bar.
73.18 Printing at or bang tags

\newcommand*{\LWR@printatbang}[2]{% 
\hspace{\ifboolexp{\boolexpr{\theLWR@tablarmutemods} or \boolexpr{\theLWR@emptyatbang}}{\textit{not muting}}{\textit{muting or empty}}}

\newcommand*{\LWR@printatbang}[2]{% 
\begin{verbatim}
\xdef\LWR@atbangspec{\LWR@getexparray{\LWR@co/l.Var#1spec}{#2}}% 
\ifempty{\LWR@atbangspec}{}{% not empty
\LWR@html/l.Vartag{\td c/l.Varass=/\quotedbl.Vartd#1%\LWR@subaddcmidru/l.Varetrim{}{}%\LWR@printbartag{#2}%/\quotedbl.Var%\LWR@tdstartsty/l.Vares%\LWR@addcmidru/l.Varewidth%\LWR@addcdash/l.Varine%\LWR@addtabu/l.Vararru/l.Vareco/l.Varors%\LWR@tdendsty/l.Vares%}
\ifboolexp{\boolexpr{\theLWR@tablarmutemods} or \boolexpr{\theLWR@emptyatbang}}{\textit{not muting}}{\textit{muting or empty}}
\end{verbatim}

Create an empty cell if muting for the \bottomru/l.Vare:

\ifboolexp{\boolexpr{\theLWR@tablarmutemods} or \boolexpr{\theLWR@emptyatbang}}{}{% not empty
\LWR@htmltag{\textit{not empty}}\\g/l.Varoba/l.Var\boo/l.Vartrue{\LWR@tabu/l.Vararce/l.Var/l.Varadded}
\LWR@addleftmostbartag

\newcommand*{\LWR@addleftmostbartag}{%
\ifnumcomp{\value{\LWR@tabLaTeXcolindex}}{=}{1}{%
\LWR@printbartag{leftedge}%
\}{}%
}

\LWR@tabularleftedge

\newcommand*{\LWR@tabularleftedge}{%
\ifnumcomp{\value{\LWR@tabLaTeXcolindex}}{=}{1}%
{%
\LWR@printatbang{at}{leftedge}%
\LWR@printatbang{bang}{leftedge}%
}% not left edge
\}

### 73.19 Data opening tag

\LWR@thiscolspec Temporary storage.

\newcommand*{\LWR@thiscolspec}{}

\LWR@tabledatasingcolunntag Print a table data opening tag with style for alignment and color.

\newcommand*{\LWR@tabledatasingcolunntag}{%
\LWR@traceinfo{\LWR@tabledatasingcolunntag}%
\LWR@maybenewtablerow%

Don't start a new paragraph tag if have already started one:

\ifbool{\LWR@intabularmetadata}{%
\%

If have found the end of tabular command, do not create the next data cell:

\ifbool{\LWR@exitingtabular}{}
{%
not exiting tabular

Print the @ and ! contents before first column:

\LWR@tabularleftedge%

Fetch the current column's alignment character into \LWR@strresult:

\edef{\LWR@strresult}{%
\LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tabLaTeXcolindex}}%
}
print the start of a new table data cell:

\LWR@traceinfo{LWR@tabledatasinglecolumnntag: about to print td tag}\
\LWR@htmltag(td class="td"

append this column's spec:

\LWR@strresult

If this column has a cmidrule, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

\LWR@addcmidruletrimmed
\LWR@addleftmostbartag
\LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%

Add styles for rules, alignment:

\LWR@tdstartstyles
\LWR@addcmidrulewidth
\LWR@addcdash
\xdef\LWR@thiscolspec{\LWR@getexparray{LWR@tableLaTeXcolspec}{\arabic{LWR@tableLaTeXcolindex}}%}
\LWR@addformatwpalignment{\LWR@thiscolspec}

Add styles for cell and rule colors:

\LWR@addtabularrowcolor
\LWR@addtabularrulecolors
\LWR@tdendstyles
% HTML td
\LWR@traceinfo{LWR@tabledatasinglecolumnntag: done printing td tag}%

If this is a p, m, b, or X column, allow paragraphs:

\ifboolexpr{%
  test{ \ifdefstring{\LWR@strresult}{p} } or
  test{ \ifdefstring{\LWR@strresult}{m} } or
  test{ \ifdefstring{\LWR@strresult}{b} } or
  test{ \ifdefstring{\LWR@strresult}{P} } or
  test{ \ifdefstring{\LWR@strresult}{M} } or
  test{ \ifdefstring{\LWR@strresult}{B} } or
  test{ \ifdefstring{\LWR@strresult}{X} }
}%
{ % allow pars
  \LWR@traceinfo{LWR@tabledatasinglecolumnntag: about to LWR@startpars}%
  \global\booltrue{LWR@tableparcell}%
  \LWR@startpars%
  \LWR@traceinfo{LWR@tabledatasinglecolumnntag: done with LWR@startpars}%}
7686     }% allow pars
7687     }% no pars

Print the contents unless muted for the \bottomrule:

7688     \ifboolexpr{\bool{LWR@tabularmutemods} or \bool{LWR@emptyatbang}}%
7689       {}%
7690       %
7691       \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
7692       %
7693       \global\boolfalse{LWR@intabularmetadata}%
7694       }% not exiting tabular
7695       }()\% in tabular metadata
7696       \LWR@traceinfo{LWR@tabledatsinglecolumnntag: done}%
7697 %

73.20 Midrules

LWR@midrules
LWR@midrules is a data array (section 43) of columns each containing a non-zero width if a midrule should be created for this column.

LWR@trimrules
LWR@trimrules is a data array (section 43) of columns containing l if a midrule should be left trimmed for each column.

LWR@trimrrules
LWR@trimrrules is a data array (section 43) of columns containing r if a midrule should be right trimmed for each column.

LWR@cdashlines
LWR@cdashlines is a data array (section 43) of columns each containing a Y if an arydshln package "cdashed line" should be created for this column.

Ctr LWR@midrulecounter
Indexes across the LWR@midrules and LWR@trim<\l/r>rules data arrays.

7698 \newcounter{LWR@midrulecounter}

Len \LWR@heavyrulewidth
The default width of the rule.

7699 \newlength{\LWR@heavyrulewidth}
7700 \setlength{\LWR@heavyrulewidth}{.08em}

Len \LWR@lightrulewidth
The default width of the rule.

7701 \newlength{\LWR@lightrulewidth}
7702 \setlength{\LWR@lightrulewidth}{.05em}

Len \LWR@cmidrulewidth
The default width of the rule.

7703 \newlength{\LWR@cmidrulewidth}
7704 \setlength{\LWR@cmidrulewidth}{.03em}

Len \LWR@thiscmidrulewidth
The width of the next rule, defaulting to \LWR@cmidrulewidth.

If not \LWR@cmidrulewidth, a style will be used to generate the custom width.
Assigned from the \LWR@midru array.

\LWR@clearmidrules  Start new midrules. Called at beginning of tabular and also at {\\}.

Clears all \LWR@midru and \LWR@trimru markers for this line.

\LWR@subcmidru  \((\textit{width})\) \((\textit{trim})\) \((\textit{leftcolumn})\) \((\textit{rightcolumn})\)

Marks \LWR@midru data array elements to be non-zero widths from left to right columns. Also marks trimming for the L and/or R columns.

\LWR@docmidrule  \[\langle width\rangle \] (\langle trim\rangle) {\langle leftcolumn-rightcolumn\rangle}
Marks \texttt{LWR@midrules} array elements to be a non-zero width from left to right columns. Also marks trimming for the L and/or R columns.

\begin{verbatim}
\newcommand*{\LWR@docmidru}{O{\LWR@cmidruwidth} D() >{\SplitArgument{1}{-}}m}
\LWR@subcmidru{#1}{#2}{#3}
\end{verbatim}

\texttt{\LWR@subcdash}{\langle leftcolumn\rangle}{\langle rightcolumn\rangle}

Marks \texttt{LWR@cdashlines} data array elements to be \texttt{Y} from left to right columns.

\texttt{\LWR@doingcmidru} is set to force an empty row at the end of the tabular to create the rule.

\begin{verbatim}
\newcommand*{\LWR@doccdash}[2]{% 
\LWR@subcdash{#1}{% 
\ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}{% 
\addtocounter{LWR@midrulecounter}{1}% 
}{}% }
\end{verbatim}

\texttt{\LWR@docdash}{\langle leftcolumn-rightcolumn\rangle}

Marks \texttt{LWR@cdashlines} data array elements to be \texttt{Y} from left to right columns.

\begin{verbatim}
\newcommand*{\LWR@docdash}[2]{% 
\LWR@subcdash{#1}{% 
\ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}{% 
\addtocounter{LWR@midrulecounter}{1}% 
}{}% }
\end{verbatim}

Used to compute margins, tabular trims, column offsets:

\begin{verbatim}
\newlength{\LWR@templenghtone}
\newlength{\LWR@templenghttwo}
\newlength{\LWR@templenghtthree}
\newcounter{LWR@tempcountone}
\end{verbatim}

Used to add a style to a table data cell:

\begin{verbatim}
\newbool{LWR@tdhavecellstyle}
\LWR@tdstartsty\LWR@tdstartsty
\end{verbatim}

\texttt{\LWR@tdstartstyles} Begins possibly adding a table data cell style.

\begin{verbatim}
\newcommand*{\LWR@tdstartstyles}{\global\boolfalse{LWR@tdhavecellstyle}}
\end{verbatim}
\LWR@tdaddsty \textbf{Starts adding a table data cell style.}

\begin{verbatim}
7767 \newcommand*(\LWR@tdaddsty)[% 7768 \ifbool{\LWR@tdhavecellstyle}{% 7769 {; }% 7770 { style="}"% 7771 \booltrue{\LWR@tdhavecellstyle}% 7772 }
\end{verbatim}

\LWR@tdendsty \textbf{Finishes possibly adding a table data cell style. Prints the closing quote.}

\begin{verbatim}
7773 \newcommand*(\LWR@tdendsty)[% 7774 \ifbool{\LWR@tdhavecellstyle}{% 7775 {/quotedbl}%;% 7776 \gobble\booltrue{\LWR@tdhavecellstyle}}{}% 7777 }% 7778 
\end{verbatim}

\LWR@subaddcmidru \textbf{\((\text{lefttrim})\) \((\text{righttrim})\) Adds a \texttt{cmidrule} with optional trim.}

\begin{verbatim}
7779 \newcommand*(\LWR@subaddcmidru)[2][% 7780 \setlength{\LWR@templengthone}{% 7781 \LWR@getexparray{\LWR@midrule}{\arabic{\LWR@tabLaTeXcolindex}}}% 7782 }% 7783 \ifdimcomp{\LWR@templengthone}{>}{0pt}{% 7784 \% 7785 \LWR@origtildetdrule#1#2% 7786 \% 7787 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}% 7788 }% 7789 \% 7790 \setlength{\LWR@thiscmidrulewidth}{0pt}% 7791 }% 7792 
\end{verbatim}

\textbf{Print the class with left and right trim letters appended:}

\begin{verbatim}
7793 \LWR@origtildetdrule#1#2% 7794 \% 7795 \LWR@setcmidrulewidth\LWR@thiscmidrulewidth% 7796 \% 7797 \setlength{\LWR@thiscmidrulewidth}{0pt}% 7798 
\end{verbatim}

\textbf{Remember the width of the rule:}

\begin{verbatim}
7799 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}% 7800 \% 7801 \setlength{\LWR@thiscmidrulewidth}{0pt}% 7802 \% 7803 
\end{verbatim}

\LWR@addcmidrule \textbf{Adds left or right trim to a \texttt{cmidrule}.}

\begin{verbatim}
7804 \newcommand*(\LWR@addcmidrule)[% 7805 \LWR@subaddcmidrule[\% 7806 \LWR@getexparray{\LWR@trim}{\arabic{\LWR@tabLaTeXcolindex}}]% 7807 \LWR@getexparray{\LWR@trimr}{\arabic{\LWR@tabLaTeXcolindex}}]% 7808 \% 7809 
\end{verbatim}

\LWR@adrulerwidth \textbf{\((\text{thiswidth})\) \((\text{defaultwidth})\)\)}

\textbf{If not default width, add a custom style with width and color depending on \texttt{thiswidth}.}
Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

\newcommand{\LWR@addrulewidth}[2][]{% 
  \ifboolexpr{}%
  \test{\ifdimcmp{#1}{=}{}{0pt}} or
  \{ %
    \test{\ifdimcmp{#1}{=}{}{#2}} and not bool(FormatWP) 
    and ( \test{\ifdefvoid{\LWR@ruleHTMLcolor}} )
  \}
  %
  {}% default width and color
  \{% custom width and/or color

  \LWR@forceminwidth{#1}%

  \LWR@tdaddstyle%

  \LWR@tdaddstyle%

  \LWR@addcmidrulewidth

  Adds a style for the rule width.

  Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

  \newcommand{\LWR@addcmidrulewidth}{}
\LWR@addcdash \ Varine Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

\LWR@WPce \ Var/l.Var \ Var/l.Var\langle \text-align} \rangle \Var/l.Var\langle \vertical-align} \rangle

\LWR@addformatwpalignment If FormatWP, adds a style for the alignment.
Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

\LWR@addtabularrowcolor Adds a cell’s row color style, if needed.
No color is added for the final row of empty cells which finishes each tabular.

73.21 Cell colors
\LWR@addtabularhrulecolor \ Adds a cell's horizontal rule color style, if needed.
\newcommand*{\LWR@addtabularhrulecolor}{%
  \ifboolexpr{%  
    \test{\ifnum\LWR@hines}{>}{1} or\%
    \test{\ifnum\LWR@dashedlines}{>}{1} or\%
    \bool{\LWR@doinghrule}%
  }{%
    \ifdefvoid{\LWR@ruleHTMLcolor}%
      \%  
      \ifnum\LWR@hines{>}{1}%
        \LWR@addstyle%  
        border-top: 4px double%  
      \}% else
      \ifnum\LWR@dashedlines{>}{1}%
        \LWR@addstyle%  
        border-top: 2px dashed%  
      \}% else
      \ifnum\LWR@dashedlines{=}{1}%
        \LWR@addstyle%  
        border-top: 1px dashed%  
    \}%}
  }%}
\}

If there is a no custom color:

\ifnum\LWR@hines{>}{1}%
  \LWR@addstyle%  
  border-top: 4px double%  
\}% else
\ifnum\LWR@dashedlines{>}{1}%
  \LWR@addstyle%  
  border-top: 2px dashed%  
\}% else
\ifnum\LWR@dashedlines{=}{1}%
  \LWR@addstyle%  
  border-top: 1px dashed%  
\}%}

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

\}%

If there is a custom color:

\%  
\ifnum\LWR@hines{>}{1}%
  \%  
  \ifnum\LWR@dashedlines{>}{1}%
  \%  
  \LWR@addstyle%
\LWR@addtabularrulecolors \ Adds a cell's rule color styles, if needed.

No color is added for the final row of empty cells which finishes each tabular.

\newcommand*{\LWR@addtabularrulecolors}{% 

Custom horizontal rule color:

\LWR@addtabularhrulecolor% 

No vertical rules if finishing the tabular with a row of empty cells:

\ifdef{\LWR@tabularmutemods}{% 

If at the leftmost cell, possibly add a leftmost vertical rule:

\edef{\LWR@tempone}{\LWR@getexparray{\LWR@colbarspec}{\LWR@tableLaTeXcolindex}}{% 

Fetch the left edge's vertical bar specification:

\edef{\LWR@tempone}{\LWR@getexparray{\LWR@colbarspec}{leftedge}}{% 

Add a custom style if a vertical bar was requested:

\ifdefstring{\LWR@tempone}{tvertbar}{% 

| border-left: 1px solid \LWR@vertrueHTMLcolor% 

}\ifdefstring{\LWR@tempone}{tvertbardouble}{% 

| border-left: 4px double \LWR@vertrueHTMLcolor% 

}{}%
Possibly add a right vertical rule for this cell:

```
\edef\LWR@tempone{\LWR@getexparray{\LWR@co/l.Varbarspec}{\arabic{\LWR@tab/l.Varco/l.Varorindex}}}
\ifdefstring{\LWR@tempone}{tvertbar}{%
    \LWR@tdaddsty/l.Varar
    border-right: 1px solid \LWR@verruleHTMLcolor%
    \LWR@vertru/l.VarorHTMLco/l.Varor%
}
\ifdefstring{\LWR@tempone}{tvertbardoub}{%
    \LWR@tdaddsty/l.Varar
    border-right: 4px double \LWR@verruleHTMLcolor%
    \LWR@vertru/l.VarorHTMLco/l.Varor%
}
\ifdefstring{\LWR@tempone}{tvertbardash}{%
    \LWR@tdaddsty/l.Varar
    border-right: 1px dashed \LWR@verruleHTMLcolor%
    \LWR@vertru/l.VarorHTMLco/l.Varor%
}
\ifdefstring{\LWR@tempone}{tvertbardoubdash}{%
    \LWR@tdaddsty/l.Varar
    border-right: 2px dashed \LWR@verruleHTMLcolor%
    \LWR@vertru/l.VarorHTMLco/l.Varor%
}%
```

Counts how many cell color <div>s were added to the current tabular data cell.

```
\newcounter{\LWR@cellcolordepth}
\LWR@subaddtabularcellcolor{% (HTML color)}
\newcommand*{\LWR@subaddtabularcellcolor}[1]{%
    \LWR@htmltag{div class="cellcolor" style="%}
        background: \LWR@origpound{}{}#1 %
    \}%
\addtocounter{\LWR@cellcolordepth}{1}%
}%
```
\texttt{\LWR@addtabularcellcolor} Adds a cell color style, if needed.

\begin{verbatim}
7970 \newcommand*{\LWR@addtabularcellcolor}{%  
7971 \ifdefvoid{\LWR@cellHTMLcolor}{%  
7972 \ifdefvoid{\LWR@rowHTMLcolor}{%  
7973 \ifdefvoid{\LWR@xcellHTMLcolor}{%  
7974 \ifdefvoid{\LWR@xrowHTMLcolor}{%  
7975 \ifdefvoid{\LWR@columnHTMLcolor}{}  
7976 \ifdefvoid{\LWR@xcolumnHTMLcolor}{}  
7977 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}{}  
7978 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@xcolumnHTMLcolor}}{}  
7979 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}{}  
7980 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@xrowHTMLcolor}}{}  
7981 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}{}  
7982 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@xcellHTMLcolor}}{}  
7983 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}{}  
7984 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@xcolumnHTMLcolor}}{}  
7985 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}{}  
7986 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@xrowHTMLcolor}}{}  
7987 \ifdefvoid{\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}{}  
\end{verbatim}

### 73.22 Multicolumns

#### 73.22.1 Parsing multicolumns

\begin{verbatim}
7987 \newcounter{\LWR@tablemulticolwidth}

Indexes into the multicolumn specification:

\begin{verbatim}
7988 \newcounter{\LWR@tablemulticolspos}

Remembers multicolumn vertical rules if found in the column spec.

\begin{verbatim}
7989 \newcounter{\LWR@mcolvertbarsl}
7990 \newcounter{\LWR@mcolvertbarsr}
7991 \newcounter{\LWR@mcolvertbarsldash}
7992 \newcounter{\LWR@mcolvertbarsrdash}
7993 \newbooll{\LWR@mcolvertbaronleft}
\end{verbatim}

\texttt{\LWR@printmccoltype} \((\text{colspec})\) Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

\begin{verbatim}
7994 \newcommand*{\LWR@printmccoltype}[1]{%  
7995 \LWR@traceinfo{\lwr@printmccoltype -#1-}%

Get one token of the column spec:

\begin{verbatim}
7996 \StrChar{\arabic{\LWR@tablemulticolspos}}{\LWR@strresult}%
\end{verbatim}

Add to the HTML tag depending on which column type is found:
\LWR@multicolother \{(colspec)\} For $\&, !, >, <$, print the next token without paragraph tags:

\newcommand*{\LWR@multicolother}[1]{%
\addtocounter{LWR@tablemulticolpos}{1}%
\StrChar{#1}{\arabic{LWR@tablemulticolpos}}[\LWR@strresult]%
\LWR@strresult%
}

A valid column data type was found:

\global\booltrue{LWR@validtablecol}%
}

\LWR@multicolskip Nothing to print for this column type.

\newcommand*{\LWR@multicolskip}(%
\global\booltrue{LWR@validtablecol}%
)

\LWR@printmccoldata \{(colspec)\} Print the data for any valid column type found.

\newcommand*{\LWR@printmccoldata}[1]{%
\LWR@traceinfo{\LWR@printmccoldata -#1}%
Not yet found a valid column type:

\global\boolfalse{LWR@validtablecol}%

Get one token of the column spec:

\StrChar{#1}{\arabic{LWR@tablemulticolpos}}[\LWR@strresult]%

Print the text depending on which column type is found. Also handles $\&, >, <$ as it comes to them.

\IfStrEq{\LWR@strresult}{l}{\LWR@multicoltext}{}
\IfStrEq{\LWR@strresult}{c}{\LWR@multicoltext}{}
\IfStrEq{\LWR@strresult}{r}{\LWR@multicoltext}{}
\IfStrEq{\LWR@strresult}{D}{%
\addtocounter{LWR@tablemulticolpos}{3} % skip parameters
\LWR@multicoltext%
\}}%
\IfStrEq{\LWR@strresult}{p}{\LWR@multicolpartext{0}}{}
\IfStrEq{\LWR@strresult}{m}{\LWR@multicolpartext{0}}{}
\IfStrEq{\LWR@strresult}{b}{\LWR@multicolpartext{0}}{}
\IfStrEq{\LWR@strresult}{P}{\LWR@multicolpartext{0}}{}
\IfStrEq{\LWR@strresult}{M}{\LWR@multicolpartext{0}}{}
\IfStrEq{\LWR@strresult}{B}{\LWR@multicolpartext{0}}{%
If an invalid column type:

\IfStrEq{\LWR@strresult}{W}{\LWR@mu/\Vartico/\Vartext}{}% 
\IfStrEq{\LWR@strresult}{S}{\LWR@mu/\Vartico/\Vartext}{}% 
\IfStrEq{\LWR@strresult}{X}{\LWR@mu/\Vartico/\Varpartext{0}}{}% 
\IfStrEq{\LWR@strresult}{|}{\LWR@mu/\Vartico/\Varskip}{}% 
\IfStrEq{\LWR@strresult}{:}{\LWR@mu/\Vartico/\Varskip}{}% 
\IfStrEq{\LWR@strresult}{;}{\LWR@mu/\Vartico/\Varskip}{}% 
\IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@mu/\Vartico/\Varother{#1}}{}% 
\IfStrEq{\LWR@strresult}{\detokenize{!}}{\LWR@mu/\Vartico/\Varother{#1}}{}% 
\IfStrEq{\LWR@strresult}{\detokenize{>}}{\LWR@mu/\Vartico/\Varother{#1}}{}% 
\IfStrEq{\LWR@strresult}{\detokenize{<}}{\LWR@mu/\Vartico/\Varother{#1}}{}% 

If an invalid column type:

\Ifbool{\LWR@validtablecol}{\LWR@multicoltext}{}

Tracing:

\LWR@traceinfo{\lwr@printmccoldata done} %

\setqcounter{\tablemulticolwidth}\LWR@strresult%

\setcounter{\tablemulticolspos}\LWR@multicolwidth%

\parsemulticolumnalignment{(1: \textit{colspec}) (2: \textit{printresults})}

Scan the multicolumn specification and execute the printfunction for each entry.

Note that the spec for a \texttt{p{spec}} column, or \texttt{@, >, <}, is a token list which will NOT match \texttt{l, c, r, or p}.

\newcommand{\parsemulticolumnalignment}{\setcounter{\tablemulticolspos}1\percent}

\setcounter{\tablemulticolwidth}\LWR@strresult\percent

Scan across the tokens in the column spec:

\whileboolexpr{\not \texttt{test}}{
  \ifnumcomp{\value{\tablemulticolspos}}{>}{\setcounter{\tablemulticolspos}{\value{\tablemulticolwidth}}}%

Execute the assigned print function for each token in the column spec:

\#2\percent
Move to the next token in the column spec:

\addtocounter{LWR@tablemulticolpos}{1}{}
\}
}

73.22.2 Multicolumn factored code

\newcommand*{\LWR@addmulticolverrulecolor}{

No vertical rules if finishing the tabular with a row of empty cells:

\ifbool{LWR@tabularmuteods}{%

Left side:

\ifnumcomp{\va{LWR@mcolvertbarsl}}{=}{}{1}{%
  \LWR@tddstyle%
  border-left: 1px solid \LWR@verruleHTMLcolor%
\}
\ifnumcomp{\va{LWR@mcolvertbarsl}}{>}{1}{%
  \LWR@tddstyle%
  border-left: 4px double \LWR@verruleHTMLcolor%
\}
\ifnumcomp{\va{LWR@mcolvertbarsldash}}{=}{}{1}{%
  \LWR@tddstyle%
  border-left: 1px dashed \LWR@verruleHTMLcolor%
\}
\ifnumcomp{\va{LWR@mcolvertbarsldash}}{>}{1}{%
  \LWR@tddstyle%
  border-left: 2px dashed \LWR@verruleHTMLcolor%
\}

Right side:

\ifnumcomp{\va{LWR@mcolvertbarsr}}{=}{}{1}{%
  \LWR@tddstyle%
  border-right: 1px solid \LWR@verruleHTMLcolor%
\}
\ifnumcomp{\va{LWR@mcolvertbarsr}}{>}{1}{%
  \LWR@tddstyle%
  border-right: 4px double \LWR@verruleHTMLcolor%
\}
\ifnumcomp{\va{LWR@mcolvertbarsrdash}}{=}{}{1}{%
  \LWR@tddstyle%
  border-right: 1px dashed \LWR@verruleHTMLcolor%
\}
\ifnumcomp{\va{LWR@mcolvertbarsrdash}}{>}{1}{%
  \LWR@tddstyle%
  border-right: 2px dashed \LWR@verruleHTMLcolor%
\}
To find multicolumn right trim:

\newcommand{\LWR@multicoltext}{}

\newcounter{LWR@lastmulticolumn}

\LWR@multicolumn\[
\langle 1: \text{vpos} \rangle \quad \langle 2: \text{rows} \rangle \quad \langle 3: \text{numLaTeXcols} \rangle \quad \langle 4: \text{numHTMLcols} \rangle \quad \langle 5: \text{colspec} \rangle \\
\langle 6: \text{text} \rangle
\]

\NewDocumentCommand{\LWR@multicolumn}{o o m m m +m}{
\LWR@traceinfo{LWR@multicolumn -#1- -#2- -#4- -#5-}\
\renewcommand{\LWR@multicoltext}{#6%\
\gobble{6}{LWR@validtablecol}%\}%
\}

Remember the text to be inserted, and remember that a valid column type was found:

\renewcommand{\LWR@multicoltext}[%
\#6%
\global{\booltrue{LWR@validtablecol}}%\
\%
\]

Compute the rightmost column to be included. This is used to create the right trim.

\setcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
\addtocounter{LWR@lastmulticolumn}{#3}%
\addtocounter{LWR@lastmulticolumn}{-1}%

Row processing:

\LWR@maybenewtablerow%

Begin the opening table data tag:

\LWR@htmltag{td colspan="#4" %
\%}

\IfValueT{#2}{ % rows?
\%rowspan="#2" %
\%
\}

\IfValueT{#1}{ % vpos?
\text{\ifstrequa{#1}{b}{\LWR@print@mbox{vertical-align:bottom}}{}%\}
\%
\text{\ifstrequa{#1}{t}{\LWR@print@mbox{vertical-align:top}}{}%\}
\%
\%vpos?
\%
\%rows?
\%
\class="td%}

Print the column type and vertical bars:

\setcounter{LWR@mcolvertbarsl}{0}%
\setcounter{LWR@mcolvertbarsr}{0}%
If this column has a cmidrule, add “rule” to the end of the HTML class tag.

If this position had a “Y” then add “rule” for a horizontal rule:

Also add vertical bar class.

Close the class tag’s opening quote: " NOT A TYPO

73.22.3 Multicolumn

\LWR@htmlmulticolumn \{\{numcols\}\} \{\{alignment\}\} \{\{text\}\}

Figure out how many extra HTML columns to add for @ and ! columns:
Create the multicolumn tag:

\LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcol}}{\arabic{LWR@tabletotalLaTeXcol}}{#1}{#2}{#3}\

Move to the next \LaTeX{} column:

\addtocounter{LWR@tableLaTeXcol}{#1}\
\addtocounter{LWR@tableLaTeXcol}{-1}\

Skip any trailing @ or ! columns for this cell:

\global\boolequal{LWR@skipatbang}{false}\
\global\boolequal{LWR@skipatbang}{true}\

73.22.4 Longtable captions

Longtable captions use \multicolumn.

\newbool{LWR@starredlongtable}
\boolequal{LWR@starredlongtable}{false}

Per the caption package, step the counter if longtable*.

\providecommand*{\LTcaptype}{\LWR@longtabledatacaptiontag*[[toc entry]]{
\langle\text{caption}\rangle}}

Remember the latest name for \nameref:

\IfValueTF{#2}{% optional given?
\ifblank{#2}{% optional empty?
{\LWR@setlatestname{#3}}% empty
{\LWR@setlatestname{#2}}% given and non-empty
{\LWR@setlatestname{#3}}% no optional

Create a multicolumn across all the columns:

Figure out how many extra HTML columns to add for @ and ! columns found between the first and the last column:

\LWR@tabularhtmlcolumns{\arabic{LWR@tabletotalLaTeXcol}}
Create the multicolumn tag:

\LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
\{\arabic{LWR@tablehtmlcoltotal}}%
\{P}%
\% \LWR@domulticolumn
\IFBooleanTF{#1}% star?

Star version, show a caption but do not make a LOT entry:

\% yes star
\LWR@figcaption%
\LWR@isolate(#3)%
\endLWR@figcaption%
\)
\% No star:

Not the star version:

Don't step the counter if \caption[]{A caption.}
\ifbool(LWR@starredlongtable)%
\%
\ifblank(#2)% TOC entry
\%
\%
\refstepcounter{\LTcaptype}%
\protected@edef\@currentlabel{%
\@nameuse{p@LTcaptype}\@nameuse{theLTcaptype}%
}%
\)%
\)%

Create an HTML caption. Afterwards, maybe make a LOT entry.

\LWR@figcaption%
\LWR@isolate{\@nameuse{fnum@LTcaptype}}%
\CaptionSeparator%
\LWR@isolate(#3)%
\endLWR@figcaption%

See if an optional caption was given:

\ifblank(#2)% TOC entry empty

if the optional caption was given, but empty, do not form a TOC entry
\%

If the optional caption was given, but might only be []:

\% TOC entry not empty
\IFNoValueTF{#2}% No TOC entry?
The optional caption is []:

```latex
\texttt{\% No TOC entry}
\addcontentsline{}
(\nameuse{ext@\LTcaptype})%
\LTcaptype%
(\%)
\protect\numberline{}
\LWR@iso\LTrate{\nameuse{p@\LTcaptype}}\nameuse{the\LTcaptype}%
{\ignorespaces \LWR@isolate(#3)\protect\relax}%
)}% end of No TOC entry
```

The optional caption has text enclosed:

```latex
\texttt{\% yes TOC entry}
\addcontentsline{}
(\nameuse{ext@\LTcaptype})%
\LTcaptype%
(\%)
\protect\numberline{}
\LWR@iso\LTrate{\nameuse{p@\LTcaptype}}\nameuse{the\LTcaptype}%
{\ignorespaces \LWR@isolate(#2)\protect\relax}%
)}% end of yes TOC entry
```

```latex
% end of TOC entry not empty
% end of no star
```

Skip any trailing @ or ! columns for this cell:

```latex
\global\booltrue(LWR@skipatbang)%
% end of \LWR@domulticolumn
\addtocounter{LWR@tabhtmcolindex}{\arabic{LWR@tabletotalLaTeXcols}}
\addtocounter{LWR@tabhtmcolindex}{-1}
```

73.22.5 Counting HTML tabular columns

The \LaTeX{} specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a \LaTeX{} \texttt{\multicolumn} command may span several additional @ and ! columns in HTML output. These additional columns must be added to the total number of columns spanned by an HTML multi-column data cell.
\LWR@subtabularhtmlcolumns \{\langle index\rangle\}

Factored from \LWR@tabularhtmlcolumns, which follows.

8271 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%  
Temporarily define a macro equal to the @ specification for this column:

8272 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@co/l.Varatspec}{#1}}%

If the @ specification is not empty, add to the count:

8273 \ifdefempty{\LWR@atbangspec}{}{\addtocounter{\LWR@tabhtmlcoltotal}{1}}%

Likewise for the ! columns:

8276 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@co/l.Varbangspec}{#1}}%
8277 \ifdefempty{\LWR@atbangspec}{}{\addtocounter{\LWR@tabhtmlcoltotal}{1}}%
8280 \LWR@subtabularhtmlcolumns \{\langle starting \LaTeX\ column\rangle \} \{\langle number \LaTeX\ columns\rangle\}

Compute the total number of HTML columns being spanned, considering the starting \LaTeX\ table column and the number of \LaTeX\ tabular columns being spanned. Any @ and ! columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter \LWR@tabhtmlcoltotal.

8281 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%  
Count the starting index, compute ending index, and begin with the count being the \LaTeX\ span, to which additional @ and ! columns may be added:

8282 \setcounter{\LWR@tabhtmlcolindex}{#1}%
8283 \setcounter{\LWR@tabhtmlcoltotal}{#2}%
8284 \setcounter{\LWR@tabhtmlcolend}{#1}%
8285 \addtocounter{\LWR@tabhtmlcolend}{#2}%

If at the left edge, add the at/bang columns for the left edge:

8286 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{=}1{%  \LWR@subtabularhtmlcolumns(leftedge)%
8288 }%

Walk across the \LaTeX\ columns looking for @ and ! columns:

8289 \whileboolexpr{%  test {
8291 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{<}{\value{\LWR@tabhtmlcolend}}% 8292 }%
73.23 Multirow if not loaded

A default definition in case \texttt{multirow} is not loaded. This is used during table parsing.

\begin{verbatim}
\begin{warpHTML}
\newcommand{\mu/varirow}{\[2\][c]}
\end{warpHTML}
\end{verbatim}

73.24 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a lateximage.

See section 332 for the HTML versions.

\texttt{for HTML & PRINT:}

\begin{verbatim}
\multicolumnrow \{(1:cols)\}\{(2:align)\}\{(3:vpos)\}\{(4:numrows)\}\{(5:bigstruts)\}\{(6:width)\}\{(7:fixup)\}\{(8:text)\}
\end{verbatim}

For discussion of the use of \texttt{\textbackslash DeclareExpandableDocumentCommand}, see:

\texttt{\textbackslash AtBeginDocument} to adjust after the user may have loaded \texttt{multirow}, which requires several tests to determine which version is loaded and thus which options are available.

\begin{verbatim}
\AtBeginDocument{
\@ifundefined{@xmu/varirow} \{+m +m +O{c} +m +O{0} +m +O{0pt} +m\} \{\}
\} % no version of multirow was loaded
\@xmu/varirow defined, so some version of multirow was loaded
\end{verbatim}
\ifpackage{multirow} determines if v2.0 or later of \texttt{multirow} was used, which included the \texttt{\ProvidesPackage} macro.

The print version:

\begin{verbatim}
\ifpackage{multirow}(% v2.0 or newer
\ifpackage{multirow}[2016/09/01]% 2016/09/27 for v2.0
\DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}{+m +m +O{c} +m +O{0} +m +O{0pt} +m}{{\multicolumn{#1}{#2}\xmultirow[#3][#4][#5][#6][#7][#8]}}
\end{verbatim}

If not \ifpackage{multirow} but \texttt{xmultirow} is defined, then this must be v1.6 or earlier, which did not \texttt{\ProvidesPackage{multirow}}, and did not have the \texttt{vposn} option.

\begin{verbatim}
\ifpackage{multirow}(% v1.6 or older did not \texttt{\ProvidesPackage}
\DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}{+m +m +O{c} +m +O{0} +m +O{0pt} +m}{{\multicolumn{#1}{#2}\xmultirow[#3][#4][#5][#6][#7][#8]}}
\end{verbatim}

\begin{verbatim}
\providecommand*{\xmultirow}{\LWR@print@multicolumnrow}
\end{verbatim}

\section{Utility macros inside a table}

\textbf{for HTML output:}

\begin{verbatim}
\begin{warpHTML}
\end{verbatim}

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

\begin{verbatim}
newcommand*{\LWR@donothing}{}
\end{verbatim}

In case \texttt{array} is not loaded:

\begin{verbatim}
let firstline\relax
let lastline\relax
newcommand*{\firstline}{}
newcommand*{\lastline}{}
\end{verbatim}
In case `bigdelim` is not loaded:

\begin{warpHTML}
\newcommand*{\l.Varde/l.Varim}{}
\newcommand*{\rde/l.Varim}{}
\end{warpHTML}

\section*{73.26 Special-case tabular markers}

\textbf{for HTML \\PRINT}: \begin{warpall}
\TabuMacro
Place this just before inserting a custom macro in a table data cell. Doing so tells lwarp not to automatically start a new HTML table data cell yet. See section 9.10.1.

\newcommand*{\TabuMacro}{}
\end{warpall}

\ResumeTabuMacro
Used to resume tabular entries after resuming an environment.

\begin{itemize}
\item \textbf{tabular inside another environment}
\begin{itemize}
\item When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabuMacro as follows. This is ignored in print mode.
\begin{verbatim}
\StartDefiningTabulars % because & is used in a definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars
\end{verbatim}
\end{itemize}
\end{itemize}

\textbf{for HTML output}: \begin{warpHTML}
\newcommand*{\ResumeTabular}{% 
\global\boolfalse{LWR@exitingtabular}% 
\global\boolfalse{LWR@tabularmutemods}% 
\LWR@getmynexttoken%
\}
\end{warpHTML}

\textbf{for PRINT output}: \begin{warpprint}
73.27 Checking for a new table cell

for HTML output:

When \end is found, turns off the next opening data tag.

Bool LWR@exitingtabular

Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomru.

Bool LWR@tabularmutemods

Open a new HTML table cell unless the next token is for a macro which does not create data, such as \hline, \topru, etc:

If not any of the below, start a new table cell:

If exiting the tabular:

longtable can have a caption in a cell

Look for other things which would not start a table cell:
\ifdefequal{\LWR@mynexttoken}{\noalign}{}%  
If an \mrowcell, this is a cell to be skipped over:

\ifdefequal{\LWR@mynexttoken}{\mrowcell}{}%  
If an \mcolrowcell, this is a cell to be skipped over:

\ifdefequal{\LWR@mynexttoken}{\TabularMacro}{}%  
\ifdefequal{\LWR@mynexttoken}{\hline}{}%  
\ifdefequal{\LWR@mynexttoken}{\firsthline}{}%  
\ifdefequal{\LWR@mynexttoken}{\asthline}{}%  
\ifdefequal{\LWR@mynexttoken}{\topru}{}%  
\ifdefequal{\LWR@mynexttoken}{\midru}{}%  
\ifdefequal{\LWR@mynexttoken}{\cmidru}{}%  
\ifdefequal{\LWR@mynexttoken}{\morecmidru}{}%  
\ifdefequal{\LWR@mynexttoken}{\specia}{}%  
\ifdefequal{\LWR@mynexttoken}{\cine}{}%  
\ifdefequal{\LWR@mynexttoken}{\bottomru}{}%  
\ifdefequal{\LWR@mynexttoken}{\rowcolor}{}%  
\ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}{}%
For \arydshln:

\ifdefequal{\LWR@mynexttoken}{\hdashline}%
{\globallet\LWR@mynextaction\LWR@donothin}%

\ifdefequal{\LWR@mynexttoken}{\cdashline}%
{\globallet\LWR@mynextaction\LWR@donothin}%

\ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
{\globallet\LWR@mynextaction\LWR@donothin}%

\ifdefequal{\LWR@mynexttoken}{\lastdashline}%
{\globallet\LWR@mynextaction\LWR@donothin}%

Ignore an empty line between rows:

\ifdefequal{\LWR@mynexttoken}{\par}%
{\globallet\LWR@mynextaction\LWR@donothin}%

No action for an \end token.

Add similar to the above for any other non-data tokens which might appear in the table.

Start the new table cell if was not any of the above:

\LWR@traceinfo{LWR@tabdatacolumn: about to do mynext}%
{\globallet\LWR@mynextaction}%
\LWR@traceinfo{LWR@tabdatacolumn: done}%
}

\end{warpHTML}

73.28 \mrowcell

for HTML & PRINT: \begin{warpall}
The user must insert \multicolumn into any \multirow cells which must be skipped. This command has no action during print output.

\newcommand*{\multicolumn}{}
\end{warpall}

\subsection{\texttt{\textbackslash mcolrowcell}}

\begin{warpa}
\begin{warpall}
\end{warpall}
\end{warpa}

\subsection{HTML tabular environment}

These are default definitions in case \texttt{booktabs} is not loaded, and are not expected to be used, but must exist as placeholders. They are pre-deleted in case \texttt{memoir} has already loaded \texttt{booktabs}.

\begin{verbatim}
\def\toprule{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\def\midrule{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\def\bottomrule{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\def\addlinespace{}\def\morecmidrules{}
\def\specia{lrule}[3]{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\newcommand*{\toprule}[1][1][]{\toprule[1][1]}
\newcommand*{\midrule}[1][1][]{\midrule[1][1]}
\newcommand*{\bottomrule}[1][1][]{\bottomrule[1][1]}
\newcommand*{\addlinespace}[1][1][]{\addlinespace[1][1]}
\newcommand*{\morecmidrules}[1][1][]{\morecmidrules[1][1]}
\newcommand*{\specia{lrule}[3][1][]{\specia{lrule}[3][1]}}
\newcommand{\noalign}[1]{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\end{verbatim}

\noalign \{\text\} Redefined for use inside \texttt{tabular}.

\begin{verbatim}
\def\toprule{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\def\midrule{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\def\bottomrule{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\def\addlinespace{}\def\morecmidrules{}
\def\specia{lrule}[3]{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\newcommand*{\toprule}[1][1][]{\toprule[1][1]}
\newcommand*{\midrule}[1][1][]{\midrule[1][1]}
\newcommand*{\bottomrule}[1][1][]{\bottomrule[1][1]}
\newcommand*{\addlinespace}[1][1][]{\addlinespace[1][1]}
\newcommand*{\morecmidrules}[1][1][]{\morecmidrules[1][1]}
\newcommand*{\specia{lrule}[3][1][]{\specia{lrule}[3][1]}}
\newcommand{\noalign}[1]{\noalign{\hrule\hfill\noalign{\vskip\aboverulesep\vskip\belowrulesep\hrule\hfill}}}
\end{verbatim}
The definition of \line depends on whether \texttt{tabls} has been loaded. If so, optional space below the line may be specified, but will be ignored.

\end{verbatim}

\LWR@HTMLcline \texttt{\{\texttt{columns}\}}

\NewDocumentCommand{\LWR@HTMLcline}{m}
\{\LWR@docmrule(1-\arabic{\LWR@totalLaTeXcols})\%
\addtocounter{\LWR@hlines}{1}\%
\LWR@getmynexttoken\%
\}

\LWR@tabular@warpprintonly \texttt{\{\texttt{contents}\}}

Only process the contents if producing printed output. Modified inside a \texttt{tabular} to grab the next token.

\newcommand{\LWR@tabular@warpprintonly}[1][1]{}
\ifbool{warpingprint}[#1]{\%
\LWR@getmynexttoken\%
\}

\LWR@nullifyNoAutoSpacing For \texttt{babel-french}, turn off auto spacing at the start of the tabular, then nullify the autospacing commands inside the tabular, since they were not compatible with the tabular column parsing code, which uses \texttt{xstring}.

\AtBeginDocument{\%
\ifundefined{frenchbsetup}{}% no babel-french
\}%
\newcommand*{\LWR@nullifyNoAutoSpacing}{}

\renewcommand*{\NoAutoSpacing}{}
\renewcommand*{\LWR@FBcancel}{}

\newcommand*{\LWR@nullifyNoAutoSpacing}{%}
\noautospacing
\renewcommand*{\NoAutoSpacing}{}
\renewcommand*{\LWR@FBcancel}{}
\}
% yes babel-french
% AtBeginDocument

\StartDefiningTabulars
\NewDocumentCommand{\LWR@HTML@@tabular}{d<> o m}{% 
  \LWR@traceinfo{LWR@HTML@@tabular started}%
  \addtocounter{LWR@tabulardepth}{1}
  Not yet started a table row:
  \gobblefalse{LWR@startedrow}%
  Not yet doing any rules:
  \setcounter{LWR@hlines}{0}%
  \setcounter{LWR@hdashedlines}{0}%
  \gobblefalse{LWR@doingtbrule}%
  \gobblefalse{LWR@doingcmidrule}%

  For babel-french, turn off auto spacing one time, then nullify the autospacing commands since were not compatible with the tabular parsing code.
  \LWR@nullifyNoAutoSpacing%

  Have not yet found the end of tabular command. Unmute the @ and ! columns.
  \gobblefalse{LWR@exitingtabular}%
  \gobblefalse{LWR@tabularmutemods}%

  Error if failed to use \mrowcell or \mcolrowcell when needed.
  \gobblefalse{LWR@usedmultirow}
  \gobblefalse{LWR@foundmrowcell}%

  Create the table tag:
  \gobbletrue{LWR@intabularmetadata}%
  \LWR@traceinfo{LWR@tabular: About to LWR@Forecenewpage.}%

The <direction> is from plex for Japanese documents, and is ignored.
Parse the table columns:

Table col spec is: \textbackslash{}textbackslash{}tablecolspec which is a string of \textbackslash{}llccrr, etc.

Do not place the table inside a paragraph:

Track column #:

Have not yet added data in this column:

Start looking for midrules:

\textbackslash{}becomes a macro to end the table row:

The following adjust for \texttt{colortbl}.

The vertical rules are set to the color active at the start of the tabular. \texttt{\textbackslash{}arrayrulecolor} will then affect horizontal rules inside the tabular, but not the vertical rules.

Tracking the depth of cell color \texttt{<div>}s:
The following may appear before a data cell is created, so after doing their actions, we look ahead with \LWR@getmynexttoken to see if the next token might create a new data cell:

The optional parameter for \hline supports the \texttt{tabls} package.

\newcommand*{\maybenewtab}{\ifboolexpr{\isiftrue\formatWP}{\LWR@docdash{1-\arabic{LWR@tabletotalLaTeXcols}}}{\addtocounter{LWR@hdashedines}{1}}\LWR@getmynexttoken}

The following create data cells and will have no more data in this cell, so we do not want to look ahead for a possible data cell, so do not want to use \LWR@getmynexttoken.

\renewcommand{\multicolumn}{\LWR@htmlmulticolumn}
\renewcommand*{\mrowcell}{\LWR@maybenewtablerow}
\renewcommand*{\tabularleftedge}{\ifboolexpr{\isiftrue\formatWP}{\LWR@docdash{1-\arabic{LWR@tabletotalLaTeXcols}}}{\addtocounter{LWR@hdashedlines}{1}}\LWR@getmynexttoken}

\renewcommand*{\mcolrowcell}{\LWR@maybenewtablerow}
\renewcommand*{\tabularleftedge}{\ifboolexpr{\isiftrue\formatWP}{\LWR@docdash{1-\arabic{LWR@tabletotalLaTeXcols}}}{\addtocounter{LWR@hdashedlines}{1}}\LWR@getmynexttoken}

\renewcommand*{\longtabledatacaptiontag}{\LWR@caption}

\let\LtxMacro{\caption}\LWR@/ongtab\aredatacaptiontag
Reset for new processing:

\global\booleanfalse{LWR@tableparcell}%
\global\booleanfalse{LWR@skippingmrowcell}%
\global\booleanfalse{LWR@skippingmcrowcell}%
\global\booleanfalse{LWR@skipatbang}%
\global\booleanfalse{LWR@emptyatbang}%

Set & for its special meaning inside the tabular:

\StartDefiningTabulls%
\protected\def&(\LWR@tabularampersand)%

Locally force any minipages to be fullwidth, until the end of the tabular:

\booltrue{LWR@forceminipagefullwidth}

Nest one level deeper of tabular paragraph handling:

\addtocounter{LWR@tabularpardepth}{1}%

Look ahead for a possible table data cell:

\LWR@traceinfo{LWR@@HTML@tabular: about to LWR@getmynexttoken}%
\LWR@getmynexttoken%

Ending the environment:

\newcommand*{\LWR@HTML@endtabular}{%
\LWR@traceinfo{LWR@HTML@endtabular}%
\Unnest one level of tabular paragraph handling:

\addtocounter{LWR@tabularpardepth}{-1}%
\ifboolexpr{%
\test {%
\ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
\or %
\} or %
\} (%
\bool{LWR@intabularmetadata} and%
\not \bool{LWR@tabularcelladded} and%
\test {%
\ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}\value{LWR@tabletotalLaTeXcols}}%
\}%
\LWR@tabularfinishrow%
\}%
\LWR@closetabulatedacell%
xcolor row color support:

Unnest one level of tabular:

Restore & to its usual meaning:

Error if used \multirow or \multicolumn without using \mrowcell or \mcolumncell.

siunitx may redefine tabular, so set the following later:
Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

A new entry in \texttt{*\_htm/l.Var.aux} is used to remember section name, file, and \texttt{lateximage} depth and number for each label:

\begin{verbatim}
\new/l.Varabe/l.Var{</l.Varabe/l.Varname}@/l.Varwarp}{{<section name>}{<fi/l.Varename>}
{<limagedepth>}{<limagenumber>}}
\end{verbatim}

Table 12 shows the data structures related to cross-referencing.

\begin{table}[htb]
\centering
\caption{Data structures related to cross-referencing.}
\label{tab:cross-referencing}
\begin{tabular}{|l|l|}
\hline
Sectioning & \begin{verbatim}
\new/l.Varabe/l.Var{</l.Varabe/l.Varname}@/l.Varwarp}{{<section name>}{<fi/l.Varename>}
{<limagedepth>}{<limagenumber>}}
\end{verbatim}
\hline
\end{tabular}
\end{table}

\section{Setup}

To remember the most recently defined section name, description, or caption, for \texttt{\nameref}.

\begin{verbatim}
\providecommand*{\@current/l.Varabe/l.Varname}{\@empty}
\LWR@stripperiod\[1\]{\langle\text\rangle}\[1\]
\end{verbatim}

Removes a trailing period.

\begin{verbatim}
\def\LWR@stripperiod#1\@empty#2\@ni{#1}\
\end{verbatim}

Removes \texttt{/l.Varabe/l.Var} and other commands from the name, the strip any final period. See \texttt{gettitlestring}.

\begin{verbatim}
\newcommand*{\LWR@set/latestname}{\langle\text\rangle}
\end{verbatim}

Remove \texttt{\label} and other commands from the name, the strip any final period. See \texttt{gettitlestring}.
Table 12: Cross-referencing data structures

**Original \LaTeX:**

\refstepcounter: Steps the counter and sets \@currentlabel.
\@currentlabel: \texttt{\p@ctr>the<ctr> Updated by \refstepcounter.}
\label: Writes to the .aux file:
\newlabel\{\label\}{\{[@currentlabel]{\the<page}\}}
\newlabel: When the .aux file is read, sets \@\@\label.
\@<label>: Set to: {[@currentlabel]{\the<page}}
\ref: Returns the first part of \@<label>.
\pageref: Returns the second part of \@<label>.

**Added by \texttt{lwarp}:**

\label: Adds \texttt{HTML} tags (section 74.3), and another .aux entry (section 74.2).
\newlabel: Unchanged. When the .aux file is read, sets \@<label>\texttt{lwarp}.
\@<label>\texttt{lwarp}: Set to \{(section\_name)\{file\_name\}{depth}\{number\}):
\texttt{\LWR@nameref}: The section name for this label.
\texttt{\LWR@htmlfileref}: The filenumber or name for this label.
\texttt{\LWR@lateximagedepthref}: The lateximagedepth for this label.
\texttt{\LWR@lateximagenumberref}: The lateximagenumber for this label.
\texttt{\nameref}: Emulated from \texttt{hyperref} for \texttt{lwarp}. See section 74.4.
\texttt{\ref} and \texttt{\nameref}: Adds \texttt{HTML} tags. See section 74.4.

**Added by \texttt{amsmath}:**

\label: Execution is delayed until the math environment is completed.
\texttt{\ltx@label}: \LaTeX \label, (HTML: patched by \texttt{lwarp},) later patched by \texttt{cleveref}.

**Added by \texttt{cleveref}:**

\refstepcounter: Added: sets \texttt{\cref@currentlabel}.
\texttt{\cref@currentlabel}: \texttt{(type)\=\<ctr> unless an alias is used):
\texttt{[<type>][arabic\<ctr>][parent\_ctrs]<p\<ctr>\texttt{\the<ctr>}} Also see section 60.4 for use with footnotes.
\label: Writes to the .aux file:
\newlabel\{\label\}\texttt{\@\cref}{\{\cref@currentlabel}{\the<page}\}}
\newlabel: Unchanged. When the .aux file is read, sets \@\@\cref.
\@<label>\texttt{\cref}: Set to: \{(\cref@currentlabel){\the<page}\}

**Utility functions:** See \texttt{\cref@getlabel}, \texttt{\cref@gettype}, \texttt{\cref@getcounter}, \texttt{\cref@getprefix}.

**Cross-referencing names:** \texttt{\cref} and \texttt{\texttt{\cref}} name assign human-readable names for references to this counter type.

**Additionally patched by \texttt{lwarp}:**

\texttt{\cref}, etc.: Modified for \texttt{lwarp}. See section 88.
\texttt{\label inside math}: See section 80.7.1.

**Footnotes:** See \texttt{\noteentry in section 60.4}.
74.2 New lwarp labels.

A new entry in *_htm/l.Var.aux is used to remember section name, file, and lateximage depth and number for each label:


See:
http://tex.stackexchange.com/questions/57194/
extract-section-number-from-equation-reference

\LWR@setref {⟨args list⟩}{⟨selector⟩}{⟨label⟩}

\@setref without the \null (\ hbox), and without the warning messages. Each caused problems with lwarp references. The regular reference will cause the warning.

\LWR@nameref {⟨label⟩} Returns the section name for this label:

\LWR@htm/l.Varfileref {⟨label⟩} Returns the file number or name for this label:

\LWR@/l.Varateximagedepthref {⟨label⟩} Returns the lateximagedepth for this label:
{\label} Returns the \lstinline!\lateximagenumberref! for this label:

\newcommand*{\lateximagenumberref}{[1][%
\expandafter\latexsetcsname r\#1\warp\endcsname\latexfourthoffour[#1]%
]}

{\warp} Sanitize the name and then creates the label:

\newcommand*{\warp}{[1][%
\latexsetcsname r\#1\warp\endcsname\warpfourthoffour{#1}%
]}

\section{Labels}

{\sublabel} Creates an HTML id tag.
\detokenize is used to allow underscores in the labels.

\newcommand*{\sublabel}{[1][%
\latexsetcsname r\#1\sublabel\endcsname\subwarpfourthoffour{#1}%
]}

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

\ifnumcomp{\value{\lateximagethmdepth}}{>}{0}%
\}%
\}% not lateximage

If not doing a lateximage, create an HTML ID tag: (To be factored...)

\latexsanitize[#1]%
\ifbool{\latexdoingstartpars}%
% pars allowed
\latex\latex\latexeqnarray
% par started
\latexhtmltag{a \latexprintmbox{id="\latexsanitized"}}\latexhtmltag{/a}%
% par started
\latexstoppars%
\latexhtmltag{a \latexprintmbox{id="\latexsanitized"}}\latexhtmltag{/a}%
\latexstartpars%
74.4 References

\LaTeX@startref \{\langle\textit{label}\rangle\} \quad \text{(Common code for \texttt{ref} and \texttt{nameref}).}

Open an HTML tag reference to a filename, \# character, and a label.

\newcommand*{\LaTeX@startref}{%
Create the filename part of the link:

\lwr@sanitize{#1}\%
\lwr@traceinfo{LWR@startref A: !#1!}\%

Create the destination id:

See if LWR@/l.Varateximagedepth is unknown:

\lwr@traceinfo{LWR@startref D: !#1!}\%
\ifcsundef{r@#1@/l.Varwarp}\%

"??" if LWR@/l.Varateximagedepth is unknown, so create a link with an unknown destination:

\%
\lwr@traceinfo{LWR@startref D0: ??}\%
\%

If LWR@/l.Varateximagedepth is known. Use a lateximage if the depth is greater than zero, or a regular link otherwise:

\%
\ifthenelse{\cnttest{\lwr@/l.Varateximagedepthref{#1}}{>}{0}}\%
\%
\%
\lwr@ImagesName\lwr@/l.Varateximagenumberref{#1}\%
\%
\%
\lwr@traceinfo{LWR@startref D3}\%

\detokenize is used to allow underscores in the labels:

\%
\lwr@print@mbox{\lwr@sanitized}\%
\%
\%
\lwr@traceinfo{LWR@startref E}\%

Closing quote:

\%
\%
\lwr@traceinfo{LWR@startref F}\%
\%
%
\lwr@subnewref {⟨label⟩} {⟨label or sub@label⟩}
Factored for the subfig package. Uses the original label for the hyper-reference, but prints its own text, such as “1(b)”.

\ref * \langle\textit{label}\rangle \ref is redefined to \LWR@HTML@ref, except inside the text part of a \hyperref, where it is redefined to \LWR@ref@ignorestar.

\LWR@HTML@ref * \langle\textit{label}\rangle Create an internal document reference link, or without a link if starred per \hyperref.

\LWR@ref@ignorestar * \langle\textit{label}\rangle For use inside \hyperref. Ignores the star, then uses the original \ref.

\pagerefPageFor Text for page references.

\pageref * \langle\textit{label}\rangle Create an internal document reference, or just the unlinked number if starred, per \hyperref.

\nameref \langle\textit{label}\rangle
\Nameref{⟨label⟩} In print, adds the page number. In HTML, does not.

\LetLtxMacro\Nameref{nameref}

\section{Hyper-references}

\textbf{⚠️} Note that the code currently only sanitizes the underscore character. Additional characters should be rendered inert as well. See the \texttt{hyperref.sty} definition of \texttt{\gdef\hyper@normalise} for an example.

\textbf{_pkg hyperref}

\textbf{⚠️} Do not tell other packages that \texttt{hyperref} is emulated. Some packages patch various commands if \texttt{hyperref} is present, which will probably break something, and the emulation already handles whatever may be emulated anyhow.

\% DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it: \Emu/l.VarestPackage{hyperref}[2015/08/01]% Disabled. Do not do this.

\texttt{\EmulatesPackage{hyperref}}

\texttt{\AtBeginDocument{\def\@currentHref{autopage-\theLWR@currentautosec\}}}

\texttt{\LWR@subhyperref{⟨URL⟩}}

\texttt{\NewDocumentCommand{\LWR@subhyperref}{m}{\LWR@traceinfo{LWR@subhyperref !#1!}\LWR@sanitize{#1}\LWR@htm/l.Vartag{\texttt{a href=}"\LWR@sanitized" % space\texttt{target=}"\_{}b/l.Varank" % space}}} starts a link for \texttt{\LWR@hrefb}. A group must have been opened first, with nullified catcodes. The text name is printed afterwards, after the group is closed and catcodes restored.
\LWR@subhyperreftext \{\langle text \rangle\} 

Finishes the hyperref for \LWR@hrefb. Catcodes must have been restored already. To be used after \LWR@subhyperref, and after its group has been closed.

\newcommand{\LWR@subhyperreftext}[1]{
\LWR@htm/l.Vartag{/a} 
\LWR@ensuredoingapar 
}

\LWR@subhyperrefclass \{\langle URL \rangle\} \{\langle text \rangle\} \{\langle htmlclass \rangle\}

\newDocumentCommand{\LWR@subhyperrefc}{l.Varass}{
\LWR@htm/l.Vartag{a % space href="\begingroup\@sanitize#1\endgroup" % space class="#3" % space}
\LWR@orignew/l.Varine
\#2\LWR@orignew/l.Varine
\LWR@htm/l.Vartag{/a}
\LWR@ensuredoingapar
}

\href \[[\langle options \rangle]\] \{\langle URL \rangle\}

Create a link with accompanying text:

\DeclareDocumentCommand{\LWR@hrefb}{O{} m}{
\LWR@ensuredoingapar
\LWR@subhyperref{#2}
}

\newrobustcmd*{\href}{
\begingroup
\catcode'#=12\catcode'%=12\catcode'&=12\catcode'~=12\catcode'_=12
\LWR@hrefb
}

\nolinkurl \{\langle URL \rangle\}

Print the name of the link without creating the link:

\newcommand{\LWR@nolinkurlb}[1]{
\LWR@ensuredoingapar 
\LWR@temptriplace{\texttt{\#1}}
\LWR@temptriplace{\texttt{\#1}}
\onelevel\sanitize\LWR@temptriplace{\texttt{\#1}}

url \{(URL)\}

Create a link whose text name is the address of the link.

The url package may redefine \url, so it is \let to \LWR@urlb here and also redefined by lwarp-url.

\LWR@subinimage \begin{itemize}
\item[\langle alttag\rangle] \langle (class) \rangle \langle (filename) \rangle \langle (extension) \rangle \langle (style) \rangle
\end{itemize}
alt="#1" \LWR@indentHTML
style="#5" \LWR@indentHTML
class="#2" \LWR@orignewline
}%
)%
)%
)%
end{warpHTML}
Table 13: Float data structures

For each `<type>` of float (figure, table, etc.) there exists the following:

- **counter `<type>`**: A counter called `<type>`, such as figure, table.
- `<type>name`: Name. `\figurename` prints “Figure”, etc.
- `<ext>@type>`: File extension. `\ext@figure` prints “lof”, etc.
- `<fps>@type>`: Placement.
- `<the>@type>`: Number. `\thetable` prints the number of the table, etc.
- `<p>@type>`: Parent’s number. Prints the number of the [within] figure, etc.
- `<fnum>@type>`: Prints the figure number for the caption.
  - `<type>name \the@type>`, “Figure 123”.
- `<type>`: Starts the float environment. `\figure` or `\begin{figure}`
- `<end>@type>`: Ends the float environment. `\endfigure` or `\end{figure}`
- `<tf>@ext>`: The LATEX file identifier for the output file.
- LWR@have<type>: A boolean remembering whether a `\listof` was requested for a float of this type.

**File with extension lof,t,a-z**: An output file containing the commands to build the `\listof` “table-of-contents” structure.

**Cross-referencing names**: For cleveref’s `\cref` and related, `\crefname` and `\Crefname` assign human-readable names for references to this float type.

75 Floats

Floats are supported, although partially through emulation.

Table 13 shows the data structure associated with each `<type>` of float.

`\@makecaption` is redefined to print the float number and caption text, separated by `\CaptionSeparator`, which works with the `babel` package to adjust the caption separator according to the language. French, for example, uses an en-dash instead of a colon: “Figure 123 – Caption text”.

75.1 Float environment

**for HTML output**: 8891 \begin{warpHTML}

LWR@floatbegin `{(type)}` `{(placement)}` Begins a `\newfloat` environment.
There is a new float, so increment the unique float counter:

\addtocounter{LWR@thisautoid}{1}
\booltrue{LWR@freezethisautoid}
\begingroup

Settings while inside the environment:

 Settings while inside the environment:

Open an HTML figure tag. The figure is assigned a class equal to its type, and another class according to the float package style, if used. Note that \csuse returns an empty string if \LWR@f@<type> is not defined.

\LWR@htmltag{% figure id=\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}} class=#1 @nameuse{LWR@floatstyle=#1} % space
}\ifbool{FormatWP}{% \LWR@orignewline\% \LWR@BlockClassWP{}\% wp#1\%\}{%}

Update the caption type:

\renewcommand*{\@captype}{#1}
\caption@settype{#1}

Mark the float for a word processor conversion:

\ifboolexpr{bool(FormatWP) and bool(WPMarkFloats)}{% begin #1 ===
\}{%}

Look for \centering, etc:

\futureon nonspace\LWR@mynexttoken\LWR@floatalignment%

For koma-script. The following does not work for tables.

\AtBeginDocument(
\ifpackageloaded{tocbasic}{
\appto\figure@atbegin{%
Support packages which create floats directly.

\begin{figure}[h]
...
\end{figure}

\begin{table}[h]
...
\end{table}

75.2 Float tracking

A sequential counter for all floats and theorems. This is used to identify the float or theorem then reference it from the List of Figures and List of Tables.

\counter{thisautoid}
A sequential counter for all word processor conversion <div>s. This is used to convince \textsc{LibreOffice} to form a frame around this element.

\begin{verbatim}
\newcounter{LWR@thisautoidWP}
\end{verbatim}

Prevents multiple increments of \texttt{LWR@thisautoid} inside a float.

\begin{verbatim}
\newbool{LWR@freezethisautoid}
\boolfalse{LWR@freezethisautoid}
\end{verbatim}

\begin{verbatim}
\LWR@newautoidanchor\texttt{\textbackslash autoid}\texttt{\textbackslash mbox{a id=\textquotesingle\texttt{\textbackslash print\textquotesingle\textbackslash mbox{autoid-arabic\textbackslash thisautoid}}\textbackslash textquotesingle}}\texttt{\textbackslash a}
\end{verbatim}

\texttt{@captype} Remembers which float type is in use.

\begin{verbatim}
\newcommand*{\@captype}{0}
\end{verbatim}

Set to center, flushleft, or flushright if saw \texttt{\textbackslash centering}, \texttt{\textbackslash raggedright}, or \texttt{\textbackslash raggedleft}.

\begin{verbatim}
\newcommand*{\LWR@floatalignmentname}{center}
\end{verbatim}

\begin{verbatim}
\newcommand*{\LWR@floatalignment}{center}
\end{verbatim}

Closes an environment from \texttt{\textbackslash LWR@floatalignment}. 
75.3 Caption inside a float environment

\CaptionSeparator

How to separate the float number and the caption text.

\AtBeginDocument{\providecommand*{\CaptionSeparator}{::}}

\@makecaption{(name and num)}{(text)}

Prints the float type and number, the caption separator, and the caption text.

\AtBeginDocument{\renewcommand{\@makecaption}{\LWR@traceinfo{@makecaption}\CaptionSeparator\LWR@iso}{#1}{#2}\
\LWR@traceinfo{@makecaption: done}{}\}}

75.4 Caption and LoF linking and tracking

When a new HTML file is marked in the \LaTeX\ PDF file, the \LaTeX\ page number at that point is stored in \LWR@testautopage, (and the associated filename is remembered by the special \LaTeX\ labels). This page number is used to generate an autopage HTML \lt<\id\gt\rt in the HTML output at the start of the new HTML file. Meanwhile, there is a float counter used to generate an HTML autoid \lt<\id\gt\rt at the start of the float itself in the HTML file. The autopage and autoid values to use for each float are written to the \texttt{.lof}, etc. files just before each float's entry. These values are used by \texttt{\LaTeX\figure}, etc. to create the HTML links in the List of Figures, etc.

Ctr \LWR@nextautoid

Tracks autoid for floats. Tracks autopage for floats.

These are updated per float as the \texttt{.lof}, \texttt{.lot} file is read.

\newcounter{\LWR@nextautoid}
\newcounter{\LWR@nextautopage}

\LWRsetnextfloat{(autopage)}{(float autoid)}

This is written to the \texttt{.*.html.lof} or \texttt{.*.html.lot} file just before each float's usual entry. The autopage and the float's autoid are remembered for \texttt{\LaTeX\figure} to use when creating the HTML links.

\newcommand*{\LWRsetnextfloat}{\LWR@testnextfloat}
Updated each time a new HTML file is begun. $\LWR\textsetnextfloat$ is written with this and the autoid by the modified $\texttt{\addcontentsline}$ just before each float's entry.

An HTML $\texttt{<figcaption>}$ is not allowed in places where \LaTeX{} does allow a figure caption, such as inside a longtable where the tabular has already started, or inside a center environment. Therefore, a $\texttt{<div>}$ of class $\texttt{figurecaption}$ is used instead.

Low-level code to create HTML tags for captions.

The print versions are from the \texttt{caption} package.

Keep par and minipage changes local:

The \texttt{caption} code was not allowing the closing $\texttt{par}$ tag:

No need for a minipage or $\texttt{parbox}$ inside the caption:

Enclose the original caption code inside an HTML tag:
Low-level patches to create HTML tags for captions.

These are assigned \AtBeginDocument so that other packages which modify captions will have already been loaded before saving the print-mode version.

Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

Patched to write the autopage and autoid before each float's entry. No changes if writing .toc For a theorem, automatically defines \ext@<type> as needed, to mimic and reuse the float mechanism.
Either package provides \captionof, which is later patched at the beginning of the document.

\captionof

Patched to handle paragraph tags.

\captionof

This section controls the generation of the toc, lof, and lot.

The .toc, .lof, and .lot files are named by the source code \jobname.

In HTML, the printed tables are placed inside a <div> of class toc, lof, or lot.

A “sidetoc” is provided which prints a subset of the toc on the side of each page other than the homepage.

The regular \LaTeX infrastructure is used for toc, along with some patches to generate HTML output.
76.1 Reading and printing the toc

\LWR@myshorttoc \{(toc/lof/lot/sidetoc)\}

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular L\TeX, the file is not reset after being read, since the sideroc may be referred to again in each HTML page.

\newcommand*{\LWR@myshorttoc}{\LWR@traceinfo{\LWR@myshorttoc: #1}\LWR@ensuredoingapar%
\IfFileExists{\jobname.#1}{\LWR@traceinfo{\LWR@myshorttoc: loading}}{
\begingroup\makeatletter
\readinthe\{(toc/lof/lot/sidetoc)\}
\sectionstarname
\Closes previous levels:
\ifundefined{chapter}{\LWR@closereference{\LWR@depthsection}}{\LWR@closereference{\LWR@depthchapter}}
\Prints any pending footnotes so that they appear above the potentially large toc:
\LWR@printpendingfootnotes
Place the list into its own chapter (if defined) or section:
\@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}

Create a new HTML nav containing the TOC/LOF/LOT:
\LWR@htmlelementclass(nav){#1}

Create the actual list:
\LWR@myshorttoc(#1)

Close the nav:
\LWR@htmlelementclassend(nav){#1
\@starttoc{(ext)}

Patch \@starttoc to encapsulate the TOC inside HTML tags:
\let\LWR@orig@starttoc@starttoc
\renewcommand{\@starttoc}[1]{
\LWR@htmlelementclass(nav){#1}
\LWR@orig@starttoc(#1)
\LWR@htmlelementclassend(nav){#1}
}

\LWR@copiedsidetoc\quad Used to only copy the TOC file to the sidetoc a single time.

(newfloat and perhaps other packages would re-use \tableofcontents for their own purposes, causing the sidetoc to be copied more than once, and thus end up empty.)

\newbool{LWR@copiedsidetoc}
\boolfalse{LWR@copiedsidetoc}

\tableofcontents\quad Patch \tableofcontents, etc. to print footnotes first. newfloat uses \listoffigures for all future float types.

\AtBeginDocument{
\let\LWR@origtableofcontents\tableofcontents
\renewcommand*{\tableofcontents}{%}

Do not print the table of contents if formatting for a word processor, which will presumably auto-generate its own updated table of contents:
\ifboolexpr{bool(FormatWP) and bool(WPMarkTOC)}{
... table of contents ...
Copy the .toc file to .sidetoc for printing the sidetoc. The original .toc file is re-"}

newed when \tableofcontents is finished.

% \ifbool{LWR@copiedsidetoc}{% 
  \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}% 
  \booltrue{LWR@copiedsidetoc}%
}% \LWR@printpendingfootnotes \LWR@origtab\tableofcontents % \AtBeginDocument
% \listoffigures
\let\LWR@origlistoffigures\listoffigures
\renewcommand*{\listoffigures}{\ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
  === list of figures ===
  \LWR@printpendingfootnotes \LWR@origlistoffigures
}{
}

\listoftables
\let\LWR@origlistoftables\listoftables
\renewcommand*{\listoftables}{\ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
  === list of tables ===
  \LWR@printpendingfootnotes \LWR@origlistoftables
}{
}

76.2 High-level toc commands

\listof\{\{type\}\{\{title\}\}
Emulate the \listof command from the float package (section 230). Used to create lists of custom float types. Also used to redefine the standard \LaTeX \listoffigures and \listoftables commands.

\begin{warpHTML}
\begin{verbatim}
9146 \NewDocumentCommand{\listof}{m +m}{%  
9147 \@ifundefined{\l@#1}{%  
9148 \csdef{\l@#1}##1##2{\hypertocfloat{1}(##1}{\@nameuse{ext@#1}{##1}##2}{%  
9149 }{%  
9150 \LWR@subtab\Varistofcontents{\@nameuse{ext@#1}}{#2}  
9151 \expandafter\newwrite\csname tf@\csname ext@#1\endcsname\endcsname  
9152 \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname  
9153 \jobname.@\nameuse{ext@#1}\relax  
9154 }
\end{verbatim}
\end{warpHTML}

76.3 Side toc

The “side toc” is a table-of-contents positioned to the side.

It may be renamed by redefining \sidetocname, and may contain paragraphs.

css may be used to format the sideroc:

\begin{center}
\begin{tabular}{ll}
\textit{CSS related to sideroc:} & \\
\texttt{div.sidetoccontainer}: & The entire sideroc. \\
\texttt{div.sidetoccontents}: & The table of contents.
\end{tabular}
\end{center}

\begin{warpHTML}
\end{warpHTML}

\textbf{for HTML & PRINT:}

\begin{verbatim}
\begin{warpall}
\end{verbatim}

\textbf{Ctr SideTOCDepth} \ Controls how deep the side-TOC gets. Use a standard \LaTeX section level similar to tocdepth.

\begin{verbatim}
9157 \newcounter{SideTOCDepth}  
9158 \setcounter{SideTOCDepth}{1}
\end{verbatim}

\texttt{\sidetocname} \ Holds the default name for the sideroc.

\begin{verbatim}
9159 \newcommand{\sidetocname}{Contents}  
9160 \end{warpall}
\end{verbatim}

\textbf{for HTML output:}

\begin{verbatim}
9161 \begin{warpHTML}
\end{verbatim}
\LWR@sidetoc \textbf{Creates the actual side-TOC.}

\begin{verbatim}
\newcommand*{\LWR@sidetoc}{
\LWR@forcenewpage
\LWR@stoppars

The entire \texttt{sidetoc} is placed into a \texttt{nav} of class \texttt{sidetoc}.

\LWR@htm/l.Vare/l.Varementc/l.Varass{div}{sidetoccontainer}
\LWR@htm/l.Vare/l.Varementc/l.Varass{nav}{sidetoc}
\setcounter{tocdepth}{\va/l.Varue{SideTOCDepth}}

The title is placed into a \texttt{<div>} of class \texttt{sidetoctitle}, and may contain paragraphs.

\begin{BlockClass}{sidetoctitle}
\ifsvoid{thetitle}{}
\InlineClass{sidetoctitle}{\thetitle}\par
\sidetocname
\end{BlockClass}

The table of contents is placed into a \texttt{<div>} of class \texttt{sidetoccontents}.

\begin{BlockClass}{sidetoccontents}
\LinkHome
\LWR@myshorttoc{sidetoc}
\end{BlockClass}
\LWR@htm/l.Vare/l.Varementc/l.Varassend{nav}{sidetoc}
\LWR@htm/l.Vare/l.Varementc/l.Varassend{div}{sidetoccontainer}
\end{verbatim}

\subsection{Low-level TOC line formatting}

\numberline \{(\textit{number})\}

(Called from each line in the \texttt{.aux}, \texttt{.lof} files.)

Record this section number for further use:

\begin{verbatim}
\newcommand*{\LWR@numberline}{\LWR@sectionnumber{#1}\quad}
\LetLtxMacro{\numberline}{\LWR@numberline}
\newcommand*{\LWR@maybetocdata}{\textbf{Replaced by tocdatal.} Adds author name.}
\end{verbatim}
\hypertoc \{\langle 1: depth\rangle \} \{\langle 2: type\rangle \} \{\langle 3: name\rangle \} \{\langle 4: page\rangle \}

Called by \l@section, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

#1 is depth
#2 is section, subsection, etc.
#3 the text of the caption
#4 page number

\NewDocumentCommand{\hypertoc}{m m +m m}{%
  \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
  \respond{#1}{#2}{#3}{#4}{%
    \LWR@startpars%
    \LWR@subhyperref{\LWR@htmrefsection\LWR@refsection{autopage-#4}}{#3}{toc#2}{%
      \LWR@origpound\LWR@printmbox{autosec-#4}{%
        \LWR@maybetocdata%
      }{%
        \LWR@stoppars%
      }
    }%}
  }%}

Respond to \texttt{tocdepth}:

\ifthenelse{\cnttest{#1}{\leq}{\value{tocdepth}}}{%
  \LWR@startpars%
  \LWR@subhyperref{\LWR@htmlrefsection\LWR@refsection{autopage-#4}}{#3}{toc#2}{%
    \LWR@origpound\LWR@printmbox{autosec-#4}{%
      \LWR@maybetocdata%
    }%}
  }%}

\LWR@stoppars%
\LWR@traceinfo{hypertoc done}%

\setcounter{lofdepth}{1}
\setcounter{lotdepth}{1}

\setcounter{lofdepth}{1}
\setcounter{lotdepth}{1}
\hypertocfloat \{(1: depth) \{(2: type) \{(3: ext of parent) \{(4: caption) \{(5: page)\}\}\}\}\}\}

#1 is depth
#2 is figure, table, etc.
#3 is \lof, lot, of the parent.
#4 the text of the caption
#5 page number

9212 \newcommand{\hypertocfloat}[5]{
9213 \LWR@startpars

If some float-creation package has not yet defined the float type's \lofdepth counter, etc, define it here:

9214 \ifundefined{c@#3depth}{
9215 \newcounter{#3depth}%
9216 \setcounter{#3depth}{1}%
9217 }{%

Respond to \lofdepth, etc.:

9218 \LWR@traceinfo{\hypertocfloat depth is #1 \#3depth is \arabic{#3depth}}%
9219 \ifthenelse{\cnttest{#1}{\leq}{\arabic{#3depth}}}{}
9220 \LWR@startpars%
9221 \LWR@subhyperrefc{\LWR@htmrefsectionfilename{autopage-\arabic{\LWR@nextautopage}}}{\LWR@origpound}{\LWR@print@mbox{autoid-\arabic{\LWR@nextautoid}}}{#4}{toc#2}%

9222 \LWR@subhyperrefclass%
9223 \LWR@htmrefsectionfilename{autopage-\arabic{\LWR@nextautopage}}%
9224 \LWR@origpound\LWR@print@mbox{autoid-\arabic{\LWR@nextautoid}}%
9225 \{#4}{toc#2}%
9226 \LWR@maybetocdata%
9227 \LWR@stoppars%
9228 %
9229 \}
9230 }

Automatically called by \contentsline:

\l@part \{\{name\}\{page\}\}

Uses \DeclareDocumentCommand in case the class does not happen to have a \part.

9231 \DeclareDocumentCommand{\l@part}{m m}{\hypertoc{-1}(part)\{#1}\{#2}}
\l@chapter \langle name \rangle \langle page \rangle

Uses \DeclareDocumentCommand in case the class does not happen to have a \chapter.

9232 \@ifundefined{chapter}
9233 {}
9234 {
9235 \DeclareDocumentCommand{\l@chapter}{m m}{{\hypertoc{0}{chapter}{#1}{#2}}}
9237 }

\l@section \langle name \rangle \langle page \rangle

9238 \renewcommand{\l@section}[2]{{\hypertoc{1}{section}{#1}{#2}}}

\l@subsection \langle name \rangle \langle page \rangle

9239 \renewcommand{\l@subsection}[2]{{\hypertoc{2}{subsection}{#1}{#2}}}

\l@subsubsection \langle name \rangle \langle page \rangle

9240 \renewcommand{\l@subsubsection}[2]{{\hypertoc{3}{subsubsection}{#1}{#2}}}

\l@paragraph \langle name \rangle \langle page \rangle

9241 \renewcommand{\l@paragraph}[2]{{\hypertoc{4}{paragraph}{#1}{#2}}}

\l@subparagraph \langle name \rangle \langle page \rangle

9242 \renewcommand{\l@subparagraph}[2]{{\hypertoc{5}{subparagraph}{#1}{#2}}}

\l@figure \langle name \rangle \langle page \rangle

9243 \renewcommand{\l@figure}[2]{{\hypertocfloat{1}{figure}{lof}{#1}{#2}}}

\l@table \langle name \rangle \langle page \rangle

9244 \renewcommand{\l@table}[2]{{\hypertocfloat{1}{table}{lot}{#1}{#2}}

9245 \end{warpHTML}

77  Index and glossary

See:
http://tex.stackexchange.com/questions/187038/
   how-to-mention-section-number-in-index-created-by-imakeidx
Index links are tracked by the counter \texttt{LWR@autoindex}. This counter is used to create a label for each index entry, and a reference to this label for each entry in the index listing. This method allows each index entry to link directly to its exact position in the document.

\texttt{for HTML output:}

\begin{verbatim}
\newcounter{LWR@autoindex}
\setcounter{LWR@autoindex}{0}
\newcounter{LWR@autoglossary}
\setcounter{LWR@autoglossary}{0}
\end{verbatim}

\texttt{Env theindex}

\begin{verbatim}
\ifundefined{chapter}{\newcommand*{\LWR@indexsection}{\section*{#1}}}{\newcommand*{\LWR@indexsection}{\chapter*{#1}}}
\AtBeginDocument{
\renewenvironment*{theindex}{\LWR@indexsection{\indexname}{\item}\LWR@indexitem}{}}
\end{verbatim}

\texttt{\LWR@indexitem} \texttt{[\langle index key \rangle] } The optional argument is added to support \texttt{repeatindex}.

\begin{verbatim}
\newcommand{\LWR@indexitem}{\empty}
\end{verbatim}

\texttt{\LWR@indexsubitem}

\begin{verbatim}
\newcommand{\LWR@indexsubitem}{\empty}
\end{verbatim}

\texttt{\LWR@indexsubsubitem}

\begin{verbatim}
\newcommand{\LWR@indexsubsubitem}{\empty}
\end{verbatim}

\texttt{\@wrindex \{} \texttt{\langle term \rangle} \} Redefined to write the \texttt{LWR@autoindex} counter instead of page.
The document contains code snippets related to LaTeX packages and commands, specifically those dealing with indexing and reference formatting. Here are the key points:

- \LWR@glossary \{(term)\} is redefined to write the \LWR@latestautopage counter instead of page.
- \LWR@indexnameref \{(LWR@autoindex)\} creates a hyperlink based on the given entry's autoindex.
- \LWR@doindexentry \{(LWR@autoindex, or macros.)\} creates a hyperlink, or handles \see, \textbf, etc.
- \LWR@hyperindexrefnullified handles macros commonly seen inside an \index entry. Each macro is redefined to create and format a link to its entry.

Additional index formatting:
- To handle additional macros:
  \appto\LWR@hyperindexrefnullified{...}
\hyperindexref{\langle LWR@autoindex \rangle}

\hyperindexref{LWR@autoindex} is inserted into *.ind by the makeindex style file \warp.ist or the xindy style file \warp.xdy.

\newcommand{\hyperindexref}[1]{% 
  In long index lines with numerous entries, makeindex can insert a newline before the page number, resulting in an extra space before the first digit. If the first character is a space, remove it first.

  \def{LWR@tempone}{#1}%
  \IfBeginWith{LWR@tempone}{ }{%
    \StrGobbleLeft{LWR@tempone}{1}[LWR@tempone]%
  }{}%}

  If a numeric entry, create a link. If not numeric, such as \see, use the entry as-is. \textbf, \textit, etc. have been redefined above to create and format the entry.

  \IfInteger{LWR@tempone}{\LWR@indexnameref{LWR@tempone}}{%
    \begingroup
      \LWR@hyperindexrefnu{LWR}{LWRified}{#1}\
    \endgroup
  }%

\end{warpHTML}

\begin{warpprint}
\newcommand{\hyperindexref}[1]{#1}
\end{warpprint}

\textbf{for HTML \& PRINT:} For the glossaries package, try to prevent an error where \glo@name was not found:

\begin{warpa{LWR}{LWR}}
\providecommand{\glo@name}{}
\end{warpa{LWR}{LWR}}
78 Bibliography presentation

for HTML output: \begin{warpHTML}

\bibliography{(filenames)}

Modified to use the base jobname instead of the \_htm jobname.

\def\bib/l.Variography#1{% 
  \if@files
    \immediate\write\@auxout{\string\bibdata{#1}}% 
  \fi
  \begingroup% 
  \@input@{\jobname.bbl}% original
  \begingroup% 
  \@input@{\BaseJobname.bbl}% lwp
  \endgroup% 
}\@bib/l.Varabe/l.Var\[
\bib/l.Variography\[
  \langle\text-refnumber\rangle\]

\renewcommand{\@bib/l.Varabe/l.Var}\[1\]{[#1]\quad}

Env thebib/l.Variography To emphasize document titles in the bibliography, the following redefines \em inside thebib/l.Variography to gather everything until the next closing brace, then display these tokens with \textit.

Adapted from embracedef.sty, which is by Takayuki Yato:

https://gist.github.com/zr-tex8r/b72555e3e7ad2f0a37f1

\AtBeginDocument{% 
  \AtBeginEnvironment{thebib/l.Variography}{% 
    \providecommand*{\LWR@newem}[1]{\textit{#1}}% 
    \renewrobustcmd{\em}{% 
      \begingroup% 
      \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}% 
      \afterassignment\LWR@em@after% 
      \toks@\bgroup% 
      \xdef\LWR@em@after{\noexpand\LWR@em@after}\the\toks@% 
    }% 
    \endgroup% 
  }% 
}\AtBeginEnvironment{thebib/l.Variography}{% 
\end{warpHTML}
79 Restoring original formatting

\LWR@restoreorigformatting

Used to temporarily restore the print-mode meaning of a number of formatting, graphics, and symbols-related macros while generating SVG math or a LaTeX image.

Must be used inside a group.

Sets \LWR@formatting to print until the end of the group.

A number of packages will \appto additional actions to this macro.

Various packages add to this macro using \appto.

For HTML output:

begin(warpHTML)
\newcommand*{\LWR@restoreorigformatting}{%
\LWR@traceinfo{LWR@restoreorigformatting}%
Numerous macros change their print/HTML meaning depending on \LWR@formatting:
\renewcommand*{\LWR@formatting}{print}%
linespread(1)%
\let\par\LWR@origpar%
\LWR@select@print@hspace%
\LetLtxMacro{\hfil}{\LWR@orighfil}%
\let\hss{\LWR@orighss}%
\let\llap{\LWR@origllap}%
\let\rlap{\LWR@origrlap}%
\let\hfilneg{\LWR@orighfilneg}%
\let{\LWR@origcomma} disable HTML short unbreakable space
\let{\thinspace} disable HTML short unbreakable space
\let{\negthinspace} disable HTML negative short unbreakable space
\let{\textellipsis} disable HTML text ellipsis
\let{\textless} disable HTML text less
\let{\textgreater} disable HTML text greater
\let{\textbf} disable HTML bold
\let{\textit} disable HTML italic
\let{\textsc} disable HTML small caps
\let{\texttt} disable HTML typewriter
\let{\textup} disable HTML upright
\let{\textsf} disable HTML sans serif
\let{\textmd} disable HTML medium
\let{\textsh} disable HTML shapes
\end{warpHTML}

\section{Math}

\subsection{Limitations}

\subsubsection{Math in section names}

If using named HTML files, in section names use paren math \((x+y)\) instead of dollar math \$x+y\$. (Dollar math works, but appears in the filename.) Or, use a short name for the \texttt{toc} entry without the math, or use \texttt{texorpdfstring}:

\begin{verbatim}
\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}
\end{verbatim}

\paragraph{math in section names}
80.1.2 Rendering tradeoffs

**Math rendering** Math may be rendered as svg graphics or using the MathJax JavaScript display engine.

**SVG files** Rendering math as images creates a new svg file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to svg only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

**SVG inline** The svg images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

**PNG files** Others \TeX-to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but svg files are the preferred approach for scalable graphics.

**MathML** Conversion to MathML might be a better approach, among other things allowing a more compact representation of math than svg drawings. Problems with MathML include limited browser support and some issues with the fine control of the appearance of the result. Also see section 11 regarding EPUB output with MathJax.

80.1.3 svg option

**SVG math option** For svg math, math is rendered as usual by \TeX into the initial pdf file using the current font\(^\text{18}\), then is captured from the pdf and converted to svg graphics via a number of utility programs. The svg format is a scalable-vector web format, so math may be typeset by \TeX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An html alt attribute carries the \TeX code which generated the math, allowing copy/paste of the \TeX math expression into other documents.

**SVG image font size** For the lateximage environment, the size of the math and text used in the svg image may be adjusted by setting \LateximageFontSizeName to a font size name — without the backslash, which defaults to:

\renewcommand{\LateximageFontSizeName}{normalsize}

For inline svg math, font size is instead controlled by \LateximageFontScale, which defaults to:

\newcommand*{\LateximageFontScale}{.75}

**SVG math copy/paste** For svg math, text copy/paste from the html <alt> tags lists the equation number or tag for single equations, along with the \TeX code for the math expression. For \AMS environments with multiple numbers in the same environment, only the first and

\(^\text{18}\)See section 506 regarding fonts and fractions.
last is copy/pasted, as a range. No tags are listed inside a starred `AMS` environment, although the \( \text{tag} \) macro will still appear inside the `\LaTeX` math expression.

SVG math does not work inside `\LaTeX` boxes, since a `\newpage` is required before and after each image.

### 80.1.4 MathJax option

**MathJax math option**

The popular MathJax alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

When `MathJax` is enabled, math is rendered twice:

1. As regular `\LaTeX` PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of `\LaTeX`, and

2. As detokenized printed `\LaTeX` commands placed directly into the HTML output for interpretation by the `MathJax` display scripts. An additional script is used to pre-set the equation number format and value according to the current `\LaTeX` values, and the `MathJax` cross-referencing system is ignored in favor of the `\LaTeX` internal system, seamlessly integrating with the rest of the `\LaTeX` code.

### 80.1.5 Customizing MathJax

`MathJax` does not have preexisting support every possible math function. Additional `MathJax` function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```latex
\CustomizeMathJax{
    \newcommand{\expval}[1]{\langle #1 \rangle}
    \newcommand{\abs}[1]{\lvert #1 \rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}} \newcommand{\arcosh}{\text{arcosh}} \newcommand{\NN}{\mathbb{N}}
```

### 80.1.6 MathJax limitations

**MathJax limitations**

- `MathJax` itself does not support subequations. This may be improved by parsing the `\LaTeX` math expression to manually insert tags, but this has not yet been done.

- Footnotes inside equations are not yet supported while using `MathJax`. 

---

World Patent

Last is copy/pasted, as a range. No tags are listed inside a starred `AMS` environment, although the `\text{tag}` macro will still appear inside the `\LaTeX` math expression.

SVG math does not work inside `\LaTeX` boxes, since a `\newpage` is required before and after each image.

### 80.1.4 MathJax option

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The popular MathJax alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

When `MathJax` is enabled, math is rendered twice:

1. As regular `\LaTeX` PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of `\LaTeX`, and

2. As detokenized printed `\LaTeX` commands placed directly into the HTML output for interpretation by the `MathJax` display scripts. An additional script is used to pre-set the equation number format and value according to the current `\LaTeX` values, and the `MathJax` cross-referencing system is ignored in favor of the `\LaTeX` internal system, seamlessly integrating with the rest of the `\LaTeX` code.

### 80.1.5 Customizing MathJax

`MathJax` does not have preexisting support every possible math function. Additional `MathJax` function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```latex
\CustomizeMathJax{
    \newcommand{\expval}[1]{\langle #1 \rangle}
    \newcommand{\abs}[1]{\lvert #1 \rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}} \newcommand{\arcosh}{\text{arcosh}} \newcommand{\NN}{\mathbb{N}}
```

### 80.1.6 MathJax limitations

**MathJax limitations**

- `MathJax` itself does not support subequations. This may be improved by parsing the `\LaTeX` math expression to manually insert tags, but this has not yet been done.

- Footnotes inside equations are not yet supported while using `MathJax`. 

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Math appearing inside a lateximage, and therefore also inside a Ti\kz or picture environment, is rendered as SVG math even if MathJax is used in the rest of the document.

Usage of siunitx inside a math equation is supported via a third-party MathJax extension. While inside a math expression, do not use \SI or \si inside \text, where it will be rendered as normal text.

siunitx inside an equation

https://github.com/burnpanck/MathJax-siunitx

Also see section 9.7.11.

A tabbing environment is emulated using an HTML <pre>. While MathJax is enabled inside tabbing, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.

tabbing

Other math-related macros and packages are not supported by MathJax, including \ensuremath and bigdelim, along with occasionally-used macros such as \relax. lwarp emulates footnotes, units, and nicefrac for MathJax.

\subsection{Catcode changes}

The math shift character $ is not set for HTML output until after the preamble. Macros defined in the preamble which contain $ must be enclosed between \StartDefiningMath and \StopDefiningMath to temporarily change to the HTML meaning of $:

\StartDefiningMath
\newcommand{. . . }
\StopDefiningMath

As an alternative, use \( and \) instead of $, in which case \StartDefiningMath and \StopDefiningMath are not necessary.

If a package defines macros using $, it may be necessary to use \StartDefiningMath and \StopDefiningMath before and after loading the package.

\subsection{Complicated inline math objects}

An inline math expression is usually converted to a reusable hashed svg math image, or a MathJax expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as $x+1$, so the image can be reused for multiple instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses. Another problem is complicated contents which do not expand well in an alt tag. The macro \linenormal may be used before a dynamic math expression, and \linenormal after. Doing so tells lwarp to use an unhashed svg math image, even if MathJax is in use. See section 45.

\subsection{Complicated display math objects}

By default, or when selecting \displaymathnormal, MathJax math display environ-
ments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

When selecting \displaymathother, it is assumed that the contents are more complicated than "pure" math. An example is an elaborate Tikz picture, which will not render in MathJax and will not make sense as an HTML alt tag. In this mode, MathJax is turned off, math display environments become SVG images, even if MathJax is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

### 80.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader’s native language.

**for HTML & PRINT:**

\mathimagename
The HTML alt tag for an SVG math image.

\mathimagename
Default: ‘‘math image’’

```
\newcommand*{\mathimagename}{math image}
```

\packagediagramname
Appended to the lateximage HTML alt tag for the images generated by many packages.

\packagediagramname
Default: ‘‘diagram’’

```
\newcommand*{\packagediagramname}{diagram}
```

**for HTML output:**

\LWR@externalfilenct
Counter for the external files which are generated and then referenced from the HTML:

```
\newcounter{LWR@externalfilenct}
```

\LWR@indisplaymathimage
True if processing display math for SVG output. Inside a lateximage, display math is only set to print-mode output if \LWR@indisplaymathimage is false. Used to avoid nullifying display math before it has been completed.

```
\newbool{LWR@indisplaymathimage}
```

\LWR@xfakebold
True if \xfakebold \setBold is in use.
Plain dollar signs appearing in the HTML output may be interpreted by MathJax to be math shifts. For a plain text dollar $\$, use an HTML entity to avoid it being interpreted by MathJax, unless are inside a lateximage, in which case it will not be seen by MathJax.

A marker to be used to help pdfcrop identify the inline math baseline and width. If either graphicx or graphics is loaded, this marker is placed at the lower left and lower right corners of the inline math. pdfcrop is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

A marker with alpha or opacity of 0% is not registered by pdfcrop, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final SVG image.

If graphicx is loaded, this marker is sized as a tiny 1 sp square. If graphics is loaded, this marker is used at its default size of around .25 pt. If neither graphics package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using graphicx.

Places a small marker in an svg inline image. If graphics or graphicx are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.
For inline math, uses MathJax, or for SVG math the image is measured and adjusted to the baseline of the HTML output, and placed inside a LaTeX image.

**image filename hashing**  If starred, a hashed filename is used. If so, the hash is based on the alt tag and also the additional hashing argument.

This may be used to provide an expression with a simple alt tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TeX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.
MathJax cannot parse the often complicated \TeX expressions which appear in the various uses of \texttt{\textbackslash ensuredmath}. \texttt{\textbackslash ensuremath} forces the \texttt{alt} tag to "\texttt{(math image)}", as translated according to \texttt{\textbackslash mathimagnename}. If this is the case, force the use of a \texttt{lateximage} even if MathJax. Likewise for \texttt{siunitx} if \texttt{parse-numbers=false}.

If MathJax, or if formatting math for a word processor, and not \texttt{\textbackslash ensuredmath}, and not a dynamic math expression, print the math expression:

\begin{verbatim}
\ifboolexpr{\texttt{boo}{mathjax} or \left(\texttt{boo}{FormatWP} and \texttt{boo}{WPMarkMath}\right) and \texttt{not test {\ifstrequal {#2} {\texttt{\textbackslash mathimagnename}}} }}{\% from \texttt{\textbackslash ensuredmath}}{ % not boolean expr\}
\end{verbatim}

For \texttt{M/A.sc/T.sc/H.scJ/A.sc/X.sc}, print the math between $\left(\textit{and} \right)$:

\begin{verbatim}
\ifboolexpr{ %
\LWR@traceinfo{LWR@subsing/l.Varedo/l.Var/l.Varar: Mathjax}\%
\{\textbackslash textbackslash{\LWR@HTMLsanitize{\LWR@HTMLsanitize[#4]{\textbackslash textbackslash}}}}\%
\LWR@traceinfo{LWR@subsing/l.Varedo/l.Var/l.Varar: NOT mathjax, or is ensuremath, or is dynamic}\%
\end{verbatim}

Measure the depth, width, and height of the math image:
Temporarily disable formatting while measuring the image parameters:

```
\LWR@restoreorigformatting%
\RenewDocumentEnvironment{lateximage}{s o o o}{}{}% inside group
\LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
\LWR@traceinfo{Using font family \LWR@ffamily}%
@nameuse{\LWR@orig\LWR@ffamily fami\LWR@fami}%
\LWR@traceinfo{Using font series \LWR@fseries}%
@nameuse{\LWR@orig\LWR@fseries series}%
\LWR@traceinfo{Using font shape \LWR@fshape}%
@nameuse{\LWR@orig\LWR@fshape shape}%
```

\texttt{lateximagedepth} must be nested to avoid generating paragraph tags. \AMS:\math modifies the \text macro such that \texttt{addtocounter} does not always occur as expected. Lower-level code is used instead.

```
\global\advance\c@LWR@ateximagedepth 1\rex%
```

Typeset and save the contents, depending on how they were generated:

**SVG math:** \LWR@origensuredmath is part of argument #4.

**SVG math \ensuremath:** \LWR@origensuredmath is part of argument #4.

**SVG dynamic math:** \LWR@origensuredmath is part of argument #4.

**Mathjax:** Argument #4 is the contents of the math expression without \LWR@origensuredmath. This case is handled above.

**Mathjax \ensuremath:** \LWR@origensuredmath is part of argument #4.

**Mathjax dynamic math:** Argument #4 is the contents of the math expression without \LWR@origensuredmath, so \LWR@origensuredmath is added below.

```
\ifmmode
\ifmmode%
\global\sbox\LWR@singlebox(#4)%
\else%
\ifbool{\LWR@dynamicmath}{%
\ifbool{mathjax}{%
\global\sbox\LWR@singlebox(\LWR@origensuredmath(#4))%
}%
\global\sbox\LWR@singlebox(#4)%
}%
\fi%
\fi%
```
Add a small and almost transparent marker at the depth of the image.

A math minus sign has the same depth as a plus, even though it does not draw anything below the baseline. This means that pdfcrop would crop the image without depth. The marker below the baseline is seen by pdfcrop and preserves the depth.

```latex
\global\sbox{\LWR@sing/l.Varedo/l.Var/l.Vararbox}{%
  \usebox{\LWR@sing/l.Varedo/l.Var/l.Vararbox}
  \raisebox{-\dp{\LWR@sing/l.Varedo/l.Var/l.Vararbox}}{%
    \LWR@addbaselinemarker%
  }%
}%
```

More low-level code to undo the counter change.

```latex
\global\advance\c@LWR@/lateximagedepth -1\relax% Due to AmS \text macro.
```

Measure the depth:

```latex
\setlength{\LWR@sing/l.Varedo/l.Var/l.Varardepth}{% 
  \LaTeXimageFontScale\dp{\LWR@sing/l.Varedo/l.Var/l.Vararbox} %
}\g/l.Varoba/l.Var\LWR@sing/l.Varedo/l.Var/l.Varardepth=\LWR@sing/l.Varedo/l.Var/l.Varardepth%
```

Likewise for width:

```latex
\setlength{\LWR@sing/l.Varedo/l.Var/l.Vararwidth}{% 
  \LaTeXimageFontScale\wd{\LWR@sing/l.Varedo/l.Var/l.Vararbox} %
}\g/l.Varoba/l.Var\LWR@sing/l.Varedo/l.Var/l.Vararwidth=\LWR@sing/l.Varedo/l.Var/l.Vararwidth%
```

Likewise for total height:

```latex
\setlength{\LWR@sing/l.Varedo/l.Var/l.Vararheight}{% 
  \LaTeXimageFontScale\ht{\LWR@sing/l.Varedo/l.Var/l.Vararbox} %
  \addtolength{\LWR@sing/l.Varedo/l.Var/l.Vararheight}{% 
    \LaTeXimageFontScale\dp{\LWR@sing/l.Varedo/l.Var/l.Vararbox} %
  }%
}\g/l.Varoba/l.Var\LWR@sing/l.Varedo/l.Var/l.Vararheight=\LWR@sing/l.Varedo/l.Var/l.Vararheight%
```

```latex
\endgroup%
```

Set a style for the the height or width. The em unit is used so that the math scales according to the user's selected font size.

```latex
\ifdimgreater{\LWR@sing/l.Varedo/l.Var/l.Vararwidth}{.7\LWR@sing/l.Varedo/l.Var/l.Vararheight}{% 
  \def\LWR@sing/l.Varedo/l.Var/l.Vararstyle{%
```
If a very narrow width, use the height:

\ifdimless{\LWR@single\dollar\width}{.2em} %
  \def\LWR@single\dollar\style{%
    \def\LWR@single\dollar\height{\LWR@convertto{em}{\the\LWR@sing\dollar\height} em%}
    )%
  %}
%}

If very wide and short, use the width:

\ifdimless{\LWR@single\dollar\height}{.2em} %
  \def\LWR@single\dollar\style{%
    \def\LWR@single\dollar\height{\LWR@convertto{em}{\the\LWR@sing\dollar\height} em%}
    \LWR@converttonumber{\LWR@sing\dollar\width}{em} em%
    )%
  %}
%}

If there is significant text depth, add the depth to the style.

\ifdimgreater{\LWR@single\dollar\depth}{0.05ex}{%
  \def\LWR@single\dollar\depth\style{%
    \LWR@printmbox{\LWR@sing\dollar\depth\style}
    ) % extra space
  %}
%}

Create the lateximage using the alternate tag and the computed size and depth. The star causes lateximage to use an MD5 hash as the filename. When hashing, also include the current font and color in the hash.

\ifbool{\LWR@dynamicmath}{%
  \LWR@traceinfo{subsing\dollar: dynamic} %
  \begin{lateximage} % no hashing
  [\LWR@imagename] % alt tag
  [\LWR@single\dollar] % no add’l hashing
  [\LWR@single\dollar\depth\style] % CSS
  %}
%}

\LWR@traceinfo{subsing\dollar: static} %
\IfValueTF{#1}{%
  \LWR@findcurrenttextcolor% sets \LWR@tempcolor
Support for xfakebold:

\ifbool{LWR@xfakebold}%
  \ifbool{LWR@tempone}{Y}{N}%
  \begin{lateximage}% use hashing
    [%#2% alt
    [% add'l' hashing
      #3%
    ]%
    \LWR@sing\Var{LWR@familystyle}\Var{LWR@seriestyle}\Var{LWR@shapestyle}\Var{LWR@tempcolorstyle}\Var{LWR@tempone xfakebold}
  ]%
  \end{lateximage}% CSS
\%
\end{lateximage}% no hashing
  [%#2% alt
  [% no add'l hashing
    [% no add'l hashing
      [% LWR@familystyle LWR@seriestyle LWR@shapestyle LWR@tempcolorstyle]
    ]%
    \LWR@sing\Var{LWR@familystyle}\Var{LWR@seriestyle}\Var{LWR@shapestyle}\Var{LWR@tempcolorstyle}
  ]%
\%
}

Place small and almost transparent markers on the baseline at the left and right edges of the image. These markers are seen by pdfcrop, and force vertically-centered objects such as a dash to be raised off the baseline in the cropped image, and also force the total width and left/right margins to be correct. (Except that in some fonts a character may exceed the bounding box, and thus may appear wider than expected when converted to an image.)

\LWR@addbaselinemakerker%

Support for xfakebold:

\LWR@applyxfakebold%

Typeset the contents:

\usebox{\LWR@singledollarbox}%

The closing baseline marker:

\end{lateximage}% not mathjasc
\endgroup%
\end{lateximage}% not in a lateximage
\LWR@traceinfo{LWR@subsingledollar: done}%
\LetLtxMacro\LWR@origdo{l.Var}/l.Varar$
\LetLtxMacro\LWR@secondorigdo{l.Var}/l.Varar$
% ba/l.Varance for editor syntax highlighting
\LetLtxMacro\LWR@origopenparen\(
\LetLtxMacro\LWR@origc/l.Varoseparen\)
\LetLtxMacro\LWR@origopenbracket\[
\LetLtxMacro\LWR@origc/l.Varosebracket\]

Redefine the dollar sign to place math inside a \texttt{lateximage}, or use \LaTeX{}:

$\begin{group}
catcode'\$=1\active$
\protected\gdef${\@ifnextchar$\LWR@doub/l.Varedo/l.Var/l.Varar}\LWR@sing/l.Varedo/l.Var/l.Varar}\

Used by \texttt{chemformula} to escape single-dollar math:

\protected\gdef\LWR@newsing/l.Varedo/l.Var/l.Varar{\@ifnextchar$\LWR@doub/l.Varedo/l.Var/l.Varar}\LWR@sing/l.Varedo/l.Var/l.Varar}

\LWR@doub/l.Varedo/l.Var/l.Varar
Redefine the double dollar sign to place math inside a \texttt{lateximage}, or use \LaTeX{}:

\protected\gdef\LWR@doub/l.Varedo/l.Var/l.Varar$#1$$%

If \LaTeX{} or formatting for a word processor, print the \LaTeX{} expression:

\ifboolexpr{bool(mathjax) or ( bool(FormatWP) and bool(WPMarkMath) ) }%

For \LaTeX{}, print the math between $[ and ]$:

{%
\textbackslash[%
\LWR@HTMLsanitize{#1}%
\textbackslash%
}%

\textbackslash%

For SVG, print the math inside a \texttt{lateximage}, with an <alt> tag of the \LaTeX{} code:

{%
\begin{BlockClass}{displaymath}%
\LWR@newautoidanchor%
\booltrue{\LWR@indisplaymathimage}%
\begin{lateximage}%
[%
\textbackslash[[] % extra space
\LWR@HTMLsanitize{#1} % extra space
\textbackslash[[]%}

Support for \texttt{xfakebold}:

\LWR@applyxfakebold%
\LWR@sing/l.Varedo/l.Var/l.Varar \{⟨alt text⟩\} \{⟨math expression⟩\}

\LWR@sing/l.Varedo/l.Var/l.Varar
\protected\gdef\LWR@sing/l.Varedo/l.Var/l.Varar#1${%
\IfBoo/l.Var{mathjax}{%
\LWR@subsing/l.Varedo/l.Var/l.Varar*%{a/l.Vart tag
\textbacks/l.Varash( %
\LWR@HTMLsanitize{#1} % extra space
\textbacks/l.Varash)%
\LWR@subsing/l.Varedo/l.Var/l.Varar}% not mathjax
{sing/l.Varedo/l.Var/l.Varar}% add'/l.Var hashing
{#1}% contents
}% not mathjax
%
{singlollar}% add’l hashing
{#1}% contents
}% not mathjax
%
\textbacks/l.Varash( %
\LWR@HTMLsanitize{#1} % extra space
\textbacks/l.Varash)%
\LWR@subsing/l.Varedo/l.Var/l.Varar}% not mathjax
%
{singlollar}% add’l hashing
{\LWR@origensuredmath{#1}}% contents
}% not mathjax
%
\AtBeginDocument{
\protected\gdef\LWR@openbracketnorma/l.Var\[\]
\LetLtxMacro\LWR@c{l.Varosebracketnorma/l.Var\]}
}\AtBeginDocument{
\LetLtxMacro\LWR@openbracketnorma/l.Var\[\]
\LetLtxMacro\LWR@c{l.Varosebracketnorma/l.Var\]}
\@ensuredmath
\{⟨expression⟩\}

Redefine to the above dollar macros.

\IfBoo/l.Var{mathjax}{%
\protected\gdef\(#1\){$#1$}
\protected\gdef\[#1\]{$$#1$$}
}%
\endgroup

\@ensuredmath
\{⟨expression⟩\}

If MathJax, a lateximage is used, since \ensuremath is often used for complex \TeX expressions which MathJax may not render. If svg math, a hashed file is used with a simple alt tag, but additional hashing provided by the contents.
If already inside a \textit{lateximage} in math mode, continue as-is.

Create an inline math \textit{lateximage} with a simple \texttt{alt} tag and additional hashing according to the contents.

Remove the old math and displaymath environments:

\begin{enumerate}
\item \texttt{Env math} Set math mode then typeset the body of what was between the begin/end. See the \texttt{environ} package for \texttt{BODY}.
\item \texttt{Env LWR@displaymathnormal} Set math mode then typeset the body of what was between the begin/end. See the \texttt{environ} package for \texttt{BODY}.
\end{enumerate}
Env LWR@displaymathother A version of displaymath which can handle complicated objects, but does not supply MathJAX or HTML alt tags.

\newenvironment{LWR@displaymathother}
{\begin{B{lVarockC{lVarass}}{disp\lVaraymath}\LWR@newautoidanchor\boo{lVartrue}{LWR@indisp\lVaraymathimage}\begin{/lVarateximage}\[(disp\lVaraymath)\]}
{\LWR@origdo/lVar/lVarar\LWR@origdo/lVar/lVarar\end{/lVarateximage}\end{B/lVarockC/lVarass}}}

Env LWR@equationother A version of displaymath which can handle complicated objects, but does not supply MathJAX or HTML alt tags.

\newenvironment{LWR@equationother}
{\begin{B{lVarockC{lVarass}}{disp\lVaraymathnumbered}\LWR@newautoidanchor\boo{lVartrue}{LWR@indisp\lVaraymathimage}\begin{/lVarateximage}\[(disp\lVaraymath)\]}
{\LWR@origequation}\LWR@origendequation\end{/lVarateximage}\end{B/lVarockC/lVarass}}

80.4 MathJAX support

Ctr LWR@nextequation Used to add one to compute the next equation number.

\newcounter{LWR@nextequation}

\LWR@syncmathjax Sets the MathJAX equation format and number for the following equations.

These MathJAX commands are printed inside “\(” and “\)” characters. They are printed to HTML output, not interpreted by \LaTEX.
\newcommand*{\LWR@syncmathjax}{
If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

\ifcsdef{thechapter}{
  \InlineClass(hidden){
    \textbackslash{}
    \textbackslash{}setesection \{\thechapter\}
  }
}
\setcounter{LWR@nextequation}{{\value{equation}}}
\addtocounter{LWR@nextequation}{1}
Place the MathJax command inside \textbackslash{} characters, to be printed to HTML, not interpreted by TEX.

\setcounter{LWR@nextequation}{{\arabic{LWR@nextequation}}}
\addtocounter{LWR@nextequation}{1}

MathJax doesn't allow setting the equation number to 1:

\ifthenelse{\cnttest{\value{equation}}>0}{
  Tell T\TeX{} that the next set of equations begins with the current T\TeX{} equation number, plus one.
  \setcounter{LWR@nextequation}{{\value{equation}}}
  \addtocounter{LWR@nextequation}{1}
  Place the MathJax command inside \textbackslash{} characters, to be printed to HTML, not interpreted by T\TeX{}.
  \InlineClass(hidden){
    \textbackslash{}
    \textbackslash{}setesection \{\arabic{LWR@nextequation}}
  }
}
\LWR@hidelatexequation {⟨environment⟩} {⟨contents⟩}

Creates the T\TeX{} version of the equation inside an HTML comment.

\NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
Stop HTML paragraph handling and open an HTML comment:

\LWR@stoppars
\LWR@htmlopencomment
\LWR@begingroup
\nameuse{LWR@orig#1}
While in the math environment, restore various commands to their \LaTeX meanings.

\LW@restoreorigformatting

See \LW@htmlmathlabel in section 80.7.1.

Print the contents of the equation:

\LW@addmathjax

\textbacks{}\textbackslash{}begin\{#1\} Print the contents, sanitizing for HTML special characters.

\LW@htmlclosecomment
\LW@startpars
\}

\LW@addmathjax \{(environment)\} \{(contents)\}

Given the name of a math environment and its contents, create a MathJax instance. The contents are printed to HTML output, not interpreted by \LaTeX.

\NewDocumentCommand{\LW@addmathjax}{m +m}{% Enclose the MathJax environment inside printed “\” and “\” characters.
\LW@origtilde\LW@orignewline \textbackslash{}begin\{#1\} Print the contents, sanitizing for HTML special characters.
\LW@HTMLsanitizeexpand{\detokenize{\expandafter{#2}}} Close the MathJax environment:
\LW@orignewline \textbackslash{}end\{#1\}}

\textbackslash{}end\{#1\}}

80.5 Equation environment

Remember existing equation environment, after redefined by amsmath, if loaded.

\AtBeginDocument{\let\LW@origequation\equation
For SVG math output, the contents are typeset using the original equation inside a lateximage, along with an \texttt{<alt>} tag containing a detokenized copy of the \LaTeX source for the math.

For \textsc{MathJax} output, the contents are typeset in an original equation environment placed inside a \texttt{HTML} comment, with special processing for \texttt{\LaTeX} labels. The contents are also printed to the \texttt{HTML} output for processing by the \textsc{MathJax} script.

If \textsc{mathjax} or \textsc{FormatWP}, print the \LaTeX expression:

\begin{verbatim}
\newcommand*{\LWR@doequation}[2]{% 
\ifboolexpr{\texttt{mathjax} or ( \texttt{FormatWP} and \texttt{WPMarkMath} ) }{% 
\textsc{MathJax} output: 
\LWR@syncmathjax 
Print the \LaTeX math inside an HTML comment: 
\LWR@hidelatexequation[#2]{#1} 
\} 
\} 
\end{verbatim}
Support for \texttt{xfakebold}:

\begin{verbatim}
\LWR@applyxfakebold\%

Create the actual \LaTeX-formatted equation inside the \texttt{lateximage} using the contents of the environment.
\begin{verbatim}
\@nameuse{LWR@orig\#2}\%

#1% contents collected by \collect@body
\@nameuse{LWR@origend\#2}\%
\end{verbatim}\%

After the environment, if \texttt{MathJax}, print the math to the HTML output for \texttt{MathJax} processing:

\begin{verbatim}
\newcommand*{\LWR@doendequation}[1]{%
  \ifboolexpr{bool(mathjax) or ( bool(FormatWP) and bool(WPMarkMath) ) }{%
    \LWR@addmathjax[#1]{\BODY}\%
  }{%}
\end{verbatim}\%

Remove existing equation environment:

\begin{verbatim}
\AtBeginDocument{
  \let\equation\relax
  \let\endequation\relax
  \csletcs{equation*}{\relax}
  \csletcs{endequation*}{\relax}
}\end{verbatim}

The new equation environment is created with \texttt{NewEnviron} (from the \texttt{environ} package), which stores the contents of its environment in a macro called \texttt{\BODY}.

\begin{verbatim}
\AtBeginDocument{
  \NewEnviron{equation}\%
  \end{verbatim}
Remember the “less” version of `equation`, which uses MathJax and alt tags, but does not support complicated contents such as some Tikz expressions.

80.6 \texttt{\textbackslash displaymathnormal and \textbackslash displaymathother}

By default, or when selecting \texttt{\textbackslash displaymathnormal}, MathJax math display environments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

When selecting \texttt{\textbackslash displaymathother}, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate Tikz picture, which will not render in MathJax and will not make sense as an HTML alt tag. In this mode, MathJax is turned off, math display environments become SVG images, even if MathJax is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

Use when display math environments have simple math which is to sent to MathJax or included in HTML alt tags.
Use when display math environments have complicated objects which will not work with MathJax or should not be included in HTML alt tags. Complicated contents are more likely to compile correctly.

\begin{warpHTML}

\begin{warpprint}

\end{warpprint}

\begin{warpHTML}

80.7 AMS Math environments

80.7.1 Support macros

\newbool{LWR@amsmultline}

True if processing a multiline environment.

To compensate for multiline-specific code, LWR@amsmultline is used to add extra horizontal space in wrapmathlabel if is used in an amsmath environment which is not a multiline environment and not an equation.
\LWR@htmlmathlabel \{(label)\}

\lwarp\ points \ltx@label\ here. This is used by \label\ when inside a \LaTeX\ AMS math environment's math display environment.

\LWR@origltx@label\ points to the \LaTeX\ original, modified by \lwarp, then by \amsmath, then by \cleveref.

\begin{verbatim}
9905 \newcommand*{\LWR@htmlmathlabel}[1]{% 
9906 \LWR@traceinfo{\LWR@htmlmathlabelb #1}\
\end{verbatim}

If \texttt{mathjax} or \texttt{FormatWP}, print the \LaTeX\ expression:

\begin{verbatim}
9907 \ifboolexpr{\bool{mathjax} or ( \bool{FormatWP} and \bool{WPMarkMath} ) }{% 
9908 \text{\%} 

The combined \LaTeX\ & HTML label is printed in a \text field:

\begin{verbatim}
9909 \text{\%} 

Shift the label over to the right side of the environment to avoid over-printing the math:

\begin{verbatim}
9910 \ifbool{\LWR@amsmultline}{}{\hspace*{\totwidth@}}% 

Temporarily end the HTML comment, insert the \LaTeX\ & HTML label, then resume the HTML comment. \@firstofone is required to remove extra braces introduced by the \amsmath\ package.)

\begin{verbatim}
9911 \LWR@htmlclosecomment% 
9912 \LWR@origltx@label[#1]\
9913 \LWR@htmlopencomment% 
9914 }% text 
9915 \% mathjax 
9916 %} 
9917 \LWR@origltx@label[#1]% 
9918 \} % 
\end{verbatim}

\end{verbatim}

\end{verbatim}

\LWR@beginhideamsmath\ Starts hiding \LaTeX\ math inside an HTML comment.

\begin{verbatim}
9920 \newcommand*{\LWR@beginhideamsmath}{% 
9921 \LWR@stoppars 
9922 \LWR@origtilde\LWR@orignewline 
9923 \LWR@htmlopencomment 
9924 \begin{group} 
9925 \LWR@restoreorigformatting 
9926 \LWR@restoreorigformatting 
9927 } 
\end{verbatim}

\LWR@endhideamsmath\ Ends hiding \LaTeX\ math inside an HTML comment.
80.7.2 Environment patches

The \texttt{amsmath} environments already collect their contents in \texttt{@envbody} for further processing. \texttt{eqnarray} is not an \texttt{AMS} package, and thus requires special handling.

For \texttt{svg math}: Each environment is encapsulated inside a \texttt{lateximage} environment, along with a special optional argument of \texttt{\LWR@amsmathbody} or \texttt{\LWR@amsmathbodynumbered} telling \texttt{lateximage} to use as the HTML \texttt{<alt>} tag the environment's contents which were automatically captured by the \texttt{AMS} environment.

For \texttt{MATHJAX}: Each environment is synched with \LaTeX's equation numbers, typeset with \LaTeX inside an \texttt{HTML} comment, then printed to \texttt{HTML} output for \texttt{MATHJAX} to process.

\begin{verbatim}
Env \texttt{eqnarray} This environment is not an \texttt{AMS} environment and thus its body is not automatically captured, so the \texttt{environ} package is used to capture the environment into \texttt{\BODY}.

\let\LWR@origeqnarray\eqnarray
\let\LWR@origendeqnarray\endeqnarray

To remember whether the starred environment was used, and thus whether to number the equations:

\newbool{LWR@numbereqarray}
\booltrue{LWR@numbereqarray}

Common code used by \texttt{eqnarray} and \texttt{Beqnarray} (from \texttt{fancybox}):

\newcommand{\LWR@eqnarrayfactor}{%
If \texttt{mathjax} or \texttt{FormatWP}, print the \LaTeX expression:

\ifboolexpr{bool(mathjax) or ( bool(FormatWP) and bool(WPMarkMath) ) }%  
\LWR@syncmathjax \fi%

If \texttt{MATHJAX}, the environment contents (the \texttt{\BODY}) are executed in a \texttt{HTML} comment to trigger the correct equation number increment (if not starred), then are included verbatim in the output for \texttt{MATHJAX} to interpret:

\LWR@syncmathjax
\boolfalse{LWR@amsmultline}
\ifbool{LWR@numbereqarray}
{
If numbering the equations, execute a copy inside an HTML comment block:

\LWR@beginhideamsmath
\LWR@origeqnarray
\BODY
\LWR@origendeqnarray
\LWR@endhideamsmath

Then print the (sanitized) contents to the output for MathJax to interpret:

\LWR@addmathjax{eqnarray}{\BODY}
%
{% not LWR@numbereqnarray

If not numbering equations, just create the contents for MathJax:

\LWR@addmathjax{eqnarray*}{\BODY}
{% \LWR@numbereqnarray

For numbered svg equations, first create a lateximage with an alt attribute containing sanitized copy of the source code:

\begin{BlockClass}{displaymathnumbered}%
  \LWR@newautoidanchor%
  \booltrue{LWR@indisplaymathimage}%
  \begin{lateximage}[\LWR@startingequationtag---\LWR@equationtag]
  \LWR@addmathjax{eqnarray}{\BODY}
  \end{lateximage}
%

Support for xfakebold:

\LWR@applyxfakebold%

Create the image contents using an actual eqnarray:

\LWR@origeqnarray
\BODY
\LWR@origendeqnarray
\end{lateximage}
\end{BlockClass}
%
{% not LWR@numbereqnarray

If not numbered, do the same, but an extra \nonumber seems to be required:

\begin{BlockClass}{displaymath}
  \LWR@newautoidanchor%
  \booltrue{LWR@indisplaymathimage}%
  \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]

lwarp 518
Support for xfakebold:
\LWR@app/l.Varyxfakebo/l.Vard%
\LWR@origeqnarray
\body
\nonumber
\LWR@origendeqnarray
\end{lateximage}
\end{blockclass}
}\% LWR@numbereqnarray
}\% not mathjax

Default to number equations in the future:
\booltrue{LWR@numbereqnarray}
}

eqnarray itself is made with a blank line before and after to force it to be on its own line:
\renewenviron{eqnarray}
\{%\%
\LWR@eqnarrayfactor
\LWR@eqnarrayfactor
\%
\%
\returnfalse{LWR@numbereqnarray}
\%
\%
\end{lateximage}

The starred version is patched to turn off the numbering:
\csseto{eqnarray*}{\returnfalse{LWR@numbereqnarray}}
\end{warpHTML}

## 81 Lateximages

### 81.1 Description

A lateximage is a piece of the document which is typeset in \LaTeX then included in the HTML output as an image. This is used for math if svg math is chosen, and also for the picture, tikzpicture, and other environments.

Before typesetting the lateximage a large number of formatting, graphics, and symbols-related macros are temporarily restored to their print-mode meaning by \LWR@restoreorigformatting. (See section 79.)

A lateximage is typeset on its own PDF page inside an HTML comment which starts on the preceeding page and ends on following page, and instructions are written to lateximage.txt for \warp to extract the lateximage from the page of the PDF file
then generate an accompanying .svg file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML <span> is created to hold both the HTML comment, which will have the pdftotext conversion, and also the link to the final .svg image.

A \LaTeX{} label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

**HTML alt tag** The HTML alt tag is set to the \LaTeX{} source for svg math, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the alt tag is set according to the package name.

When creating an svg math image, its alt tag may be set to the math expression, which may be hashed for image reuse. In the case of \texttt{\textbackslash ensuremath} or after \texttt{\textbackslash linemathother}, where the contents require a unique image for each instance of the same expression, the alt tag is set to \texttt{\textbackslash mathimagename}, and the image is not reused.

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following svg math images.

For many packages, the output is placed inside a lateximage with an HTML alt tag set to the package name followed by \texttt{\textbackslash packagediagramname}. For example:

\begin{verbatim}
(~xy~ diagram)
\end{verbatim}

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and it may be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following lateximages.

**SVG image font size** For the \texttt{lateximage} environment, the size of the math and text used in the svg image may be adjusted by setting \texttt{\textbackslash LateximageFontSizeName} to a font size name — *without the backslash*, which defaults to:

\begin{verbatim}
\renewcommand{\LateximageFontSizeName}{\texttt{\textbackslash normalsize}}
\end{verbatim}

For inline svg math, font size is instead controlled by \texttt{\textbackslash LateximageFontScale}, which defaults to:

\begin{verbatim}
\newcommand*{\textbackslash LateximageFontScale}{.75}
\end{verbatim}

## 81.2 Support counters and macros

**for HTML output**

\begin{verbatim}
\begin{warpHTML}
\newcounter{LWR@lateximagenumber}
\end{warpHTML}
\end{verbatim}

\texttt{Ctr LWR@lateximagenumber} Sequence the images.
A few utility macros to write special characters:

\begin{warpHTML}
\edef\LWR@hashmark{\string#} % for use in \write
\edef\LWR@percent{\@percentchar} % for use in \write
\end{warpHTML}

\newcounter{LWR@LIpage}
\end{warpHTML}

81.3 Font size

\begin{warpall}
\LateximageFontSizeName
Declares how large to write text in \lateximages. The .svg file text size should blend well with the surrounding HTML text size.

⚠️ no backslash \textit{Do not include the leading backslash in the name.}

\newcommand*{\LateximageFontSizeName}{normalsize}

\LateximageFontScale
Declares how large to scale inline svg math images. The .svg file text size should blend well with the surrounding HTML text size. The default is .75, but it may be redefined as needed depending on the HTML font.

\newcommand*{\LateximageFontScale}{.75}

\end{warpall}

81.4 Sanitizing math expressions for HTML

\begin{warpHTML}
\LWR@HTMLsanitize {\textit{(text)}}

Math expressions are converted to lateximages, and some math environments may contain &, <, or >, which should not be allowed inside an HTML &lt; tag, so must convert them to HTML entities.

\end{warpHTML}
Two versions follow, depending on expansion needs. There may be a better way...

10010 \newrobustcmd{\LWR@HTMLsanitize}[^1]\

Cancel French babel character handling, and fully expand the strings:

10011 \begingroup
10012 \LWR@Fcancel
10013 \fullexpandarg

The &, <, and > may be interpreted by the browser:

10014 \protect\StrSubstitute{\detokenize{#1}}
10015 {\detokenize{&}}{{\detokenize{&}}}{\LWR@strresult}
10016 \protect\StrSubstitute{\detokenize{\expandafter{\LWR@strresult}}}
10017 {\detokenize{<}}{{\detokenize{&/\LWR@Vart;}}}{\LWR@strresult}
10018 \protect\StrSubstitute{\detokenize{\expandafter{\LWR@strresult}}}
10019 {\detokenize{>}}{{\detokenize{>}}}{\LWR@strresult}

The double quote occasionally causes problems.

10020 \protect\StrSubstitute{\detokenize{\expandafter{\LWR@strresult}}}
10021 {\detokenize{"}}{{\detokenize{"}}}{\LWR@strresult}

MathJax allows expressions to be defined with \newcommand. These expressions would appear with ## for each argument, and each must be changed to a single #. This must be done after all the above changes. Attempting another conversion after this causes an error upon further expansion.

10022 \protect\StrSubstitute{\detokenize{\expandafter{\LWR@strresult}}}
10023 {\detokenize{##}}{{\detokenize{##}}}{\LWR@origpound}{\LWR@strresult}

10024 \LWR@strresult
10025 \endgroup
10026 )

\LWR@HTMLsanitizeexpand {((text))}

This version expands the argument before sanitizing it.

10027 \newrobustcmd{\LWR@HTMLsanitizeexpand}[^1]\

Cancel French babel character handling, and fully expand the strings:

10028 \begingroup
10029 \LWR@Fcancel
10030 \fullexpandarg
The difference between this and \LWR@HTMLsanitize (without “expand”) is the following \expandafter:

\protect\StrSubstitute{\detokenize{\expandafter{#1}}}\protect\StrSubstitute{\detokenize{&}}\protect\StrSubstitute{\detokenize{<}}\protect\StrSubstitute{\detokenize{>}}\protect\StrSubstitute{\detokenize{/quotedbl}}

\LWR@HTMLsanitizeexpand is not used for defining new MathJax macros, so the conversion is not needed here.

81.5 Equation numbers

For use with lateximage and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

\newcounter{LWR@startingequation}
\newbool{LWR@isstartingequation}
\LWR@startingequationtag \theLWR@startingequation

True for the first equation tag, false for later tags in the same environment.

\newbool{LWR@isstartingequation}
\LWR@startingequationtag \theLWR@startingequation

Prints the starting equation number or tag.
\LWR@equationtag \ Prints the ending equation number or tag.

This is reset by \texttt{lateximage}, may be temporarily overwritten by \texttt{tag} calling \LWR@remembertag.

\newcommand*{\LWR@equationtag}{}

Only if \texttt{svg} math, patch \texttt{tag} after packages have loaded, in case someone else modified \texttt{tag}.

\AtBeginDocument{\ifbool{mathjax}{% not mathjax

\LWR@remembertag \langle tag \rangle

For use inside the math environments while using \texttt{svg} math. Sets \texttt{theLWR@startingequation} and \texttt{theequation} to the given tag.

\NewDocumentCommand{\LWR@remembertag}{m}{%
\ifbool{LWR@isstartingequation}{%
\gdef{\boo{\fa{\bofa{LWR@isstartingequation}}}}%
\xdef{\LWR@startingequationtag}{#1}%
%}
\xdef{\LWR@equationtag}{#1}%
%}
% not mathjax
\AtBeginDocument

81.6 \textbf{HTML alt tags}

\LWR@amsmathbody \langle envname \rangle \ For use inside the optional argument to a \texttt{lateximage} to add the contents of a AMS math environment to the \texttt{<alt>} tag.

\newcommand*{\LWR@amsmathbody}[1]{%
\textbackslash{\begin}{#1} % extra space
\LWR@HTMLsanitizeexpand{\detokenize{\expandafter{\the@envbody}}}%
\textbackslash{\end}{#1}%
}

\LWR@amsmathbodynumbered \langle envname \rangle \ For use inside the optional argument to a \texttt{lateximage} to add the contents of a AMS math environment to the \texttt{alt} tag, prefixed by the equation numbers.

\newcommand*{\LWR@amsmathbodynumbered}[1]{%
\ifnumcomp{\val{LWR@startingequation}}{=}\val{equation}{%}
\{\LWR@equationtag\} %
}

\LWR@amsmathbodynumbered
81.7 \texttt{lateximage} environment

\begin{verbatim}
\NewDocumentEnvironment{/lateximage}{s O{(image)} O{} O{}}{
\LWR@traceinfo{/lateximage: starting on \jobname.pdf page \arabic{page}}%
\LWR@traceinfo{/lateximage: entering depth is \arabic{\LWR@lateximagedepth}}%

 Nested \texttt{lateximage}s remain one large \texttt{lateximage}:

\ifnumcomp{\va{\LWR@lateximagedepth}}{>}{0}%
\end{verbatim}

\texttt{lateximage} \:\ ([2: \texttt{alt} \: \texttt{tag}]) \:\ ([3: \texttt{add'l hashing}]) \:\ ([4: \texttt{css style}])

Typesets the contents and then renders the result as an svg file. Star causes the image to be hashed for reuse.

The optional \texttt{alt} tag is included in the HTML code for use with copy/paste.

\begin{itemize}
\item \texttt{image filename hashing} \quad If starred, a hashed filename is used. If so, the hash is based on the \texttt{alt} tag and also the additional hashing argument.
\item This may be used to provide an expression with a simple \texttt{alt} tag but also enough additional information to provide a unique hash.
\item An example is when the expression is a complicated \TeX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.
\item Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple \texttt{alt} tag is still the same.
\end{itemize}

\begin{verbatim}
\newlabel{\LWR@lateximage=<BaseJobname>-<number>}{(<x>{<y>})}
\end{verbatim}

This is used to find the image in the PDF file, according to its name.

\begin{verbatim}
\NewDocumentEnvironment{lateximage}{s O{(image)} O{} O{}}{
\begin{verbatim}
\newlabel{\LWR@lateximage=<BaseJobname>-<number>}{(<x>{<y>})}
\end{verbatim}
\end{verbatim}

A list of images to generate is created in \texttt{<jobname>-images.txt}. Each line has three pipe-delimited fields, containing the PDF page number from \texttt{<jobname>_html.pdf}, where the image is located, a boolean indicating whether the image is hashed, and the filename of the image. The last line has “end” in each field, and is used to detect an incomplete compile.

\begin{verbatim}
\catcode\$=\active%
\end{verbatim}

\begin{verbatim}
\NewDocumentEnvironment{lateximage}{s O{(image)} O{} O{}}{
\begin{verbatim}
\newlabel{\LWR@lateximage=<BaseJobname>-<number>}{(<x>{<y>})}
\end{verbatim}
\end{verbatim}
If nesting inside an already-existing lateximage, simply record one more level. AMS packages redefine \addtocounter to do nothing if inside a \text, so lower-level \TeX macros are used for tracking nested lateximages.

\begin{verbatim}
\ifnesting
  \addtocounter{LWR@lateximagedepth}{1}
  \global\advance\c@LWR@lateximagedepth \relax
\else
  \let\LWR@externalfilenum\LWR@lateximagenumber
  \addtocounter{LWR@lateximagenumber}{1}
  \booltrue{LWR@islateximage}
  \let\LWR@latextag\theequation
\end{verbatim}

Otherwise, this is the outer-most lateximage:

\begin{verbatim}
\% start of outer-most lateximage

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

\setcounter{LWR@startingequation}{\value{equation}}
\addtocounter{LWR@startingequation}{1}
\booltrue{LWR@isstartingequation}
\let\LWR@startingequationtag\theLWR@startingequation

The default equation tag, unless overwritten by \tag:

\let\LWR@equationtag\theequation

Starting a new lateximage:

\addtocounter{LWR@lateximagedepth}{1}
\LWR@traceinfo{lateximage: starting outer-most lateximage}
\setcounter{LWR@lateximagenumber}{\arabic{LWR@lateximagenumber}}
\LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}

While inside a lateximage, locally do not use mathjax:

\boolfalse{mathjax}

Be sure that are doing a paragraph:

\LWR@ensuredoingapar

Next file:

\addtocounter{LWR@externalfilenum}{1}
\LWR@traceinfo{lateximage: LWR@externalfilenum is \arabic{LWR@externalfilenum}}

Figure out what the next page number will be. \setcounterpageref assigns LWR@LIpage to the page number for the reference LWRlateximage-BaseJobname-XXX:

\setcounterpageref{LWR@LIpage}{
  LWRlateximage-BaseJobname-\arabic{LWR@lateximagenumber}
}
\LWR@traceinfo{lateximage: LWR@LIpage is \arabic{LWR@LIpage}}
\end{verbatim}
Create an HTML span which will hold the comment which contains the `pdftotext` translation of the image's page, and also will hold the link to the .svg file:

```latex
\begin{verbatim}
10113  \htmltag{span}{\indentHTML% id="lateximage-\BaseJobname-\arabic{LWR@lateximagnumber}"\indentHTML
10114  class="lateximagesource"\indentHTML\orignewline
10116  %}

Write instructions to the <ImagesDirectory>.txt file:

```latex
\begin{verbatim}
10117  \traceinfo{lateximage: about to write to |\BaseJobname-\arabic{LWR@externalfilecnt}|%}
10118  \IfBooleanTF{#1}{% starred
10119  {% hash
10120  \traceinfo{lateximage: hash true, adding %
10121  !\detokenize\expandafter{#2}!\detokenize\expandafter{#3}!}%

Compute and save the hashed file name for later use:

```latex
\begin{verbatim}
10122  \edef\hashedname{%
10123  \mdfive{\detokenize\expandafter{#2}-!-#3}%
10124  }%
10125  \traceinfo{lateximage: hash is |\hashedname|%

Write the page, hashing, and hashed name:

```latex
\begin{verbatim}
10126  \immediate\write\lateximagesfile{%
10127  |\arabic{LWR@LIpage}|true|\hashedname|%}
10128  %}
10129  {% no hash
10130  }

No hash, so write the page, no hashing, and the image number:

```latex
\begin{verbatim}
10131  \traceinfo{lateximage: hash false}%
10132  \immediate\write\lateximagesfile{%
10133  |\arabic{LWR@LIpage}|false|\latexImagesName\arabic{LWR@externalfilecnt}|%}
10134  %}
10135  {% no hash

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by `pdftotext`.

```latex
\begin{verbatim}
10136  \traceinfo{lateximage: about to create open comment}%
10137  \htmlopencomment%

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an `\AMS` \text, since the outer-most level will never be in math mode.

```latex
\begin{verbatim}
10138  \addtocounter{LWR@lateximagedepth}{1}%

Start the new PDF page:

```latex
\begin{verbatim}
10139  \traceinfo{lateximage: about to create a new page}%
10140  \orignewline
```
Typeset the image in a “standard” width page and font size:

\LWR@traceinfo{lateximage: about to create minipage}\
\LWR@print@minipage{6in}\
\@nameuse{LWR@print@\LateximageFontSizeName}

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

\LWR@traceinfo{lateximage: about to temporarily restore formatting}\
\LWR@restoreorigformatting

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

\def\@mpfn{footnote}\
\def\thempfn{\thefootnote}\
\LetLtxMacro\@footnotetext{LWR@footnotetext}

Create the \LWR@lateximage<number> label:

\LWR@traceinfo{lateximage: about to create label}\
\LWR@orig@label{\LWR@lateximage\-\BaseJobname\-\arabic{LWR@\lateximagemumber}}\
\LWR@traceinfo{lateximage: finished creating the label}

Enable print-mode math functions:

\LetLtxMacro$\LWR@origdo\ar$\
\catcode\$=3% math shift\
\LetLtxMacro(\LWR@origopenparen\
\LetLtxMacro)\LWR@origcloseparen\
\cs{equation}{LWR@origequation}\
\cs{endequation}{LWR@origendequation}

Only enable print-mode display math if are not already inside display math:

\ifbool{LWR@indisplaymathimage}{}{% not in display math\
\LetLtxMacro[\LWR@origopenbracket\
\LetLtxMacro]\LWR@origclosebracket\
\let\equation\LWR@origequation\
\let\endequation\LWR@origendequation\
\cs{equation*}{LWR@origequation*}\
\cs{endequation*}{LWR@origendequation*}

\cs{equation}{LWR@origequation}\
\cs{endequation}{LWR@origendequation}

}% not in display math

For chemformula:

\LetLtxMacro\LWR@newsing\ar\\
\LetLtxMacro\LWR@newsing\ar

\endlateximage When the environment closes:
Nested more than one deep?

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level \TeX macro due to AM\S \text change of addtocounter.

If this is the outer-most lateximage:

Finish the lateximage minipage and start a new PDF page:

Close the HTML comment which encapsulated any traces of the lateximage picked up by \texttt{pdftotext}:

Create a link to the lateximage, allowing its natural height:

Be sure that are doing a paragraph:
Close the HTML span which has the pdftotext comment and also the link to the .svg image:

\LWR@htmltag{/span}\
\ifbool{HTMLDebugComments}{\LWR@htmlcomment{End of lateximage}}{}\

Undo one lateximage level. This is not inside an \AMS\text, so regular \addtocounter may be used here.

\addtocounter{LWR@lateximagedepth}{-1}\
\LWR@traceinfo{/lateximage: exiting depth is \arabic{LWR@lateximagedepth}}\
\LWR@traceinfo{/lateximage: done}\
\catcode\$=3% math shift

for PRINT output:

\begin{warpprint}
\Env lateximage [⟨alt tag⟩] [⟨css style⟩]
varwidth is used to create a box of the natural width of its contents.
\NewDocumentEnvironment{lateximage}{s o o o}{\begin{varwidth}[b]{\/linewidth}}{\end{varwidth}}
\end{warpprint}

82 center, flushleft, flushright

for HTML output:

\begin{warpHTML}
\Env center Replace center functionality with css tags:
\renewenvironment*{center}{\LWR@forcenewpage
\ifbool{FormatWP}{\BockCass{\LWR@print@mbox[text-align:center]}{center}}}{\endBockCass}
\Env flushright
\newenvironment*{flushright}{\LWR@forcenewpage
\ifbool{FormatWP}{\BlockClass[\LWR@print@mbox{text-align:right}][flushright]}
{\BlockClass[flushright]}
\endBlockClass}

\newenvironment*{flushleft}{\LWR@forcenewpage
\ifbool{FormatWP}{\BlockClass[\LWR@print@mbox{text-align:left}][flushleft]}
{\BlockClass[flushleft]}
\endBlockClass}

\centering, \raggedleft, and \raggedright usually have no effect on the HTML output, but they may be used to compare with the next token to identify their use at the start of a float. See \LWR@floatalignment.

\centering
\newcommand*{\LWR@HTML@centering}{%
\ifbool{HTMLDebugComments}{\LWR@htmlcomment{centering}日常生活%
}%
\LWR@formatted{centering}日常生活}

\raggedleft
\newcommand*{\LWR@HTML@raggedleft}{%
\ifbool{HTMLDebugComments}{\LWR@htmlcomment{raggedleft}日常生活%
}%
\LWR@formatted{raggedleft}日常生活}

\raggedright
\newcommand*{\LWR@HTML@raggedright}{%
\ifbool{HTMLDebugComments}{\LWR@htmlcomment{raggedright}日常生活%
}%
\LWR@formatted{raggedright}日常生活}
83 Preloaded packages

for HTML output: \begin{warpHTML}

If the given package was loaded before or by \warp, load the \warp version as well.

\LWR@PreloadedPackage {\textit{packagename}}

If \inputtrc was loaded before \warp, as is usually done, explicitly load the \warp patches now:

\LWR@PreloadedPackage{\inputtrc}

If \textcomp was loaded before \warp, perhaps as part of the font-related packages, explicitly load the \warp patches now:

\LWR@PreloadedPackage{\textcomp}

If \xunicode was loaded before \warp, perhaps as part of the font-related packages, explicitly load the \warp patches now:

\LWR@PreloadedPackage{\xunicode}
If graphics or graphicx were loaded before lwarp, perhaps by xunicode, explicitly load the lwarp patches now:

\LWR@Pre/l.VaroadedPackage{graphics}
\LWR@Pre/l.VaroadedPackage{graphicx}

ulem may be preloaded by ctex, ctexart, and related classes.
\LWR@Pre/l.VaroadedPackage{ulem}

xetexko-vertical may be preloaded by xetexko.
\LWR@Pre/l.VaroadedPackage{xetexko-vertical}

geometry is preloaded by lwarp, and perhaps by various classes.
\LWR@Pre/l.VaroadedPackage{geometry}

plext is preloaded by some CJK classes.
\LWR@Pre/l.VaroadedPackage{plext}

stfloats is preloaded by ltj* classes.
\LWR@Pre/l.VaroadedPackage{stfloats}

lltjext is preloaded by ltj* classes.
\LWR@Pre/l.VaroadedPackage{lltjext}

84 siunitx

Pkg siunitx The lwarp core passes a few options to siunitx.

fractions Due to pdftotext limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

⚠️ math mode required Some units will require that the expression be placed inside math mode.

NOTE: As of this writing, the siunitx extension for MathJax is not currently hosted at any public CDN, thus siunitx is not usable with MathJax unless a local copy of this extension is created first. See \MathJaxFilename to select a custom MathJax script.

⚠️ tabular Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in \num or \si.

for HTML output: \begin{warpHTML}
Options for siunitx:

\newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity(deg)\textdegree} \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity(deg)} \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}} \newrobustcmd{\LWR@siunitx@textdb}{\Varprime} \newrobustcmd{\LWR@siunitx@textp}{\Varanckbar}

\appto{\LWR@restoreorigformatting}{% \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}\textdegree}}} \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}% \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}% \renewrobustcmd{\LWR@siunitx@textdb}{\Varprime} \renewrobustcmd{\LWR@siunitx@textp}{\Varanckbar} %}

\PassOptionsToPackage{detect-mode=true,per-mode=symbol}{siunitx}

85 Graphics print-mode modifications

85.1 General limitations

⚠️ scale Avoid using the `\includegraphics` `scale` option. Change:

```
\includegraphics[\textwidth]{...}
```

to:

```
\includegraphics[\textwidth]{...}
```

For `\includegraphics` with `.pdf` or `.eps` files, the user must provide a `.pdf` or `.eps` image file for use in print mode, and also a `.svg`, `.png`, or `.jpg` version of the same image for use in HTML.

```
\includegraphics[filename] % print:.pdf/.eps HTML:.svg, etc.
```

For print output, `lwarp` will automatically choose the `.pdf` or `.eps` format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a `.pdf` or `.eps` image is referred to with its file extension, the extension will be changed to `.svg` for HTML.
To convert a PDF image to SVG, use the utility `pdftocairo`:

```
Prog  pdftocairo
PDF to SVG
Enter ⇒  pdftocairo -svg filename.pdf
```

For a large number of images, use `lwarpmk`:

```
Prog  lwarpmk pdftosvg
Enter ⇒  lwarpmk pdftosvg *.pdf  (or a list of filenames)
```

For EPS images converted to PDF using the package `epstopdf`, use

```
Prog  lwarpmk epstopdf
Prog  epstopdf
epstopdf package
Enter ⇒  lwarpmk pdftosvg *.PDF
```

to convert to SVG images.

When using `dvi latex`, it is necessary to convert EPS to PDF and then to SVG:

```
DVI latex
Enter ⇒  lwarpmk epstopdf *.eps  (or a list of filenames)
Enter ⇒  lwarpmk pdftosvg *.pdf  (or a list of filenames)
```

For PNG or JPG while using `pdflatex`, `lualatex`, or `xelatex`, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF files may be used for HTML, but another format must also be provided for print output.

- **file extension priorities**: If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

- **graphics vs. graphicx**
  If using the older `graphics` syntax, use both optional arguments for \includegraphics. A single optional parameter is interpreted as the newer `graphicx` syntax. Note that viewports are not supported by `lwarpl` — the entire image will be shown.

- **viewport units**
  For \includegraphics, avoid px and % units for width and height, or enclose them inside warpHTML environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys width=.5\linewidth, or similar for \textheight or \textwidth, to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the scale option, since it is not well supported by HTML browsers.

- **options**
  \includegraphics accepts width and height, origin, rotate and scale, plus new class and alt keys.

- **HTML class**
  With HTML output, \includegraphics accepts an optional class=xyz keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

- **HTML alt tags**
  Likewise, the \includegraphics alt key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag of “(image)”.

- **\rotatebox**
  \rotatebox accepts the optional origin key.
\rotatebox, \scalebox, and \reflectbox depend on modern browser support. The css3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike \LaTeX, so expect some ugly results for scaling and rotating.

### 85.2 Print-mode modifications

**for PRINT output:**

For print output, accept and then discard the new class key:

\begin{warpprint}
\define@key{Gin}{class}{}
\end{warpprint}

Print-mode additions for the overpic package. See section 352 for the HTML version.

\begin{warpprint}
\AtBeginDocument{
@ifpackage{xcolor}{\LWR@traceinfo{patching xcolor}}{
\newcommand*{\overpicfontsize}{12}
\newcommand*{\overpicfontskip}{14}}{}
}\end{warpprint}

### 86 xcolor boxes

**Pkg xcolor** A few new definitions are provided for enhanced HTML colored boxes, and \fcolorbox is slightly modified. Print-mode version are also provided.

Print-mode versions of new xcolor definitions. These are defined inside warppal because they are also used for HTML while inside a \lateximage. They are defined \AtBeginDocument so that the xcolor originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of none, in which case only the frame is drawn, allowing the background page color to show.

**for HTML & PRINT:**

\begin{warpp}
\AtBeginDocument{
\ifpackageloaded{xcolor}{
\LWR@traceinfo{patching xcolor}}{}
}\end{warpp}

After xparse may have been loaded …

\begin{warpp}
\AtBeginDocument{
\ifpackageloaded{xcolor}{
\LWR@traceinfo{patching xcolor}}{}
}\end{warpp}

... and only if xcolor was loaded:

\begin{warpp}
\AtBeginDocument{
\ifpackageloaded{xcolor}{
\LWR@traceinfo{patching xcolor}}{}
}\end{warpp}

The print version:
\colorboxBlock is the same as \colorbox:

\LetLtxMacro{\colorboxBlock}{\colorbox}

The original definition is reused by the new versions:

\LetLtxMacro{\LWR@orig@print@fcolorbox}{\fcolorbox}

\fcolorbox \[(framemodel)\] \{(framecolor)\} \[(boxmodel)\] \{(boxcolor)\} \{(text)\}

In print mode, \fcolorbox is modified to accept a background color of none.

(\fcolorbox is particular about its optional arguments, thus the elaborate combinations of ifthenelse.)

\newsavebox{\LWR@colorminipagebox}
\NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
\LWR@traceinfo{LWR@print@fcolorbox #2 #4}%
Pre-load the contents into an LR box so that they can be used inside a \fcolorbox:
\begin{lrbox}{\LWR@colorminipagebox}#5%
\end{lrbox}%
Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a \fcolorbox.

The current color is remembered, then set to the frame, then the current color is used for the contents.

\IfStreqa\{(none)\}#4%
\IfValueTF#1%
\IfValueTF#3%
\fcolorboxBlock \((\text{framemodel})\) \((\text{framecolor})\) \((\text{boxmodel})\) \((\text{boxcolor})\) \((\text{text})\)

In print mode, \fcolorboxBlock is the same as \fcolorbox.

\newcommand*{\fcolorboxBlock}{\fcolorbox}

\Env \fcolorminipage \((1:\text{framemodel})\) \((2:\text{framecolor})\) \((3:\text{boxmodel})\) \((4:\text{boxcolor})\) \((5:\text{align})\) \((6:\text{height})\)
\((7:\text{inner-align})\) \((8:\text{width})\)

In print mode, becomes a \fcolorbox containing a minipage:

\NewDocumentEnvironment{fcolorminipage}{o m o m O{c} O{} o m}{\fcolorminipage}{\fcolorbox}{\fcolorboxBlock}{\begin{minipage}\[\#5\]\[\#6\]\[\#7\]{\#8}}\end{minipage}

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a \fcolorbox.

The current color is remembered, then set to the frame, then the current color is used for the contents.

\IfValueTF{\#7}{...}{...}
\begin{minipage}\[\#5\]\[\#6\]\[\#7\]\[\#8\]}
\end{minipage}
\fbox{...}
\begin{minipage}\[\#5\]\[\#6\]\[\#5\]\[\#8\]}
\end{minipage}
\color\{none\}
\color{none}
\color{\#2}
\color\{\#2\}

\color{LWR@currentcolor}


### 87 chemmacros environments

\[\text{makepolymerdelims}\] and redox reactions must be enclosed in a \texttt{lateximage} during \texttt{HTML} output. These environments are provided here in print mode, and in the \texttt{chemmacros} code in \texttt{HTML} mode, as a high-level semantic syntax which automatically embeds the contents in a \texttt{lateximage} with an appropriate \texttt{alt} tag.

*for PRINT output:*

```
\begin{warpprint}
\AtBeginDocument{
\@ifpackage{chemmacros}{
\Dec\DeclareDocumentEnvironment{polymerdelims}{}{
\langle space above \rangle}{\langle space below \rangle}

\Dec\DeclareDocumentEnvironment{redoxreaction}{
\langle (space above) \rangle}{\langle (space below) \rangle}

\end{warpprint}
```
For print output, extra space is included above and below the image, and a \lateximage is not necessary. This extra space must be enforced, even inside a float, so zero-width rules are used.

For the HTML version, see section 168.4.

\begin{varareDocumentEnvironment}{redoxreaction}{m m}
\ru{\varare{0pt}{#1}}\ru{\varare{-#2}{0pt}{#2}}
\end{varareDocumentEnvironment}

\% chemmacros
\% AtBeginDocument

\end{vararePrint}

\section{cleveref}

\textbf{Pkg cleveref} The \texttt{cleveref} package is used as-is with minor patches.

\textbf{\texttt{cleveref} page numbers} The \texttt{cleveref} and \texttt{varioref} are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \texttt{\cpageref} and \texttt{\cpagerefrange}. This phrase includes \texttt{\cpagerefFor}, which defaults to “for”.

Ex:

\texttt{\cpageref{tab:first,tab:second}}

in HTML becomes:

“pages \texttt{for} table 4.1 and \texttt{for} table 4.2”

See \texttt{\cpagerefFor} at page 541 to redefine the message which is printed for page number references.

\textbf{loading order} \texttt{cleveref} and the following associated macro patches are automatically preloaded at the end of the preamble via \texttt{\AtEndPreamble} and \texttt{\AfterEndPreamble}. This is done because the HTML conversion requires \texttt{cleveref}. The user's document may not require \texttt{cleveref}, thus the user may never explicitly load it, so during HTML output \texttt{lwp} loads it last. If the user's document preamble uses \texttt{cleveref} options, or functions such as \texttt{\crefname}, then \texttt{cleveref} may be loaded in the user's preamble near the end, and \texttt{lwp}'s additional loading of \texttt{cleveref} will have no effect.

Table 12 on page 463 shows the data structure of the label/reference system as revised by \texttt{lwp} and \texttt{cleveref}.

A few patches allow \texttt{cleveref} to work as-is:

\begin{verbatim}
\begin{warpHTML}
\AtEndPreab\% cleveref to be loaded last:
\\AtEndPreamble\
\\% \RequirePackage{cleveref}
\end{warpHTML}
\end{verbatim}
The following patches are applied after \cleveref has loaded, and after \AtBeginDocument. Print-mode versions are not required since they all come down to \ref eventually, and \ref has a print-mode version.

\AfterEndPreamble{
\LWR@traceinfo{Patching cleveref.}

\@@setcref \{(kindofref)\} \{(label)\}
\@templabel becomes the section number.

\def\LWR@orig@@@setcref#1#2{%1\cref\getlabel\#2\@templabel\#1\@templabel\}{}
\ifdefequal\@@setcref\{\LWR@orig@@@setcref\}{% before v0.21
\renewcommand\@@setcref\[2\]{\cref\getlabel\#2\@templabel\#1\@templabel\}{}
\ifdefequal\@@@setcref\{\LWR@orig@@@setcref\}{% as of v0.21
\renewcommand\@@@setcref\[2\]{\cref\getlabel\#2\@templabel\#1\@templabel\}{}
\PackageWarning{lwp-cleveref}{Unknown version of cleveref.
\protect\cref\space will fail.}
}

\@@setcrefrange \{(text)\} \{(label)\} \{(label)\}

\def\LWR@orig@@@setcrefrange#1#2#3{%1\cref\getlabel\#2\@labela\cref\getlabel\#3\@labelb\#1\@labela\@labelb\}{}
\ifdefequal\@@setcrefrange\{\LWR@orig@@@setcrefrange\}{%\renewcommand\@@@setcrefrange\[3\]{\cref\getlabel\#2\@labela\@labelb\#1\@labela\@labelb\}{}
\ifdefequal\@@@setcrefrange\{\LWR@orig@@@setcrefrange\}{%\renewcommand\@@@setcrefrange\[3\]{\cref\getlabel\#2\@labela\@labelb\#1\@labela\@labelb\}{}
\PackageWarning{lwp-cleveref}{Unknown version of cleveref.
\protect\crefrange\space will fail.}
}
\cpagerefFor
Redefinable word between “page(s)” and the page numbers.
\newcommand*{\cpagerefFor}{for}

\@setcpageref{\langle typeofref \rangle \langle label \rangle}, where typeofref is “page” or “pages”

\def\LWR@orig@@setcpageref#1#2{% before v0.21
  \cref@getpageref{#2}{\@temppage)#1{\@temppage}{))}%
\}
\def\LWR@orig@@@setcpageref#1#2{% as of v0.21
  \cpageref@getlVarabe/l.Var{#2}{\@temppage)#1{\@temppage}{))}%
\}
\ifdefequa/l.Var{\@@setcpageref}{\LWR@orig@@setcpageref}{
  \renewcommand*{\@@setcpageref}[2]{%
    #1{\cpagerefFor \cref{#2}}{}{}%
  }
}\ifdefequa/l.Var{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
  \renewcommand*{\@@@setcpageref}[2]{%
    #1{\cpagerefFor \cref{#2}}{}{}%
  }
}\PackageWarning{lwarp-c/l.Var}{Unknown version of cleveref. \protect\cpageref\space will fail.}
}
\def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
  \cref@getpageref{#2}{\@pagea}%
  \cref@getpageref{#3}{\@pageb}%
  #1{\@pagea}{\@pageb}{)){}{}{}{}}%
\}
\def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
  \cpageref@getlVarabe/l.Var{#2}{\@pagea}%
  \cpageref@getlVarabe/l.Var{#3}{\@pageb}%
  #1{\@pagea}{\@pageb}{)){}{}{}{}}%
\}
\ifdefequa/l.Var{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
  \renewcommand*{\@@setcpagerefrange}[3]{%
    #1{\cpagerefFor \cref{#2}}{\cref{#3}}{}{}{}{}}%
  }
}\ifdefequa/l.Var{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{
  \renewcommand*{\@@@setcpagerefrange}[3]{%
    #1{\cpagerefFor \cref{#2}}{\cref{#3}}{}{}{}{}}%
  }
\PackageWarning{lwarp-c/l.Var}{Unknown version of cleveref. \protect\cpagerefrange\space will fail.}
}
Remember and patch some label-related definitons. These will be further encased and patched by other packages later.

\label and \pageref do NOT change their behavior according to print or HTML output, and thus do not use the \LWR@formatted system.

\begin{warpHTML}
\BeforeBeginEnvironment{picture}{\begin{/lateximage}\[(picture)\]}
\AfterEndEnvironment{picture}{\end{/lateximage}}
\end{warpHTML}

89 picture environment

\begin{warpHTML}
\BeforeBeginEnvironment{picture}{\begin{/lateximage}\[(picture)\]}
\AfterEndEnvironment{picture}{\end{/lateximage}}
\end{warpHTML}

90 Minipages and Boxes

A css flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

\begin{itemize}
\item[\triangle] inline A line of text with an inline minipage or \parbox will have the minipage or \parbox placed onto its own line, because a paragraph is a block element and cannot be made inline-block.
\item[placement] minipages and \parboxes will be placed side-by-side in HTML unless you place a \newline between them.
\item[side-by-side] Side-by-side minipages may be separated by \quad, \qquad, \enskip, \hspace, \hfill, or a \rule. When inside a center environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.
\end{itemize}
\section*{Counters and lengths}

\begin{enumerate}
\item \texttt{Ctr LWR@minipagedepth} Used to only reset the line width at the outermost minipage.
\begin{verbatim}
10527 \newcounter{LWR@minipagedepth}
10528 \setcounter{LWR@minipagedepth}{0}
\end{verbatim}
\item \texttt{Len LWR@minipagewidth} Used to convert the width into printable units.
\begin{verbatim}
10529 \newlength{\LWR@minipagewidth}
\end{verbatim}
\item \texttt{Len LWR@minipageheight} Used to convert the height into printable units.
\begin{verbatim}
10530 \newlength{\LWR@minipageheight}
\end{verbatim}
\end{enumerate}

\section*{Footnote handling}

Also see section \ref{footnotes} for other forms of footnotes. Minipage footnotes are gathered in section \ref{minipagefootnotes}, and then placed into the document in section \ref{minipageplacement}.
90.3 Minipage handling

Bool LWR@minipagefullwidth Should the next minipage have no HTML width?

\newbool{LWR@minipagefullwidth}
\boolfalse{LWR@minipagefullwidth}

Bool LWR@forceminipagefullwidth Should the next minipage have no HTML width? Used to force full width for all
minipages in an environment such as tabular or multicols, where the actual
width depends on the browser width. Controlled by \useminipagewidths and
\ignoreminipagewidths.

\newbool{LWR@forceminipagefullwidth}
\boolfalse{LWR@forceminipagefullwidth}

\minipagefullwidth Requests that the next minipage have no width tag in HTML:

for HTML output: \newcommand*{\minipagefullwidth}{\g@addto@macro\booltrue{LWR@minipagefullwidth}}

\UseMinipageWidths Locally requests that minipage widths be honored.

\newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}

\IgnoreMinipageWidths Locally requests that minipage widths be honored.

\newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}
\end{warpHTML}

for PRINT output: \begin{warpprint}
\newcommand*{\minipagefullwidth}{}
\newcommand*{\UseMinipageWidths}{}
\newcommand*{\IgnoreMinipageWidths}{}
\end{warpprint}

for HTML output: \begin{warpHTML}

\minipagefu Has a minipage been seen this paragraph? If true, prevents paragraph tags around
horizontal space between minipages.

\newbool{LWR@minipagethispar}
\boolfalse{LWR@minipagethispar}

Env minipage [⟨vert position⟩] [⟨height⟩] [⟨inner vert position⟩] [⟨width⟩]
The vertical positions may be 'c', 't', or 'b'. The inner position may also be 's'.

When using \linewidth, \textwidth, or \textheight, these are scaled proportionally
to a 6×9 inch text area.

\NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
Temporarily open a group, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

The following used to be an actual \LaTeX minipage.

\begingroup

Compute width, adjusted for frames:

\setlength{\LWR@minipagewidth}{#4}\%
\ifthenelse{\cnttest{\va/l.Varue{\LWR@minipagedepth}}={0}}{% Only create a new page if not yet nested:
  \LWR@orignewpage\%

  Adjust virtual page size:

  \addtolength{\LWR@minipagewidth}{3em}\% room for frames
  \setlength{\linewidth}{6in}\%
  \setlength{\textwidth}{6in}\%
  \setlength{\textheight}{9in}\%
}{%}
\LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}\%

Compute height:

\setlength{\LWR@minipageheight}{\textheight}\% default unless specified
\ifb/l.Varank{#2}{}{\setlength{\LWR@minipageheight}{#2}}\%

Track nesting depth:

\addtocounter{\LWR@minipagedepth}{1}\%

\LaTeX wants to start a paragraph for the virtual minipage, then start a paragraph again for the contents of the minipage, so cancel the paragraph tag handling until the minipage has begun.

\ifbool{FormatWP}{\newline}{%\LWR@stoppars% 
If FormatWP, add a text frame:

\ifbool{FormatWP}{{% 
  \addtocounter{\LWR@thisautoidWP}{1} %
  \LWR@htmltag{% 
    div id="\LWR@printmbox{\arabic{\LWR@thisautoidWP}}" %
    class="wpm minimized" 
  }% 
}}%
Create the <div> tag with optional alignment style:

```
\LWR@traceinfo{minipage: creating div class}%
\LWR@htmltag{div class="minipage" style="%
\ifthenelse{equal(#1){t}}{\LWR@print@mbox{vertical-align:bottom} ; }{}
\ifthenelse{equal(#1){c}}{\LWR@print@mbox{vertical-align:middle} ; }{}
\ifthenelse{equal(#1){b}}{\LWR@print@mbox{vertical-align:top} ; }{}
\ifthenelse{equal(#3){t}}{\LWR@print@mbox{justify-content:flex-start} ; }{}
\ifthenelse{equal(#3){c}}{\LWR@print@mbox{justify-content:center} ; }{}
\ifthenelse{equal(#3){b}}{\LWR@print@mbox{justify-content:flex-end} ; }{}
\ifthenelse{equal(#3){s}}{\LWR@print@mbox{justify-content:space-between} ; }{}
```

Print the width and optional height styles:

```
\LWR@traceinfo{minipage: about to print the width of \LWR@printlength(\LWR@minipagewidth)}%
\ifbool{\LWR@minipagefullwidth}%
{\global{boolfalse(\LWR@minipagefullwidth)}%
{\ifbool{\LWR@forceminipagefullwidth}{}
{\ifthenelse{\lengthtest{#4}=\linewidth}{}
{width:\LWR@printlength(\LWR@minipagewidth) ; }%
}
}
\LWR@traceinfo{minipage: about to print the height}%
\ifblank{#2}{}{height:\LWR@printlength(\LWR@minipageheight) ; }%
```

Finish with an empty line to start the contents on a new line.

```
% The preceding empty line is required.
```

Set the user-accessible line and text width and height values inside the virtual minipage. These do not affect the actual size of the PDF output, but are used by any reference to \linewidth, etc. inside the virtual minipage being created here.

```
\setlength{\linewidth}{#4}% the original width
\setlength{\textwidth}{6in}%
\setlength{\textheight}{9in}%
```

\raggedright cancels hyphenation, which will be done by HTML instead.

```
\LWR@print@raggedright%
```

Set minipage footnotes:

```
\def\mpfn{mpfootnote}%
\def\thempfn{\thempfootnote}\c@mpfootnote\z@%
```
Resume paragraph tag handling for the contents of the minipage:

\let@footnotetext@mpfootnotetext%

Print pending minipage footnotes:

\LWR@printpendingmpfootnotes%

End the environment with closing tag:

\ifboolexpr{bool(FormatWP) and bool(WPMarkMinipages)}{%
  === end minipage ===
  % \endminipage
  \LWR@stoppars%

The following used to be an actual \LaTeX{} minipage.

\endgroup
\ifbool{FormatWP}{%
  % LWR@htm/l.Vare/l.Varementend{div}
  % LWR@htm/l.Vardivc/l.Varassend{minipage}
  \addtocounter{LWR@minipagedepth}{-1}
  \LWR@startpars%
  \ifbool{FormatWP}{{\new/l.Varine}{}%}

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

\global\booltrue(LWR@minipagethispar)%
\LWR@traceinfo{LWR@minipage: done}%
\NewDocumentEnvironment{LWR@HTML@minipage}{O{t} O{} O{t} m}{\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}{\endLWR@HTML@sub@minipage}
90.4 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:
\parbox \[\langle pos\rangle \[\langle height\rangle \[\langle inner-pos\rangle \{\langle width\}\} \{\langle text\}\}

A parbox uses the minipage code:

\begin{minipage}{#4}\end{minipage}

\mbox \{\langle text\}\}

Nullified for HTML.

\mbox \{\langle text\}\}

Nullified for HTML.

\makeboxparen \{\langle width\}\}, \{\langle height\}\}

Adds to the style in \LWR@temptwo.

\makeboxalign \{\langle alignment character\}\}

Adds to the style in \LWR@temptwo.
\makebox ((width, height)) ((width)) ([pos]) {<text>}

\framebox ((width, height)) ((width)) ([pos]) {<text>}

\NewDocumentCommand{\LWR@HTML@makebox}{>{\Sp/l.VaritArgument{1}{,}}d() o o +m}{% Build the style depending on arguments:
\def\LWR@temptwo{}\IfValueTF{#1}{% (width,height) ..
  \LWR@makebox@paren #1\IfValueT{#2}{% (width,height) [posn]
    \LWR@makebox@align[#2]}
  }
\IfValueT{#2}{% [width]
  \IfValueT{#3}{% [width] [posn]
    \LWR@makebox@align[#3]
  }
  \InlineClass[
    \LWR@print@mbox{display:inline-block} ; %
    \LWR@temptwo
  ]{makebox}{#4}{% scope
  }{scope}
\LWR@formatted{makebox}
}

\NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{% \framebox ((width, height)) ((width)) ([pos]) {<text>}
  \fbox{\makebox(#1)[#2][#3]{#4}}%}
\LWR@formatted{framebox}
\LWR@forcinewidth \{⟨\text⟩\} \\

Sets \LWR@atleastonept to be at least 1pt.

\newlength{\LWR@atleastonept}
\newcommand*{\LWR@forcinewidth}{\newcommand*\set{\LWR@atleastonept}{#1}}% \set{\LWR@atleastonept}{\ifthenelse% \lengthtest{\LWR@atleastonept>0pt} \AND% \lengthtest{\LWR@atleastonept<1pt}}% \set{\LWR@atleastonept}{1pt}}%

\LWR@fboxsty Print the HTML attributes for a black border and padding. \LWR@forcinewidth must be used first in order to set the border width.

\newcommand*{\LWR@fboxsty}{\LWR@findcurrenttextcolor\%} \border: \LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor \% } \padding: \LWR@printlength{\fboxsep} \% } \color: \LWR@origpound\LWR@tempcolor \% }

\fbox \{⟨\text⟩\} \\

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after xcolor may have loaded:

\newcommand{\LWR@HTML@fbox}{\LWR@traceinfo{HTML fbox}\% \LWR@forcinewidth{\fboxru}\% \Inset{\LWR@printmbox{disp:inline-bock} \% \LWR@fboxsty\% \fbox{#1}}\% }

xcolor \lets things to \fbox when it is loaded, and this must remain even for HTML output while in a lateximage, so \fbox is not modified until \AtBeginDocument:

\AtBeginDocument{\LWR@formatted{fbox}}

\fboxBlock \{ ⟨\text⟩ \} Creates a framed HTML <div> of the text.

First, a print-mode version. This is newly defined for print mode, so it is defined inside warpa/l.Var/l.Var for HTML & PRINT: 

end{warpHTML}
for HTML output:  Next, an HTML version:

\begin{warpHTML}
\newcommand{\LWR@HTML@fboxB/l.Varock}[1]{% 
\LWR@forceminwidth{\fboxru/l.Vare}\
\begin{B/l.VarockC/l.Varass}[% 
\LWR@fboxsty/l.Vare\]{fboxB/l.Varock}#1\end{B/l.VarockC/l.Varass} 
\LWR@formatted{fboxB/l.Varock} 
\end{warpHTML}

Env \texttt{fminipage} \begin{itemize}
\item \texttt{⟨align⟩} \texttt{⟨height⟩} \texttt{⟨align⟩} \texttt{⟨width⟩}
\end{itemize}

Creates a framed HTML \texttt{<div>} around its contents.

for HTML & PRINT:  Print version:

\begin{warp}
\begin{lrbox}{\LWR@fminipagebox}
\newsavebox{\LWR@fminipagebox}
\NewDocumentEnvironment{LWR@print@fminipage}{O{t} o O{t} m}{{%
\begin{lrbox}{\LWR@fminipagebox}%

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \texttt{fbox}.

If the optional inner alignment is not given, use the outer instead:

\IfValueTF[#3]{% 
\begin{lrbox}{\LWR@thisalign{#3}}%
\begin{lrbox}{\LWR@thisalign{#1}}%

Form the outer minipage depending on whether a height was given. Make the outer minipage larger to compensate for the frame.

\IfValueTF[#2]{% 
\begin{lrbox}{\LWR@thisalign[#1+2\fboxsep+2\fboxru]}{\LWR@thisalign[#4+2\fboxsep+2\fboxru]}% 
\begin{lrbox}{\LWR@thisalign[#1+2\fboxsep+2\fboxru]}{\LWR@thisalign[#4+2\fboxsep+2\fboxru]}% 

Capture the contents of the environment:

\begin{lrbox}{\LWR@fminipagebox}%
Nest the contents inside an inner minipage of the desired size:

\begin{minipage}{#4}
\end{minipage}

Close the inner minipage and the LR box with the contents:

\end{minipage}
\end{lrbox}

Create a frame around the contents of the environment:

\fbox{\usebox{\LWR@fminipagebox}}

The entire thing is placed inside the outer minipage:

\end{minipage}
\end{warpa/l.Var/l.Var}

**for HTML output:**

\begin{warpHTML}
\NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}{\LWR@traceinfo{fminipage #1 #2 #3 #4} % \
\LWR@forceminwidth{\fboxru/l.Vare} % 
\set/l.Varength{\LWR@tempwidth}{#4} % 
\IfVa/l.VarueT{#2}{\set/l.Varength{\LWR@tempheight}{#2}} % 
\LWR@stoppars % 
\begin{B/l.VarockC/l.Varass}%
\LWR@fboxsty/l.Vare ; % 
\IfVa/l.VarueT{#2}{height:\LWR@print/l.Varength{\LWR@tempheight} ; } % 
\ifboo/l.Var{LWR@minipagefu/l.Var/l.Varwidth} % 
{\g/l.Varoba/l.Var\boo/l.Varfa/l.Varse{LWR@minipagefu/l.Var/l.Varwidth}} % 
{\% \newenvironment{fminipage}{\LWR@print/l.Varength{\LWR@tempheight}(#2)} % 
\end{minipage} %
91 Direct formatting

\textbf, etc. are supported, but \bfseries, etc. work only in some situations.

\texttt, etc. have special meanings in \texttt{HTML}. If \&, \textless, and \textgreater are used, proper \texttt{HTML} entities will be used, but there may be \texttt{HTML} parsing problems if these special characters occur unescaped in program listings or other verbatim text.

For program listings, the listings package is supported, and its \texttt{literate} option is used to convert \&, \textless, and \textgreater to proper \texttt{HTML} entities.

The various verbatim-related environments do not convert \&, \textless, and \textgreater, so care must be taken to avoid accidentally including valid \texttt{HTML} code inside these environments. Adding a space on either side may be sufficient.

For high-level block and inline custom \texttt{CSS} classes, see section \texttt{52.9}.
\textmd \{(text)\}

\textbf \{(text)\}

\textsf \{(text)\}
\texttt {{(text)}}

\textup {{(text)}}

\textit {{(text)}}

\textsc {{(text)}}
\textsl{\{(text)\}}

\textnormal{\{(text)\}}

\textnorma{\{(text)\}}

\textmd{\{(text)\}}

\textup{\{(text)\}}

\textsc{\{(text)\}}

\textit{\{(text)\}}

\norma{\{(text)\}}

\em{\{(text)\}}

\textmd{\{(text)\}}

\textup{\{(text)\}}

\textsc{\{(text)\}}

\textit{\{(text)\}}

\norma{\{(text)\}}

\em{\{(text)\}}
The following are *not* made robust, since they must be expanded to their nullified versions.

\begin{verbatim}
\catcode'\$=\active% redefining $ below
\catcode'\_=12% redefining \_ below
\newcommand*{\LWR@nullfonts}{% 
\LetLtxMacro\emph{\LWR@null@emph}% 
\LetLtxMacro\textmd{\LWR@null@textmd}% 
\LetLtxMacro\textbf{\LWR@null@textbf}% 
\LetLtxMacro\textrm{\LWR@null@textrm}% 
\LetLtxMacro\textsf{\LWR@null@textsf}% 
\LetLtxMacro\texttt{\LWR@null@texttt}% 
\LetLtxMacro\textup{\LWR@null@textup}% 
\LetLtxMacro\textit{\LWR@null@textit}% 
\LetLtxMacro\textsc{\LWR@null@textsc}% 
\LetLtxMacro\textsi{\LWR@null@textsi}% 
\LetLtxMacro\texts{\LWR@null@texts}% 
\LetLtxMacro\textnorma{\LWR@null@textnorma}% 
\LetLtxMacro\rmfami{\LWR@null@rmfami}% 
\LetLtxMacro\sffami{\LWR@null@sffami}% 
\LetLtxMacro\ttfami{\LWR@null@ttfami}% 
\LetLtxMacro\bfseries{\LWR@null@bfseries}% 
\LetLtxMacro\mdseries{\LWR@null@mdseries}% 
\LetLtxMacro\upshape{\LWR@null@upshape}% 
\LetLtxMacro\sshape{\LWR@null@sshape}% 
\LetLtxMacro\scshape{\LWR@null@scshape}% 
\LetLtxMacro\sishape{\LWR@null@sishape}% 
\LetLtxMacro\itshape{\LWR@null@itshape}% 
\LetLtxMacro\normafont{\LWR@null@normafont}% 
\LetLtxMacro\em{\LWR@null@em}%
\renewcommand*{\\}{}% 
\renewcommand*{\{}{}% 
\renewcommand*{\&}{and}% 
\renewcommand*{\#}{-}% 
\renewcommand*{\,}{-}% 
\renewcommand*{~}{-}% 
\renewcommand*{\^}[1]{-}% 
\renewcommand*{\~}[1]{-}% 
\renewcommand*{\newline}{-}% 
\renewcommand*{\textasciicircum}{-}% 
\renewcommand*{\textasciitilde}{-}% 
\renewcommand*{\textasteriskcentered}{-}% 
\renewcommand*{\textbackslash}{-}% 
\renewcommand*{\textbar}{-}% 
\renewcommand*{\textbardbl}{-}% 
\renewcommand*{\textbigcirc}{-}%
\end{verbatim}

Various built-in symbols.
Nullify math macros.

\def\(##1\){}
\def\[##1\]{}
\RenewDocumentCommand{\LWR@htm}{l.Varspanc/l.Varass}{o m +m}{##3}
\Dec/l.VarareExpandab/l.VareDocumentCommand{\In/l.VarineC/l.Varass}{D{(}{)}{} o m +m}{##4}

Nullify logos:

\renewcommand{\TeX}{TeX}
\renewcommand{\LaTeX}{LaTeX}
\renewcommand{\LaTeXe}{LaTeX2e}
\renewcommand{\LuaTeX}{LuaTeX}
\renewcommand{\LuaLaTeX}{LuaLaTeX}
\renewcommand{\XeTeX}{XeTeX}
\renewcommand{\XeLaTeX}{XeLaTeX}
\renewcommand{\ConTeXt}{ConTeXt}
\renewcommand{\BibTeX}{BibTeX}
\renewcommand{\MakeIndex}{MakeIndex}
\renewcommand{\AmS}{AmS}
\renewcommand{\MiKTeX}{MiKTeX}
\renewcommand{\LyX}{LyX}

Use the simpler form with \textorpdfstring:

\newcommand{\textorpdfstring}{##2}
\FilenameNullify \langle redefinitions \rangle

Adds more nullifying definitions for filename generation.

\newcommand*{\FilenameNullify}[]{%}
  \appto{\LWR@nullfonts}{#1}%
}\end

Remembers the current font family, series, and shape.

\newcommand*{\LWR@f@family}{rm}
\newcommand*{\LWR@f@series}{md}
\newcommand*{\LWR@f@shape}{up}
\LWR@textcurrentfont \langle text \rangle

Prints the text with the current font choices. Avoids nesting repeated font selections.

\newcounter{LWR@textcurrentfontdepth}
\setcounter{LWR@textcurrentfontdepth}{0}
\newcommand*{\LWR@textcurrentfont}[]{%
  \ifnum\value{LWR@textcurrentfontdepth}>0%
    \addtocounter{LWR@textcurrentfontdepth}{1}%
    #1%
    \addtocounter{LWR@textcurrentfontdepth}{-1}%
  \else%
    \addtocounter{LWR@textcurrentfontdepth}{1}%
    \InineClass{\text{\LWR@f@family}\LWR@origtilde{}}%
    \text{\LWR@f@series}\LWR@origtilde{}%
    \text{\LWR@f@shape}%
  \fi%
}\end

 Env \LWR@blocktextcurrentfont

Prints the contents with the current font choices.

\newenvironment*{\LWR@blocktextcurrentfont}{%}
  \BlockClass{\text{\LWR@f@family}\LWR@origtilde{}}%
  \text{\LWR@f@series}\LWR@origtilde{}%
  \text{\LWR@f@shape}%
}\end

\mdseries

\renewrobustcmd{\mdseries}{\renewcommand*{\LWR@f@series}{md}}
\bfseries
\renewrobustcmd*{\bfseries}{\renewcommand*{\LWR@f@series}{bf}}
\rmfamily
\renewrobustcmd*{\rmfamily}{\renewcommand*{\LWR@f@family}{rm}}
\sffamily
\renewrobustcmd*{\sffamily}{\renewcommand*{\LWR@f@family}{sf}}
\ttfamily
\renewrobustcmd*{\ttfamily}{\renewcommand*{\LWR@f@family}{tt}}
\upshape
\renewrobustcmd*{\upshape}{\renewcommand*{\LWR@f@shape}{up}}
\itshape
\renewrobustcmd*{\itshape}{\renewcommand*{\LWR@f@shape}{it}}
\scshape
\renewrobustcmd*{\scshape}{\renewcommand*{\LWR@f@shape}{sc}}
\sshape
@ifundefined{sishape}{
\newrobustcmd*{\sishape}{\renewcommand*{\LWR@f@shape}{si}}}{
\renewrobustcmd*{\sishape}{\renewcommand*{\LWR@f@shape}{si}}}
\slshape
\renewrobustcmd*{\slshape}{\renewcommand*{\LWR@f@shape}{sl}}
\normalfont
\renewrobustcmd*{\normalfont}{\rmfamily\mdseries\upshape}
\sp
\{(text)\}

For siunitx. Must work in math mode.
\renewcommand{\sp}[1]{\text{(sup#1)}()}

\normalsize
\begin{itemize}
\item Item 1
\item Item 2
\end{itemize}

For siunitx. Must work in math mode.
\sb \{\langle text\rangle\}

For \textsc{siunitx}. Must work in math mode.

\textsuperscript\{\langle text\rangle\}

\textsuperscript\{\langle text\rangle\}

\textsuperscript\{\langle text\rangle\}

\textsubscript\{\langle text\rangle\}

\textsubscript\{\langle text\rangle\}

\textsuperscript\{\langle text\rangle\}

\textsuperscript\{\langle text\rangle\}

\textsuperscript\{\langle text\rangle\}

\up\{\langle text\rangle\} Prints superscript.

This is \texttt{\let} at the beginning of the document in case some other package has changed the definition.

\fup\{\langle text\rangle\} Prints superscript.

Supports \texttt{fmtcount} package.

This is \texttt{\let} at the beginning of the document in case some other package has changed the definition.

\underline\{\langle text\rangle\}

\underline\{\langle text\rangle\}
\LWR@overline  \{\langle text\rangle\}

\LWR@currenttextcolor  The color to use for text and \textcolor, defaulting to black:
\newcommand*{\LWR@currenttextcolor}{black}

\LWR@tempcolor  The color converted to HTML colorspace.
\newcommand*{\LWR@tempcolor}{black}
\newcommand*{\LWR@tempcolortwo}{black}
\LWR@findcurrenttextcolor  Sets \LWR@tempcolor to the current color.
\newcommand*{\LWR@findcurrenttextcolor}{black}
\LWR@textcurrentcolor  \{\langle text\rangle\} Like \textcolor but uses the current \color instead.
\NewDocumentCommand{\LWR@textcurrentcolor}{m}{black}
\begin{warpHTML}
\LWR@textcurrentfont  \{\langle text\rangle\} Prints the text with the current font choices.
\newcommand*{\LWR@textcurrentfont}{black}
\Env  \LWR@blocktextcurrentfont  Prints the contents with the current font choices.
\newenvironment{\LWR@blocktextcurrentfont}{}{}
\Fi  \FilenameNullify  \{\langle macros to nullify\rangle\}
\newcommand*{\FilenameNullify}{black}
92 Skips, spaces, font sizes

for HTML output: \begin{warpHTML}
\begin{Verbatim}
\, and \thinspace may be redefined by other packages, so are redefined \AtBeginDocument here.

Direct-formatting space commands become HTML entities:

\begin{Verbatim}
\AtBeginDocument{
\renewrobustcmd*{\,}{\HTMLunicode{202f}} % HTML thin non-breakable space
\renewrobustcmd*{\thinspace}{\HTMLunicode{202f}} % HTML thin non-breakable space
\renewrobustcmd*{\negthinspace}{\HTMLunicode{202f}} % HTML thin non-breakable space
\renewrobustcmd*{\texte/l.Var/l.Vartildash}{\HTMLunicode{2026}}
}
\end{Verbatim}

Direct-formatting font sizes are ignored:

\begin{Verbatim}
\Dec/l.VarareDocumentCommand{\oneco/l.Varumn}{}
\Dec/l.VarareDocumentCommand{\twoco/l.Varumn}{O{}}{
\end{Verbatim}
\hfill
\newcommand*{\LWR@HTML@hfill}{\quad}
\LWR@formatted{hfill}

\hrulefill
\newcommand*{\LWR@HTML@hrulefill}{\rule{1in}{1pt}}
\LWR@formatted{hrulefill}

\dotfill
\newcommand*{\LWR@HTML@dotfill}{\dots}
\LWR@formatted{dotfill}

\newpage
\renewcommand*{\newpage}{\LWR@endof}
\new/l.Varine
Uses the HTML \texttt{\textless br \textgreater} element.
\newrobustcmd*{\LWR@new/l.Varinebr}{\unskip\LWR@ht/l.Vartag{br \textgreater}\LWR@orignew/l.Varine}\
\LetLtxMacro{\new/l.Varine}{\LWR@new/l.Varinebr}

\LWR@endof
Redefined to \LWR@endof or \LWR@tabularendofline.

\LWR@endofline * [{\texttt{\textless len\textgreater}}]
\is assigned to \LWR@endofline at \LWR@LwarpStart.
Inside tabular, \texttt{\textless} is temporarily changed to \LWR@tabularendofline.
\newcommand{\LWR@endofline}[1]{{\setlength{\LWR@templengthone}{#1}}%}
\newcommand{\LWR@endofline}{\texttt{\textless} 0pt}%
\setlength{\LWR@templengthone}{\texttt{\textless} 0pt}
\newcommand{\LWR@endofline}{\texttt{\textless} 0pt}%

\LWR@minipagethmstartpars Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a \texttt{\textless div\textgreater} to be inside a \texttt{p}, paragraphs must
be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, \texttt{lwarp} correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. \texttt{lwarp} tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around \texttt{hspace}, \texttt{enskip}, \texttt{quad}, and \texttt{qquad} until the end of the paragraph, when the closing \texttt{p} tag is created.

When a minipage is seen, the boolean \texttt{LWR@minipagethispar} is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. \texttt{LWR@minipagethispar} is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

Placed just before \texttt{hspace}, \texttt{quad}, or \texttt{qquad}'s HTML output.

\newcommand*{\LWR@minipagestartpars}{%}
\ifbool{LWR@minipagethispar}{\LWR@startpars}{}%

\newcommand*{\LWR@minipagestoppars}{%}
\ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%

\quad Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

\renewrobustcmd*{\quad}{\LWR@minipagestoppars%}{\HTMLunicode{2003}%}{\LWR@minipagestartpars%}

\qquad Handles special minipage & horizontal space interactions.

\renewrobustcmd*{\qquad}{\quad\quad}
\enskip Handles special minipage & horizontal space interactions.

\renewrobustcmd*{\enskip}{\LWR@minipagestoppars%}{\HTMLunicode{2002}%}{\LWR@minipagestartpars%}

\texttt{LWR@tempwidth} Used to compute span width, height, raise for \texttt{hspace} and \texttt{rule}:

\newlength{\LWR@tempheight}
\newlength{\LWR@tempraise}

\newlength{\LWR@tempwidth}
Handles special minipage & horizontal space interactions.
Prints a span of a given width. Ignores the optional star.
\\hspace{\fi/l.Var/l.Var} is converted to \hspace{2em}, equal to \qquad.

If \fill, change to \quad:

Only if the width is not zero:

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

Support the HTML thin wrappable space:

Print the span with the converted width. Not rounded.

If formatting for a word processor, approximate with a number of \quad's, in case a span of a given width is not supported:
Close the span:

\LWR@htmltag{/span}%

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

\LWR@minipagestartpars%
\% width not 0
\%
}

\LWR@select@htm\nullif\no/hspace
\hspace

* {⟨length⟩}

Used to disable \hspace while creating description \items.

\newcommand{\LWR@select@html\no/hspace}{%
\RenewDocumentCommand{\hspace}{s m}{}%
\%
}

\LWR@select@print\hspace

\newcommand*{\LWR@select@print\hspace}{%
\renewrobustcmd{\hspace}{\@ifstar{\@hspacer}{\@hspace}}%
\%
}

\hspace
* {⟨length⟩}

Handles special minipage & horizontal space interactions.

\LWR@select@html\hspace

\LWR@vspace
* {⟨length⟩} Nullified vspace.

\newDocumentCommand{\LWR@HTML\vspace}{s m}{%
\LWR@formatted{vspace}
\[⟨num⟩\]
Inserts an HTML \texttt{br} tag.

\renewcommand*{\linebreak}[1][]{\newline}

\nolinebreak
[⟨num⟩]

\renewcommand*{\nolinebreak}[1][]{&}
\pagebreak [...] Starts a new paragraph.
\nopagebreak [...]}

\en/l.Varargethispage * {⟨len⟩}
\renewcommand*{\en/l.Varargethispage}[s m]{}
\c/l.Varearpage \c/l.Vareardoub/l.Varepage
\renewcommand*{\c/l.Varearpage}{}
\renewcommand*{\c/l.Vareardoub/l.Varepage}{}
\ru/l.Vare \ru/l.Vare \ru/l.Vare \ru/l.Vare
\rule \ru/l.Vare \ru/l.Vare \ru/l.Vare
\ru/l.Vare \ru/l.Vare \ru/l.Vare \ru/l.Vare
Handles special minipage & horizontal space interactions.
Creates a span of a given width and height. Ignores the optional star.
\fi/l.Var/l.Var\IfThenElse is zero-width, so \hspace{\fi/l.Var/l.Var} is ignored.
\newcommand*{\LWR@HTML@ru/l.Vare}[3]{%
The width is copied into a temporary \LaTeX length, from which comparisons and conversions may be made:
\set/l.Varength{\LWR@tempwidth}{#2}%
If it's zero-width then skip the entire rule:
\IfThenElse{\lengthtest{\LWR@tempwidth=0pt}}%
\IfThenElse{\lengthtest{\LWR@tempwidth>0pt} \AND%}
\IfThenElse{\lengthtest{\LWR@tempwidth<1pt}}%
\IfThenElse{\setlength{\LWR@tempwidth}{1pt}}%
Likewise with height:
If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

\LWR@minipagestoppars%

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in \LaTeX code.

\LWR@findcurrenttextcolor%
\LWR@htmltagc%
span\LWR@indentHTML%
style="%

The background color is used to draw the filled rule. The color may be changed by \textcolor.

\ifbool{FormatWP}{}{background:\LWR@currenttextcolor ; }%

The width and height are printed, converted to PT:

width:\LWR@printlength(\LWR@tempwidth) ; %
height:\LWR@printlength(\LWR@temphight) ; %

The raise height is converted to a css transform. The \( \text{\#2} \) raise multiplier is to approximately match html output's X height. Conversion to a \LaTeX length allows a typical \LaTeX expression to be used as an argument for the raise, whereas printing the raise argument directly to html output without conversion to a \LaTeX length limits the allowable syntax. To do: A superior method would compute a ratio of \LaTeX ex height, then print that to html with an ex unit.

\ifblank{#1}{}{
\setlength{\LWR@tempraise}{0pt-#1}\
\setlength{\LWR@tempraise}{\LWR@tempraise*2}\
\LWR@indentHTML%
-\ms-transform: translate(0pt,\LWR@printlength(\LWR@tempraise)); %
\LWR@indentHTML%
-webkit-transform: translate(0pt,\LWR@printlength(\LWR@tempraise)); %
\LWR@indentHTML%
transform: translate(0pt,\LWR@printlength(\LWR@tempraise)); %
\LWR@indentHTML%}

Display inline-block to place the span inline with the text:
If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```latex
\ifbool{\FormatWP}{% 
  \setlength{\templo}{\tempwidth}\n% 
  \whiledo{\lengthtest{\templo}>1em}{% 
    \_{}% 
    \addtolength{\templo}{-1em}% 
  }% 
}\}%
\end{warpHTML}
```

Close the span:

\LWR@htmltagc{/span}%

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

\LWR@minipagestartpars% \LWR@minipagestoppars%
\% non-zero width
\}
\LWR@formatted{rule}
\end{warpHTML}

**93 \phantomsection**

*for HTML output:*
\begin{warpHTML}
\phantomsection
\end{warpHTML}

\phantomsection Emulate the \texttt{hyperref} \texttt{\phantomsection} command, often used to insert the bibliography into the table of contents. Ignores \texttt{\ForceHTMLTOC}.

\DeclareDocumentCommand{\phantomsection}{()}{% 
  \begin{pgfinterruptnode}{\ForcingHTMLTOC}% 
  \begin{strip}{1em}{\section*}{% 
  \\end{strip} 
  \end{pgfinterruptnode}% 
\end{warpHTML}

**94 \LaTeX{} and other logos**

Logos for \texttt{HTML} and print modes:
Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally set by \LWR@formatted.

For CSS conversions, see:

http://edward.oconnor.cx/2007/08/tex-poshlet
http://nitens.org/taraborelli/texlogo

and the spacing described in the metafont package documentation.

for HTML & PRINT:

for HTML output:
\侕\TeXe  \TEXe,  \TEXe2\epsilon
\LaTeX \TeX,  \LaTeX 2\epsilon
\newrobustcmd*{\LWR@HTML@LaTeX}{\LaTeX}{\In/l.VarineC/l.Varass{/l.Varatex/l.Varogofont}{\LaTeX}}
\newrobustcmd*{\LWR@HTML@LaTeXe}{\LaTeX\In/l.VarineC/l.Varass{/l.Varatex/l.Varogotwoe}{\LaTeX}}

\LuaTeX \TEXe,  \LaTeX 2\epsilon
\newrobustcmd*{\LWR@HTML@LuaTeX}{\In/l.VarineC/l.Varass{/l.Varatex/l.Varogofont}{Lua}\TeX}
\newrobustcmd*{\LWR@HTML@LuaLaTeX}{\In/l.VarineC/l.Varass{/l.Varatex/l.Varogofont}{Lua}\LaTeX}
\XeTeX, \Xelatex

tetxlogo is a css class which aligns the backwards E in \XeTeX{} and spaces \TeX\{} appropriately.

xelatexlogo is a css class which aligns the backwards E in \XeLATEX{} and spaces \LaTeX\{} appropriately.

\newrobustcmd*{\LWR@HTML@Xe}{
  \HTMLunicode{18e}
}\AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by meta\logo

\newrobustcmd*{\LWR@HTML@XeTeX}{\Xe\TeX}\AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by meta\logo

\newrobustcmd*{\LWR@HTML@XeLaTeX}{\Xe\LaTeX}\AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by meta\logo

\ConTeXt  \ConTeXt

\newrobustcmd*{\LWR@HTML@Con\TeXt}{Con\TeXt t}\LWR@formatted{Con\TeXt}

\BibTeX, \MakeIndex
\BibTeX, \MakeIndex

\newrobustcmd*{\LWR@HTML@Bib\TeX}{B\textsc{ib}\TeX}\LWR@formatted{Bib\TeX}

\newrobustcmd*{\LWR@HTML@Make\Index}{\textit{MakeIndex}}\LWR@formatted{MakeIndex}

\AmS  \AmS

amslogo is a css class used for the \AmS\{} logo.

\AtBeginDocument{%
  \newrobustcmd*{\LWR@HTML@Am\S}{%
  \textit{\AmS}\%\textit{\AmS}\%\textit{\AmS}\%\textit{\AmS}\%}%\AtBeginDocument{%
  \newrobustcmd*{\LWR@HTML@Am\S}{%\textit{\AmS}\%\textit{\AmS}\%\textit{\AmS}\%\textit{\AmS}\%}%
\newrobustcmd*{\LWR@HTML@MiKTeX}{{\In/l.VarineC/l.Varass{/l.Varatex/l.Varogofont}{MiK}\TeX}}
\LWR@formatted{MiKTeX}
\newrobustcmd*{\LWR@HTML@LyX}{{\In/l.VarineC/l.Varass{/l.Varyx/l.Varogo}{LyX}}}
\LWR@formatted{LyX}
\end{warpHTML}

\begin{warpHTML}
\LWR@LwarpStart
\LWR@LwarpEnd
\end{warpHTML}

\AtBeginDocument, \AtEndDocument

\begin{warpHTML}
\@ifc/l.Varass/l.Varoaded{scrbook}{{\RequirePackage{lwp-patch-komascript}}}
\@ifc/l.Varass/l.Varoaded{scrartc/l.Var}{{\RequirePackage{lwp-patch-komascript}}}
\@ifc/l.Varass/l.Varoaded{scrreprt}{{\RequirePackage{lwp-patch-komascript}}}
\end{warpHTML}

\section{Loading KOMA-SCRIPT class patches}

Load patches to koma-script.

\begin{warpHTML}
\@ifclassloaded{scrbook}{{\RequirePackage{lwp-patch-komascript}}}
\@ifclassloaded{scrartc}{{\RequirePackage{lwp-patch-komascript}}}
\@ifclassloaded{scrrtpt}{{\RequirePackage{lwp-patch-komascript}}}
\end{warpHTML}


## 97 Loading MEMOIR class patches

Load patches to memoir.

for HTML output:
```latex
\begin{warpHTML}
@ifclassloaded{memoir}{\RequirePackage{lwp-memoir}}{}
\end{warpHTML}
```

## 98 ut* class patches

Load patches to uj* and ut* classes, as well as ltj* classes.

for HTML output:
```latex
\begin{warpHTML}
\newcommand*{\LWR@patchujtc}{uj/t does not use \partname
\def\@partnameformat{}
\def\@partcntformat##1{\prepartname\csname the##1\endcsname\postpartname\quad}
@ifundefined{chapter}{}{\def\@chapcntformat##1{\prechaptername\csname the##1\endcsname\postchaptername\quad}}
\renewcommand{\thepart}{\@Roman\c@part}\@ifundefined{chapter}{}{\renewcommand{\thesection}{\@arabic\c@section}}\renewcommand{\thechapter}{\@arabic\c@chapter}\renewcommand{\thesection}{\thechapter.\@arabic\c@section}\renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}\renewcommand{\thesubsubsection}{\thesubsection.\@arabic\c@subsubsection}
```

Use decimal points instead of centered dots:
```latex
\renewcommand{\thepart}{\@Roman\c@part}\@ifundefined{chapter}{}{\renewcommand{\thesection}{\@arabic\c@section}}\renewcommand{\thechapter}{\@arabic\c@chapter}\renewcommand{\thesection}{\thechapter.\@arabic\c@section}\renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}\renewcommand{\thesubsubsection}{\thesubsection.\@arabic\c@subsubsection}
```
99  \textbf{CT\TeX\ patches}

Patches for \texttt{ctex} and related classes, which are loaded before \texttt{lwp}.

All \texttt{CT\TeX} classes and the \texttt{ctex} package seem to load \texttt{ctexpatch}, so its presence is used to decide whether to have \texttt{lwp} patch \texttt{CT\TeX}.

\textbf{for HTML output}: \begin{warpHTML}
\AtBeginDocument in case the user set FileSectionNames in the preamble.
\end{warpHTML}

\begin{verbatim}
\AtBeginDocument{
    \@ifpackage\loaded{ctexpatch}{% 
        \def\partcntformat#1{% 
          \LWR@iso\CTEX@partname~% 
          \CTEX@part@aftername
        }% 
    }

\begin{warpHTML}
\AtBeginDocument
    \@ifpackageloading{ctexpatch}{% 
        \def\partcntformat#1{% 
          \LWR@iso\CTEX@partname~% 
          \CTEX@part@aftername
        }% 
    }

\end{warpHTML}
\end{verbatim}
100 kotexutf patches

Patch for kotexutf, which is loaded before lwarp.

kotexutf's \@setref was conflicting with lwarp's cross references.

for HTML output: 11588 \begin{warpHTML}

If kotexutf's version of \@setref is detected, it is reverted to the original.

11589 \AtBeginDocument{
11590 \@ifpackageloaded{kotexutf}{%
11591 \def\LWR@kotexutf@setref#1#2#3{%}
11592 \@setref@dhucs@orig{#1}{#2}{#3}%
11593 \ift\@relax\else
11594 \bgroup
11595 \dhucs\make@cjkchar@null
11596 \edef\@temp{\expandafter#2\@temp}
11597 \egroup
11598 \fi%
11599 }%
11600 }%
11601 \ifdefined{\@setref}{\LWR@kotexutf@setref}{%
11602 \let\@setref@setref@dhucs@orig
11603 }{}
11604 }{}
11605 }%
11606 \end{warpHTML}
File 2  lwp-a2in1.sty

§ 101  Package  2in1

Pkg  2in1  2in1 is ignored.

for HTML output:
1 \LWR@ProvidesPackageDrop{2in1}

File 3  lwp-a2up.sty

§ 102  Package  2up

Pkg  2up  2up is ignored.

for HTML output:
1 \LWR@ProvidesPackageDrop{2up}[2010/05/15]
2 \def\source#1#2#3{}
3 \def\target#1#2#3{}
4 \def\targetlayout#1{}
5 \newdimen\pageseplength
6 \newdimen\pagesepwidth
7 \newdimen\pagesepoffset
8 \def\twoupemptypage{}
9 \def\twoupclearpage{}
10 \def\twoupject{}
11 \def\twouparticle{}
12 \def\twoupplain{}
13 \def\twouplegaltarget{}
14 \def\twouplandscape{}
15 \def\TwoupWrites{}

File 4  lwp-a4.sty

§ 103  Package  a4

Pkg  a4  a4 is ignored.

for HTML output:
1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]
2 \newcommand*{\WideMargins}{

2 \def\source#1#2#3{}
3 \def\target#1#2#3{}
4 \def\targetlayout#1{}
5 \newdimen\pageseplength
6 \newdimen\pagesepwidth
7 \newdimen\pagesepoffset
8 \def\twoupemptypage{}
9 \def\twoupclearpage{}
10 \def\twoupject{}
11 \def\twouparticle{}
12 \def\twoupplain{}
13 \def\twouplegaltarget{}
14 \def\twouplandscape{}
15 \def\TwoupWrites{}

File 5  \texttt{lwarp-a4wide.sty}

§ 104  Package  \texttt{a4wide}

\texttt{Pkg a4wide}  \texttt{a4wide} is ignored.

\texttt{for HTML output:}  \texttt{\LWR@ProvidesPackageDrop{a4wide}[1994/08/30]}

File 6  \texttt{lwarp-a5comb.sty}

§ 105  Package  \texttt{a5comb}

\texttt{Pkg a5comb}  \texttt{a5comb} is ignored.

\texttt{for HTML output:}  \texttt{\LWR@ProvidesPackageDrop{a5comb}}

File 7  \texttt{lwarp-abstract.sty}

§ 106  Package  \texttt{abstract}

\texttt{(Emulates or patches code by Peter Wilson.)}

\texttt{Pkg abstract}  \texttt{abstract} is supported and patched by \texttt{lwp}.

⚠️  \texttt{missing roc}  If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

\texttt{for HTML output:}  \texttt{memoir} provides an abstract environment even though it is not an \texttt{article} or \texttt{report} class. Meanwhile, \texttt{lwp} loads \texttt{book} to emulate \texttt{memoir}, but \texttt{book} does not have an abstract environment, so when the \texttt{abstract} package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

\begin{verbatim}
\ProvideDocumentEnvironment{abstract}{[]}{[]}{[]}
\end{verbatim}

Accept all options for \texttt{lwp-abstract}:

\begin{verbatim}
\LWR@ProvidesPackagePass{abstract}[2009/06/08]
\AtBeginDocument{
\BeforeBeginEnvironment{abstract}{
\LWR@forcenewpage
\BlockClass{abstract}
}
lwarp-academicons.sty

§ 107  Package    

academicons

(Emulates or patches code by Diogo A. B. Fernandes.)

Pkg  academicons  academicons is patched for use by lwarp.

If \aiicon is used, the name of the icon is used in the alt tag. Otherwise, for each of
the individual icon macros, a generic alt tag is used.

for HTML output:  

\LWR@ProvidesPackagePass{academicons}[2018/06/27]

\LetLtxMacro\LWR@orig@symbol\symbol
\let\LWR@academicons@orig@AI\AI
\newcommand*{\LWR@academicons@symbol}{\LWR@academicons@symbol}[1][%  
  \begin{lateximage}*[\LWR@academicons@symbol][1][%  
  \begin{egroup}
\renewcommand*{\AI}{\LetLtxMacro\symbo/l.Var\LWR@academicons@symbo/l.Var}
\renewcommand*{\aiicon}[1]{\begin{/l.Varateximage}*[\textdollar\textsuperscript{#1 icon}]\texttt{academicons#1}\AI\csname aiicon@#1\endcsname\end{/l.Varateximage}}

---

File 9  \texttt{lwp-accsupp.sty}

§ 108 Package \texttt{accsupp}

\texttt{Pkg} accsupp \texttt{accsupp} is ignored.

\texttt{for HTML output:}  1 \LWR@ProvidesPackageDrop{accsupp}[2018/03/28]

2 \newcommand*{\BeginAccSupp}{1}{1}{1}
3 \newcommand*{\EndAccSupp}{1}{1}{1}

---

File 10  \texttt{lwp-acro.sty}

§ 109 Package \texttt{acro}

(\textit{Emulates or patches code by Clemens Niederberger.})

\texttt{Pkg} acro \texttt{acro} is patched for use by \texttt{lwp}.

\texttt{for HTML output:}  1 \LWR@ProvidesPackagePass{acro}[2017/01/30]

\Dec/l.VarareAcronym is used in the preamble, where \texttt{lwp} has not yet made the dollar active, so temporarily enable \texttt{lwp} math catcode just for this definition:

2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {\acro_declare_acronym:mm {#1} {#2}}
5 \catcode\textdollar=3 \lwp
6 \ExplSyntaxOff

9
\RenewDocumentCommand{\DeclareAcronym}{}{
\catcode\$=\active% warp
\LWR@DeclareAcronym }

Modified to activate the current font:

\ExplSyntaxOn
\cs_gset_protected:Npn \acro_write_short:nn #1#2
\{ 
\mode_if_horizontal:F { \leavevmode }
\group_begin:
\bool_if:NTF \__acro_custom_format_bool 
\{ \__acro_custom_format_tl 
\{ \__acro_short_format_tl 
\{\LWR@textcurrentfont(#2)\}
\leavevmode
\group_end:
\}
\cs_gset_protected:Npn \acro_write_a:nn #1#2
\{ 
\mode_if_horizontal:F { \leavevmode }
\group_begin:
\bool_if:NTF \__acro_custom_format_bool 
\{ \__acro_custom_format_tl 
\{ \__acro_a_format_tl 
\{\LWR@textcurrentfont(#2)\}
\leavevmode
\group_end:
\}
\cs_gset_protected:Npn \acro_write_/long:nn #1#2
\{ 
\mode_if_horizontal:F { \leavevmode }
\group_begin:
\bool_if:NTF \__acro_custom_/long_format_bool 
\{ \__acro_custom_/long_format_tl 
\{ \_first_upper_case:n \exp_not:n {\LWR@textcurrentfont(#2)} \}
\leavevmode
\group_end:
\}
\ExplSyntaxOff
lwarp

lwarp-acronym.sty

§ 110 Package acronym

(Emulates or patches code by Tobias Oetiker.)

Pkg acronym acronym is patched for use by lwarp.

⚠ multiply-defined labels \acresetall does not work with cleveref, causing multiply-defined labels. lwarp patches acronym for HTML, but not for print mode.

for HTML output: 1 \LWR@ProvidesPackagePass{acronym}[2015/03/21]

Uses \textit instead of \itshape:

2 \renewcommand\acfbia[1][% 3 \{\textit{\AC@ac/l.Var{#1}}} (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)

Removes the mbox to allow math inside:

4 \renewcommand*\AC@acs[1][% 5% \mbox{ 6 \expandafter\AC@get\csname fn@#1\endcsname\@firstoftwo{#1}} 7% }

Fix for acronym labels in the captions of floats.

8 \renewcommand\@starttoc[1][{ 9 \LWR@htmelementclass(nav){#1} 10 \LetLtxMacro\verridelabel\gobble 11 \LWR@orig@starttoc(#1) 12 \LWR@htmelementclassend(nav){#1} 13 ]

Modified for cleveref and lwarp:

14 \renewcommand\AC@und@newl@bel[3][% 15 \@ifundefined[#1#3]% 16 { 17 \global\expandafter\let\csname#2#3\endcsname@nnil 18 \global\expandafter\let\csname#2#3@lwarp\endcsname@nnil\lwr 19 \global\expandafter\let\csname#2#3@cref\endcsname@nnil\lwr 20 }% 21 { 22 \global\expandafter\let\csname#1#3\endcsname@relax 23 \global\expandafter\let\csname#1#3@lwarp\endcsname@relax\lwr 24 \global\expandafter\let\csname#1#3@cref\endcsname@relax\lwr 25 }% 26 ]%
lwarp

File 12  lwarp-adjmulticol.sty

§ 111  Package  adjmulticol

(Emulates or patches code by Boris Veysman.)

Pkg  adjmulticol  adjmulticol is emulated.

Emulation similar to multicols is used, with adjusted margins. If the number of
columns is specified as 1, it is set so, but if two or greater are used, lwarp allows
a variable number of columns up to three.

for HTML output:

1 \LWR@ProvidesPackageDrop{adjmulticol}\[2012/01/20]\]

2 \RequirePackage{mu/l.Vartico/l.Var}

adjmulticols  * \{(numcols)\} \{(left margin)\} \{(right margin)\}

3 \NewDocumentEnvironment{adjmulticols}{s m m m}

4 \%

Compute the margins, and limit to positive only:

5 \set/l.Varength{\LWR@temp/l.Varengthone}{#3}\%  
6 \ifdimcomp{\LWR@temp/l.Varengthone}{<}{0pt}{\set/l.Varength{\LWR@temp/l.Varengthone}{0pt}}{}\%
7 \set/l.Varength{\LWR@temp/l.Varengthtwo}{#4}\%
8 \ifdimcomp{\LWR@temp/l.Varengthtwo}{<}{0pt}{\set/l.Varength{\LWR@temp/l.Varengthtwo}{0pt}}{}\%

If one column is specified, use a <div> of class singlecolumn, else use multicols:

9 \newcommand*{\LWR@mcolstyle}{multicols}\%
10 \ifnumcomp{#2}{=}{}{1}\{\renewcommand*{\LWR@mcolstyle}{singlecolumn}\}\%

Help avoid page overflow:

11 \LWR@forcenewpage\%

Create the <div> with the given margin and class:

12 \BlockClass\%
13 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; \%
14 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}\%
15 \{\LWR@mcolstyle\%
16 \}
17 \{\endBlockClass\%

18 \}
19 \{\endBlockClass\%

20 \}
File 13  \texttt{lwp-addlines.sty}

§ 112  Package \texttt{addlines}

(Emulates or patches code by Will Robertson.)

\texttt{addlines} is emulated.

\begin{verbatim}
\ProvidesPackage{addlines}[2018/12/05]
\IfStrEq{\addlinesa}{\@ifstar\addlinesa\addlinesa}{}
\IfStrEq{\addlines}{\@ifstar\addlines\addlines}{}
\newcommand{\addlines}{\@ifstar\addlines\addlines}
\end{verbatim}

File 14  \texttt{lwp-afterpage.sty}

§ 113  Package \texttt{afterpage}

(Emulates or patches code by David Carlisle.)

\texttt{afterpage} is emulated.

\begin{verbatim}
\ProvidesPackage{afterpage}[2014/10/28]
\end{verbatim}

File 15  \texttt{lwp-algorithm2e.sty}

§ 114  Package \texttt{algorithm2e}

(Emulates or patches code by Christophe Fiorio.)

\texttt{algorithm2e} is patched for use by \texttt{lwp}.

For print output, captions are placed according to package options, but for HTML output captions are placed where used. Therefore, to have captions appear at the top of the algorithms for both print and HTML, place each captions at the top of each algorithm.

\begin{verbatim}
\ProvidesPackagePass{algorithm2e}[2017/07/18]
\end{verbatim}
For the list-of entries:

\renewcommand{\lVar@a/l.Vargocf}{\hypertocf/l.Varoat{1}{a/l.Vargocf}{/l.Varoa}{#1}{#2}}

Select the lwarp float style according to the algorithm2e style:

\newcommand*{\LWR@f/l.Varoatsty/l.Vare@a/l.Vargocf}{ru/l.Vared}\
\ifdefstring{\a/l.Vargocf@sty/l.Vare}{boxed}{\renewcommand*{\LWR@f/l.Varoatsty/l.Vare@a/l.Vargocf}{boxed}}{}
\ifdefstring{\a/l.Vargocf@sty/l.Vare}{boxru/l.Vared}{\renewcommand*{\LWR@f/l.Varoatsty/l.Vare@a/l.Vargocf}{boxru/l.Vared}}{}
\ifdefstring{\a/l.Vargocf@sty/l.Vare}{p/l.Varain}{\renewcommand*{\LWR@f/l.Varoatsty/l.Vare@a/l.Vargocf}{p/l.Varain}}{}

Paragraph handling to allow line numbers under certain conditions:

\newbool{LWR@algocf@dopars}\
\booltrue{LWR@algocf@dopars}\
\renewcommand{\algocf@everypar}{%\
  \ifbool{LWR@algocf@dopars}{\ifbool{LWR@doingstartpars}{\ifnumcomp{\vaue{LWR@/ateximagedepth}}{>}{0}{}\algocf@everyparhanging%}}{}%}

lwarp caption handling:

\renewcommand{\algocf@makecaption}[2]{%\
  \LWR@HTML@caption@begin{algocf}%\
  \LWR@isolate{algocf@captiontext(#1)(#2)}%\
  \LWR@HTML@caption@end%}

Print any caption where it is declared:

\renewcommand{\algocf@makecaption@plain}[2]{%\
  \LWR@HTML@caption@begin{algocf}%\
  \LWR@isolate{algocf@captiontext(#1)(#2)}%\
  \LWR@HTML@caption@end%}

\renewcommand{\algocf@makecaption@boxed}[2]{%\
  \LWR@HTML@caption@begin{algocf}%}
Turn off line numbering while making the caption:

\renewcommand{\algocf@makecaption@ru}{\reset@font}
\renewcommand{\algocf@printn}{\text{#1}}

Line numbers are printed in a \texttt{<span> of class alg2elinenumber:

\renewcommand{\algocf@printnl}{\text{#1}}

While initializing an algorithm environment, locally declare the style of a regular figure to be the same as the algorithm style, in case the \texttt{figure} option was used.

For \texttt{lwarp}, the algorithm is not assembled inside a box, since \texttt{lateximages} would not work, so the captions are printed where declared.
\let\colon=@mathsemicolon
\let\}=@mathdisplay
}

Use an HTML break:

\renewcommand{\BlankLine}{%
\LWR@stoppars%
\LWR@htmltag{br /}%
\LWR@startpars%
}

Simplified for HTML. The paragraph handling must be preserved.

\renewcommand{\SetKwInOut}[2]{%
\algocf@newcommand{#1}{%
\ifthenelse{\boolean{\algocf@hanginginout}}{\relax}{%
\algocf@seteveryparhanging{\relax}}%
\ifthenelse{\boolean{\algocf@inoutnumbered}}{\relax}{%
\algocf@seteveryparl{\relax}}%
}%
\algocf@reseteveryparhanging%
}%
\renewcommand{\ResetInOut}[1]{}

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

\renewcommand{\algocf@vline}[1]{%
\boolfalse{LWR@algocf@dopars}%
\begin{BlockClass}{alg2evline}%
\booltrue{LWR@algocf@dopars}%
#1%
\boolfalse{LWR@algocf@dopars}%
\end{BlockClass}%
\booltrue{LWR@algocf@dopars}%
}

\renewcommand{\algocf@vslines}[1]{%
\boolfalse{LWR@algocf@dopars}%
\begin{BlockClass}{alg2evsline}%
\booltrue{LWR@algocf@dopars}%
#1%
\boolfalse{LWR@algocf@dopars}%
\end{BlockClass}%
}
The \[H\] environment is converted to a regular float, which in HTML is placed where declared. Reusing the regular float allows the \[H\] version to reuse the ruled and boxed options.

File 16  lwarp-algorithmicx.sty

§ 115  Package  algorithmicx

(Emulates or patches code by Szász János.)

Pkg  algorithmicx  algorithmicx is supported with minor adjustments.

for HTML output:  1 \LWR@ProvidesPackagePass{algorithmicx}[2005/04/27]

Inside the algorithmic environment, level indenting is converted to a <span> of the required length, and comments are placed inside a <span> which is floated right.

⚠️ package conflicts  If using \newfloat, trivfloat, and/or algorithmicx together, see section 475.1.

for HTML output:  2 \begin{warpHTML}

3 \AtBeginEnvironment{algorithmic}{%
4 %
5 \let\origALG@doentity\ALG@doentity%
6 %
7 \renewcommand\ALG@doentity{%
8 \origALG@doentity%
9 \LWR@htmtag{%
10 span style="width: \LWR@printlength{\ALG@thistlm}; display:inline-block;"%}
11 %}
12 \ifbool{FormatWP}{%
13 \setlength{\LWR@templengthone}{\the\ALG@thistlm}%
14 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
15 \quad%
16 \addtolength{\LWR@templengthone}{-1em}%
17 }%
lwarp

File 17  **lwarp-alltt.sty**

§ 116  Package  **alltt**

*(Emulates or patches code by Johannes Braams.)*

Pkg  alltt  *alltt* is patched for use by *lwarp*.

*for HTML output:*  
1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4 \AtBeginEnvironment{alltt}{%
5 \LWR@forcenewpage
6 \LWR@atbeginverbatim{3}{alltt}%
7 }% 
8 \AfterEndEnvironment{alltt}%
9 \LWR@afterendverbatim{2}%
10 }%
11 %}

File 18  **lwarp-amsmath.sty**

§ 117  Package  **amsmath**

*(Emulates or patches code by American Mathematical Society, *\LaTeX*3 Project.)*

Pkg  amsmath  *amsmath* is patched for use by *lwarp*.

*for HTML output:*  
1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]

Patches to allow \eqref inside a caption:
Patches for $\text{AMS}$ math $\verb|	ag|$ macro to remember the first tag:

\begin{verbatim}
2 \def\maketag@@@#1{\text{#1}}
3 \def\tagform@#1{\maketag@@@{\ignorespaces#1\unskip}}

The following $\text{AMS}$ environments are patched in-place:

\verb|\LWR@amsmathenv@@before| $\langle$ environment name $\rangle$
Embeds the environment inside a lateximage.

\begin{verbatim}
20 \newcommand*{\LWR@amsmathenv@@before}[1]{% 
21 \begin{BlockClass}{displaymathnumbered}
22 \LWR@newautoidanchor%
23 \boo{LWR@indisplaymathimage}%
24 \begin{lateximage}[\LWR@amsmathbodynumbered[#1]]
25 \LWR@appxfakebold%
26 }
\end{verbatim}

\verb|\LWR@amsmathenv@before| $\langle$ environment name $\rangle$
Embeds the environment with $\text{MATHJAX}$ or a lateximage.

\begin{verbatim}
27 \newcommand*{\LWR@amsmathenv@before}[1]{% 
28 \ifboolexpr{\bool{mathjax} or ( \bool{FormatWP} and \bool{WPMarkMath} ) }% 
29 { 
30 \LWR@syncmathjax
31 \boolfalse{\LWR@amsmultiline}
32 \ifstrequa{#1}{multline}\booltrue{\LWR@amsmultiline}{}
33 \ifstrequa{#1}{multline*}\booltrue{\LWR@amsmultiline}{}
34 autonum's “+” environments are not supported by $\text{MATHJAX}$.
35 \LWR@beginhideamsmath
36 { 
37 \LWR@amsmathenv@before(multline)
38 }
39 }
\end{verbatim}

\LWR@amsmathenv@after

Embeds the environment inside a lateximage.

40 \newcommand*{\LWR@amsmathenv@after}{%
41 \end{lateximage}\end{BlockClass}
42 }

\LWR@amsmathenv@after \{\langle environment name\rangle\}

Embeds the environment with \LaTeX{} or a lateximage.

43 \newcommand*{\LWR@amsmathenv@after}{[
44 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
45 {
46 \LWR@endhideamsmath
47 \boolequal{\LWR@amsmultline}
48 \LWR@addmathjax{#1}{\the\@envbody}
49 }
50 {\LWR@amsmathenv@@after}
51 }

Env \texttt{multline}

52 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
53 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}

Env \texttt{multline*}

55 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before{multline*}}
56 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after{multline*}}

Env \texttt{gather}

59 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
60 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}

Env \texttt{gather*}

62 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before{gather*}}
63 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after{gather*}}

Env \texttt{align}

65 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
66 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
Env \align*

\BeforeBeginEnvironment{\align*}{\LWR@amsmathenv@before{\align*}}
\AfterEndEnvironment{\align*}{\LWR@amsmathenv@after{\align*}}

Env \flalign

\BeforeBeginEnvironment{\flalign}{\LWR@amsmathenv@before{\flalign}}
\AfterEndEnvironment{\flalign}{\LWR@amsmathenv@after{\flalign}}

Env \flalign*

\BeforeBeginEnvironment{\flalign*}{\LWR@amsmathenv@before{\flalign*}}
\AfterEndEnvironment{\flalign*}{\LWR@amsmathenv@after{\flalign*}}

Env \alignat

\BeforeBeginEnvironment{\alignat}{\LWR@amsmathenv@before{\alignat}}
\AfterEndEnvironment{\alignat}{\LWR@amsmathenv@after{\alignat}}

Env \alignat*

\BeforeBeginEnvironment{\alignat*}{\LWR@amsmathenv@before{\alignat*}}
\AfterEndEnvironment{\alignat*}{\LWR@amsmathenv@after{\alignat*}}

---

File 19 \lwarp-\amsthm.sty

§ 118 Package \amsthm

(Emulates or patches code by Publications Technical Group—American Mathematical Society.)

The original source code is located in amsc/l.Varass.dtx, and printed in amsc/l.Varass.pdf.

\pkg \amsthm \amsthm is patched for use by \lwarp.

\pkg \amsthm \amsthm must be loaded before \mdframed:

\begin{verbatim}
1 \@ifpackageloaded{mdframed}{
2 \PackageError{\lwarp}{Package mdframed must be \lwarp\edLoaded after package amsthm}
3 \}{\PackageWarning{\lwarp}{Package amsthm may be \lwarp\edLoaded by something else, \MessageBreak which must also be moved before mdframed.}}
\end{verbatim}
Tree 14: \textit{amsthm} package — css styling of theorems and proofs

\textbf{Theorem:} \texttt{of class amsthmbody\texttt{theoremmstyle}}

\textbf{Theorem Name:} \texttt{of class amsthmname\texttt{theoremmstyle}}

\textbf{Theorem Number:} \texttt{of class amsthmmnumber\texttt{theoremmstyle}}

\textbf{Theorem Note:} \texttt{of class amsthmnote\texttt{theoremmstyle}}

\textbf{Proof:} \texttt{of class amsthmproof}

\textbf{Proof Name:} \texttt{of class amsthmproofname}

where \texttt{<theoremmstyle>} is plain, definition, etc.

\begin{verbatim}
\LWR@ProvidesPackagePass{amsthm}[2017/10/31]

Storage for the style being used for new theorems:
\begin{verbatim}
13 \newcommand{\LWR@newtheoremsty}{p}{\textit{plain}}
\end{verbatim}

Patched to remember the style being used for new theorems:
\begin{verbatim}
14 \renewcommand{\theoremmstyle}{\LWR@newtheoremsty}{\textit{plain}} lwp
15 \ifdefined{th@#1}{%
16 \PackageWarning{amsthm}{Unknown theoremsty '#1'}%
17 \the@sty{plain}%
18 \renewcommand{\LWR@newtheoremsty}{\textit{plain}} lwp
19 %}
20 \the@sty{#1}%
21 \renewcommand{\LWR@newtheoremsty}{\textit{#1}} lwp
22 %}
23 }
\end{verbatim}

Patched to remember the style for this theorem type:
\begin{verbatim}
24 \def\@nthm#1#2{%
25 \csedef{LWR@thmstyle#2}{\LWR@newtheoremmstyle}{\textit{plain}} lwp
26 \let\@tempa\relax
27 \@xp\if\@ifdefinable\csname #2\endcsname{%
28 \global\@xp\let\csname end#2\endcsname@endtheorem
29 \ifx *#1 unnumbered, need to get one more mandatory arg
30 \edef\@tempa{\ifnum\the\thm@sty=0\relax}
31 \gdef\xp\@nx\csname #2\endcsname{%
32 \@nx@thm\xp\nx\csname th@\the\thm@style\endcsname}{%}
33 \{
34 \else % numbered theorem, need to check for optional arg
\def\@tempa{\@oparg{\@nthm[#2]}{%}
\end{verbatim}

\end{verbatim}
\AtBeginEnvironment{#2}{\edef\LWR@thisthmsty/l.Vare{\@nameuse{LWR@thmstyle(#2)}}% lwp
}%
\@tempa
}

Patched to enclose with \csname sc/sc/sc\endcsname:

\newcommand{\LWR@haveamsthmname}{
  \renewcommand{\thmname}[1]{\In/l.VarineC/l.Varass{amsthmname\LWR@thisthmsty/l.Vare}{##1}}
}
\newcommand{\LWR@haveamsthmnumber}{
  \renewcommand{\thmnumber}[1]{\In/l.VarineC/l.Varass{amsthmnumber\LWR@thisthmsty/l.Vare}{##1}}
}
\newcommand{\LWR@haveamsthmnote}{
  \renewcommand{\thmnote}[1]{\In/l.VarineC/l.Varass{amsthmnote\LWR@thisthmsty/l.Vare}{##1}}
}
\LWR@haveamsthmname
\LWR@haveamsthmnumber
\LWR@haveamsthmnote

Patches for \csname sc/sc/sc\endcsname:

\def{\begintheorem#1#2[#3]}{%
  \item[
    \deferred@thm@head{
      \thm@headfont \thm@indent
      \ifempty{#1}{\let\thm@name\gobble}{\LWR@haveamsthmname}% lwp
      \ifempty{#2}{\let\thm@number\gobble}{\LWR@haveamsthmnumber}% lwp
      \ifempty{#3}{\let\thm@note\gobble}{\LWR@haveamsthmnote}% lwp
      \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
      \the\thm@headpunct
    }
    \hskip\thm@headsep
  ]%
}
\ignorespaces}

Patched for \csname sc/sc/sc\endcsname:

\def{\ifthm#1#2#3}{%
  \ifhmode\unskip\unskip\par\fi
  \normalfont
  \LWR@forcenewpage% lwp
  \BlockClass{amsthmbody}\LWR@thisthmstyle% lwp
  \trivlist
  \let\theheadlnl\relax
  \let\thm@swap\gobble
  \thm@notefont{\fontseries\mddefault\upshape}%
  \thm@headpunct.}% add period after heading
  \thm@headsep 5p@ plus.p@ minus.p@\relax
  \thm@space@setup
}
#1% style overrides
\@topsep \thm@preskip % used by thm head
\@topsepadd \thm@postskip % used by \@endparenv
\def\@tempa[#2]\ifx\@empty\@tempa
\def\@tempa[\@oparg[\@begintheorem[#3][][]]
\else
\refstepcounter[#2]
\def\@tempa[\@oparg[\@begintheorem[#3][\csname the#2\endcsname][]]
\fi
\@tempa
}

\cleveref patches \@thm to do \cref@thmoptarg if an optional argument is given. \lwarp then patches \cref@thmoptarg \AtBeginDocument.

\AtBeginDocument(%
\def\cref@thmoptarg[#1][#2][#3][#4]{%
\ifhmode\unskip\unskip\par\fi%
\norma/l.Varse
\LWR@forcenewpage % /l.Varse
\B/l.VarockC/l.Varass{amsthmbody}l.Warp\thishmstyle% \lwarp
\trivlist%
\let\thmheadn\relax%
\let\thm@swap@gobble%
\thm@notefont(\fontseries\mddefault\upshape)%
\thm@headpunct{.}% add period after heading
\thm@headsep 5\p@ plus\p@ minus\p@\relax%
\thm@space\setup%
\@topsep \thm@preskip % used by thm head
\@topsepadd \thm@postskip % used by \@endparenv
\def\@tempa[#3]\ifx\@empty\@tempa
\def\@tempa[\@oparg[\@begintheorem[#4][][]]
\else%
\refstepcounter[#1][[#3]]% \cleveref modification
\def\@tempa[\@oparg[\@begintheorem[#4][\csname the#3\endcsname][]]
\fi%
\@tempa
%
\AtBeginDocument

\endtrivlist\endBlockClass\@endpfalse )

Proof QED symbol:

\AtBeginDocument(
\ifundefined{LWR@orig@openbox}{
\LetLtxMacro{LWR@orig@openbox}{openbox}
\LetLtxMacro{LWR@orig@b/square}{b/square}
\LetLtxMacro{LWR@orig@Box}{Box}
\def\openbox{\text{\HTMLunicode{25A1}}} % UTF-8 white box
\def\b/square{\text{\HTMLunicode{220E}}} % UTF-8 end-of-proof
\def\Box{\text{\HTMLunicode{25A1}}} % UTF-8 white box
\end{document}
Patched for css:

\renewenvironment{proof}[1]\[1\][\proofname]\[par
\LWR@forcenewpage lwp
\Bloc
\BlockComment{amsthmproof} lwp
\pushQED{\qed}%
\normalfont \topsep6\p@ \@plus6\p@ \relax\trivlist
\item[
\InlineClass{amsthmproofname}]{#1\@addpunct{.}}\ignorespaces% changes
\}%
\InlineClass{thmendmark}\{popQED\}endtrivlist%
\endBlockComment lwp
\@endpefalse
\]

File 20  \texttt{lwp-anonchap.sty}

§ 119  Package  \texttt{anonchap}

\textit{(Emulates or patches code by Peter Wilson.)}

\textbf{Pkg } anonchap  \texttt{anonchap} is emulated.

\textbf{Pkg } tocloft  \texttt{tcloft} & other packages  \texttt{tcloft} with \texttt{tocbibind}, \texttt{anonchap}, \texttt{fncychap}, or other packages which change chapter title formatting, load \texttt{tcloft} with its \texttt{titles} option, which tells \texttt{tcloft} to use standard \LaTeX{} commands to create the titles, allowing other packages to work with it.

The code is shared by \texttt{tocbibind}.

\textbf{for HTML output:}

1 \LWR@ProvidesPackageDrop{anonchap}[2009/08/03]

2 \newcommand{\simplechapter}[1][\@empty]{%
3 \def{\chapntformat}{% #1\csname the#1\endcsname\simplechapterdelim\quad%
4 }%
5 }
6 }
7 \newcommand{\restorechapter}{%  
9 \let{\chapntformat}{\secntformat}
10 }
lwarp

File 21  lwarp-anysize.sty

§ 120  Package  anysize

(Emulates or patches code by Michael Salzenberg, Thomas Esser.)

Pkg  anysize  anysize is emulated.

for HTML output:  1 \LWR@ProvidesPackageDrop{anysize}[1994/08/13]

2 \def\papersize#1#2{}
3 \def\marginsize#1#2#3#4{}

File 22  lwarp-appendix.sty

§ 121  Package  appendix

(Emulates or patches code by Peter Wilson.)

Pkg  appendix  appendix is patched for use by lwarp.

⚠  Incorrect toc link  During HTML conversion, the option toc without the option page results in a toc link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

for HTML output:  1 \LWR@ProvidesPackagePass{appendix}[2009/09/02]

2 \renewcommand*{\@chap@pppage}{%
3 \part*{\appendixpagename}
4 \if@dotoc@pp
5 \addappheaddotoc
6 \fi
7 )
8
9 \renewcommand*{\@sec@pppage}{%
10 \part*{\appendixpagename}
11 \if@dotoc@pp
12 \addappheaddotoc
13 \fi
14 )

File 23  lwarp-ar.sty

§ 122  Package  ar

(Emulates or patches code by Agostino De Marco.)
\texttt{ar} is patched for use by \texttt{lwrap}.

\textbf{for HTML output:} 

 Measure and print the width of the supplied glyph.

\begin{verbatim}
\newlength{\lwr@ar@width}
\newcommand*{\lwr@ar@printwidth}[1]{
  \setlength{\lwr@ar@width}{\widthof{#1}}
  \lwr@convertto{em}{\the\lwr@ar@width}em
}
\end{verbatim}

The \texttt{HTML} version of \texttt{AR}:

\begin{verbatim}
\newrobustcmd*{\lwr@HTML@AR}{%
  \begin{lateximage}*[AR][\lwr@fseries][\lwr@ar@printwidth]\lwr@print@AR\end{lateximage}%
}
For text mode, set the font series according to the \texttt{HTML} font series:
\begin{verbatim}
\ifmmode\e/l.Varse\csuse{LWR@orig\lwr@fseries series}\fi%
\end{verbatim}
Print the original glyph using the newly set font series:
\begin{verbatim}
\lwr@print@AR%
\end{verbatim}

Done.

\begin{verbatim}
\end{lateximage}%
\end{verbatim}

Combine the print and \texttt{HTML} versions:

\begin{verbatim}
\newrobustcmd*{\lwr@formatted{AR}}{
  \begin{lateximage}*[AR][\lwr@fseries][\lwr@ar@printwidth]\lwr@print@AR\end{lateximage}}%
\end{verbatim}

\begin{verbatim}
\newrobustcmd*{\lwr@formatted{ARb}}{
  \begin{lateximage}*[AR][b][\lwr@ar@printwidth]\lwr@print@ARb\end{lateximage}}%
\end{verbatim}

\begin{verbatim}
\newrobustcmd*{\lwr@formatted{ARss}}{
  \ifmmode\e/l.Varse\csuse{LWR@orig\lwr@fseries series}\fi%
  \begin{lateximage}*[ARss][\lwr@fseries][\lwr@ar@printwidth]\lwr@print@ARss\end{lateximage}}%
\end{verbatim}
\newrobustcmd*{\LWR@HTML@ARssb}{% 
\begin{lateximage}*[AR][ssb][\LWR@print@ARssb]%
\LWR@print@ARssb%
\end{lateximage}%
\LWR@formatted{ARssb}
}

\newrobustcmd*{\LWR@HTML@ARtt}{% 
\begin{lateximage}*[AR][tt][\LWR@print@ARtt]%
\LWR@print@ARtt%
\end{lateximage}%
\LWR@formatted{ARtt}
}

---

**File 24**  
**lwarp-arabicfront.sty**

§ 123  
Package  
**arabicfront**

Pkgs  
arabicfront  
arabicfront is ignored.

for HTML output:  
1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

---

**File 25**  
**lwarp-array.sty**

§ 124  
Package  
**array**

Pkgs  
array  
array is used as-is for print output, and emulated for HTML.

plarray and plextarray do not affect \firsth or \lasth, and so are not affected by the following.

for HTML output:  
Remove the default nullified macros:

1 \let\firsth\relax
2 \let\lasth\relax
3 \LWR@ProvidesPackagePass{array}[2018/12/30]

5 \newcommand*{\LWR@HTML@firsth}{\LWR@HTMLh}%
6 \LWR@expandableformatted{firsth}
7 \newcommand*{\LWR@HTML@lasth}{\LWR@HTMLh}%
8 \LWR@expandableformatted{lasth}

10 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
11 \LWR@formatted{tabularnewline}
§ 125 Package arydshln

(Emulates or patches code by Hiroshi Nakashima.)

arydshln heavily patches tabular code, so the actual package is not used. arydshln is emulated for HTML tabular, and reverts to solid rules for svg math array and tabular in a\LaTeX\ image.

css is not able to display a double-dashed border, so a single-dashed rule is displayed as a single-dashed border, and a double-dashed rule is displayed as a thicker single-dashed border.

for HTML output:

array is required to allow \texttt{\newcolumn} below.

1\texttt{\RequirePackage{array}}

2\texttt{\LWR@ProvidesPackageDrop{arydshln}[2018/09/26]}

Ignored, but included for source compatibility:

3\texttt{\newdimen\dashlinewidth} \texttt{\dashlinewidth4pt %}
4\texttt{\newdimen\dashlinegap} \texttt{\dashlinegap4pt %}
5\texttt{\let\dashlinewidth\dashlinethin}
6\texttt{\let\dashlinegap\dashlinegapt}
7
8\texttt{\def\ADLnullwide{}}
9\texttt{\def\ADLsomewide{}}
10\texttt{\def\ADLnullwidehline{}}
11\texttt{\def\ADLsomewidehline{}}
12
13\texttt{\def\ADLactivate{}}
14\texttt{\def\ADLinactivate{}}
15\texttt{\newcommand*{\ADLdrawmode}[1]{}}
16\texttt{\newcommand*{\ADLnoerrupted}{}}
17\texttt{\newcommand*{\dashgapcolor}[2][]{}%}
18\texttt{\newcommand*{\nodashgapcolor}{}}

In a\LaTeX\ image, revert to solid vertical rules:

19\texttt{\appto\LWR@restoreorigformatting{}}
20\texttt{\newcolumntype{}{[]}{}}
21\texttt{\newcolumntype{}{[]}{}%}
22\texttt{\LetLtxMacro\dashline\hline%}
23

Some of these macros are already defined as temporary placeholders in the lwarp core, so they must be redefined here.
The emulated defaults also work for an emulated print mode inside a \texttt{lateximage}:

24 \def\dashline{
25 % \ad\dashline\ad\ihdashline
26 \ad\dashline\ad\inactivehd
27 }
28 \def\ad\dashline#1\{\noalign{\ifnum0='}\fi
29 % \if\ad\zwhrule \vskip-\arrayrulewidth
30 % \else
31 \ad\hline\ad\connect\arrayrulewidth
32 \hrule \@height \arrayrulewidth % lwp
33 % \fi
34 \@ifnextchar[\%
35 {#1}%
36 {#1[%
37 % \dashlinedash/\dashlinegap
38 1pt/1pt
39 ]}]
40 % \def\ad\ihdashline#1/#2\{\noalign{\ifnum0='}{\fi%
41 % \multispan{\ad\columns}\unskip \ad\hline\z\#[1/#2]%
42 % \noalign{\ifnum0='}{\fi%
43 % \futurelet\@tempa\ad\xhline
44 \def\ad\inactivehd[#1/#2]\{
45 % \if\ad\zwhrule \vskip-\arrayrulewidth \fi
46 \hrule\@height\arrayrulewidth
47 \futurelet\@tempa\ad\xhline
48 \def\ad\xhline\{\ifx\@tempa\ad\hline \ad\xhline\fi
49 \ifx\@tempa\ad\dashline \ad\xhline\fi
50 % \ifnum0='{\fi}
51 \def\ad\xhline\{\vskip\double\array\hline\relax\double\array\sepsilon \ad\hline\relax\double\array\sepsilon\ad\dashline#1/#2\%
52 \def\ad\hline#1#2\%
53 % \@tempcnta=2
54 % \global\advance\ad\total\height\@tempcnta
55 % \xdef\ad\rows\{\ad\rows\}
56 % (1/#1/number\@tempcnta);}%
57 % \xdef\ad\rowsR\{\ad\rowsR\}
58 % (1/#1/number\@tempcnta);}%
59 }
60
61 \def\cdashline#1\{\noalign{\ifnum0='}{\fi
62 \@ifnextchar[\%
63 {#1}%
64 {#1[%
65 % \dashlinedash/\dashlinegap
66 1pt/1pt
67 ]}]
68 % \def\ad\cdashline#1\{\noalign{\ifnum0='}{\fi\ad\cdashline[#1]}
69 % \ad\cdashline[#1]\{\dashlinedash/\dashlinegap\}
70 % \ad\inactivecd[#1]\{\dashlinedash/\dashlinegap\}
71 % \ad\inactivecd[#1-#2][#3]\{\ifnum0='{\fi}\ad\cdashline[#1-#2][#3]
72 \ad\inactivecd[#1-#2][#3]}}
File 27  **lwp-asymptote.sty**

§ 126  **Package asymptote**

*(Emulates or patches code by Andy Hammerlindl, John Bowman, Tom Prince.)*

**Pkg asymptote** asymptote is patched for use by lwarp.

To compile:

```
pdflatex project.tex
  asy project*.asy
  pdflatex project.tex
  lwpmk print
  asy project*.asy
  lwpmk print1
  lwpmk print1
  lwpmk html
  asy project_html*.asy
  lwpmk html1
  lwpmk html1
  lwpmk images
```

**for HTML output:**

```
\LWR@ProvidesPackagePass{asymptote}[2016/11/26]
\BeforeBeginEnvironment{asy}{\begin{lateximage}[<-asymptote-\packagediagramname]}
\AfterEndEnvironment{asy}{\end{lateximage}]
\xpatchcmd{\asyinc/lwpunde}{\begingroup}{\begin{lateximage}[<-asymptote-\packagediagramname]}{}
\LWR@patcherror{asymptote}{asyinc/lwpunde-begingroup}
\xpatchcmd{\asyinc/lwpunde}{\endgroup}{\end{lateximage}}{}
\LWR@patcherror{asymptote}{asyinc/lwpunde-endgroup}
```

---

File 28  **lwp-atbegshi.sty**

§ 127  **Package atbegshi**

*(Emulates or patches code by Heiko Oberdiek.)*
lwarp

Emulated.

for HTML output:

Discard all options for lwarp-atbegshi:

```latex
\LWR@ProvidesPackageDrop{atbegshi}[2011/10/05]
\newcommand*{\AtBeginShipout}[1]{}
\newbox\AtBeginShipoutBox
\newcommand*{\AtBeginShipoutNext}[1]{}
\newcommand*{\AtBeginShipoutFirst}[1]{}
\newcommand*{\AtBeginShipoutDiscard}{}
\newcommand*{\AtBeginShipoutInit}{}
\newcommand*{\AtBeginShipoutAddToBox}[1]{}
\newcommand*{\AtBeginShipoutAddToBoxForeground}[1]{}
\newcommand*{\AtBeginShipoutUpperLeft}[1]{}
\newcommand*{\AtBeginShipoutUpperLeftForeground}[1]{}
\AtBeginShipoutOriginalShipout[1]{}
def\AtBeginShipoutBoxWidth{0pt}
def\AtBeginShipoutBoxHeight{0pt}
def\AtBeginShipoutBoxDepth{0pt}
```

File 29  lwarp-attachfile.sty

§ 128  Package  attachfile

(Emulates or patches code by Scott Pakin.)

attachfile is patched for use by lwarp.

Metadata is ignored for now.

for HTML output:

```latex
\LWR@ProvidesPackagePass{attachfile}[2016/09/18]
```

Encloses each icon:

```latex
\newenvironment*{LWR@attachfile@icon}
{
\begin{lateximage}
\detokenize{\texttt{\atfi@icon}}%
\detokenize{\texttt{\atfi@color@rgb}}%
\end{lateximage}
}
```

Each icon is enclosed inside a LWR@attachfile@icon environment:

```latex
\xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
```
Disable PDF file embedding:

\DeclareRobustCommand{\atfi@embedfile}[1]{[]}

The displayed output for an \atfi@file reference:

\newcommand*{\LWR@attachfile@appearance}{}
\DeclareRobustCommand{\atfi@set@appearance}[1][% \def\LWR@attachfile@appearance{#1}%
\]

A file annotation becomes a reference:

\DeclareRobustCommand{\atfi@insert@file@annot}[1][% \href{#1}{\LWR@attachfile@appearance}%
\]

File 30 lwarp-attachfile2.sty

§ 129 Package attachfile2

(Emulates or patches code by Heiko Oberdiek.)

Pkg attachfile2 attachfile2 is patched for use by lwarp.

⚠ Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile2}[2016/05/16]

Adds memory of the selected color:

2 \def\LWR@attachfiletwo@color{}
3 \define@key{AtFi}{color}[% \def\LWR@attachfiletwo@color{#1}% lwarp
4 \HyColor{AttachFileColor}{#1}%
5 \atfi@color@tex\atfi@color@inline\atfi@color@annot
6 {attachfile2}{color}%
7 }


Encloses each icon:

\newenvironment*{LWR@attachfile@icon}
{
  \begin{lateximage}*
  [-attachfile=]%
  \%
  \detokenize\expandafter{atfi@icon@icon}-%
  \detokenize\expandafter{LWR@attachfiletwo@color}-%
  \%
}{
  \end{lateximage}
}

Each icon is enclosed inside a LWR@attachfile@icon environment:

\xpretocmd{atfi@acroGraph}{LWR@attachfile@icon}{}{}
\xapptocmd{atfi@acroGraph}{endLWR@attachfile@icon}{}{}
\xpretocmd{atfi@acroPaperclip}{LWR@attachfile@icon}{}{}
\xapptocmd{atfi@acroPaperclip}{endLWR@attachfile@icon}{}{}
\xpretocmd{atfi@acroPushPin}{LWR@attachfile@icon}{}{}
\xapptocmd{atfi@acroPushPin}{endLWR@attachfile@icon}{}{}
\xpretocmd{atfi@acroTag}{LWR@attachfile@icon}{}{}
\xapptocmd{atfi@acroTag}{endLWR@attachfile@icon}{}{}

Disable PDF file embedding:

\DeclareRobustCommand{atfi@embedfile}[]{}

The displayed output for an \attachfile reference:

\newcommand*{\LWR@attachfile@appearance}{}
\def\atfi@set@appearance@icon{%
\atfi@set@appearance{\csname atfi@acro\atfi@icon@icon\endcsname}%
}
\DeclareRobustCommand{\atfi@set@appearance}[1]{%
\def\LWR@attachfile@appearance[#1]%
}

A file annotation becomes a reference:

\DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
  \href[#1]{\LWR@attachfile@appearance}%
}

Modified for text color:

\DeclareRobustCommand{\notextattachfile}[2][%
lwarp

```latex
\begingroup
\atfi@setup{#1}%
\ifatfi@print
\leavevmode
\begingroup
atfi@UseColor@atfi@color@tex
/LWR@textcurrentcolor(#2)% lwarp
% \strut
\endgroup
% \e/l.Varse
% \sbox/l.Vartx@zero(#2\strut)%
% \makebox[\wd0]{% 
\fi
\endgroup
}
```

Modified to draw the icon:

```latex
\DeclareRobustCommand{\noattachfile}[1][]{%
\begingroup
\atfi@setup{#1}%
\atfi@set@appearance@icon
\ifatfi@print
LWR@attachfile@appearance% lwarp
% \expandafter
% \atfi@refxform\csname atfi@appobj@\atfi@icon@icon\endcsname
% \e/l.Varse
% \makebox[\atfi@appearancewidth]{}%
\fi
\fi
\endgroup
}
```

File 31 `lwarp-authblk.sty`

§ 130 Package **authblk**

*(Emulates or patches code by Patrick W. Daly.)*

Pkg **authblk**

authblk is patched for HTML.

package support LWarp supports the native \LaTeX\ titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling.

load order \\texttt{\pub} and \texttt{\subtitle}

If using the titling package, additional titlepage fields for \texttt{\pub} and \texttt{\subtitle} may be added by using \texttt{\AddSubtit\pub} in the preamble. See section 67.8.

for HTML output

Require that authblk be loaded before titling:

```latex
\if@ifpackageloaded{titling}{
\PackageError{lwarp-authblk}{Package authblk must be loaded before titling}
```
{(Titling appends authblk’s author macro, so authblk must be loaded first.)}

Load authblk:

7 \LWR@ProvidesPackagePass{authblk}[2001/02/27]

Patch to add a class for the affiliation:

8 \LetLtxMacro\LWRAB@affi/affi
9 \renewcommand[affil][2][][% 11 \LWR@affi[#1]{\protect\InlineClass{affiliation}{#2}}
12 }

Create an HTML break for an \authorcr:

13 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}

---

File 32 lwarp-autonum.sty

§ 131 Package autonum

autonum is ignored.

⚠ numbering All equations are numbered in HTML output.

MATHJax does not support the “+” environments.

for HTML output:

1 \LWR@ProvidesPackageDrop{autonum}[2015/01/18]

2 \RequirePackage{amsmath}
3
4
5 \newenvironment{equation+}{\equation}{\endequation}
6
7
8 \newenvironment{gather+}{\gather}{\endgather}
9
10 \BeforeBeginEnvironment{gather+}{\LWR@amsmathenv@@before{gather+}}
11
12 \AfterEndEnvironment{gather+}{\LWR@amsmathenv@@after}
13
14
15 \newenvironment{multline+}{\multline}{\endmultline}
16
17 \BeforeBeginEnvironment{multline+}{\LWR@amsmathenv@@before{multline+}}
18
19 \AfterEndEnvironment{multline+}{\LWR@amsmathenv@@after}
\newenvironment{flalign+}{\begin{flalign}}{\end{flalign}}
\BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flalign+}}
\AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
\newenvironment{align+}{\begin{align}}{\end{align}}
\BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{align+}}
\AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
\newenvironment{alignat+}{\begin{alignat}}{\end{alignat}}
\BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alignat+}}
\AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
\newenvironment{split+}{\begin{split}}{\end{split}}

File 33 \texttt{lwp-axessibility.sty}

§ 132 Package \texttt{axessibility}

Pkg \texttt{axessibility} axessibility is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop{axessibility}

2 \newcommand{\wrap}{[1]}

File 34 \texttt{lwp-axodraw2.sty}

§ 133 Package \texttt{axodraw2}

(Emulates or patches code by John C. Collins, J.A.M. Vermaeren.)

Pkg \texttt{axodraw2} axodraw2 is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{axodraw2}[2018/02/15]

2 \BeforeBeginEnvironment{axopicture}{\begin{lateximage}[\texttt{-axopicture--\packagediagramname}]}

3 \AfterEndEnvironment{axopicture}{\end{lateximage}}
lwarp

---

File 35  **lwarp-backref.sty**

§ 134 Package  **backref**

(Emulates or patches code by David Carlisle and Sebastian Rahtz.)

**Pkg** backref  backref is patched for use by lwarp.

⚠️ **loading** Note that backref must be explicitly loaded, and is not automatically loaded by hyperref when generating HTML output.

**for HTML output:**

1 \LWR@ProvidesPackagePass{backref}[2016/05/21]

Force the hyperref option:

2 \def\backref{}\let\backrefxxx\hyper@section@backref

---

File 36  **lwarp-balance.sty**

§ 135 Package  **balance**

(Emulates or patches code by Patrick W. Daly.)

**Pkg** balance  Emulated.

**for HTML output:**

Discard all options for lwarp-balance:

1 \LWR@ProvidesPackageDrop{balance}[1999/02/23]

2 \newcommand*{\balance}{}

3 \newcommand*{\nobalance}{}

---

File 37  **lwarp-bbding.sty**

§ 136 Package  **bbding**

(Emulates or patches code by Karel Horak, Peter Møller Møervaard.)

**Pkg** bbding  bbding is patched for use by lwarp.

**for HTML output:**

1 \LWR@ProvidesPackagePass{bbding}[1999/04/15]

2 \newcommand*{\LWR@bbdingsymbol}[2]{\HTMLunicode{#2}}

3 \newcommand{\LWR@HTML@ScissorRightBrokenBottom}{\LWR@bbdingsymbol{000} {2701}}
\newcommand{\LWR@HTML@ScissorRight}{\bbdingsymbol{001}}
\newcommand{\LWR@HTML@ScissorRightBrokenTop}{\bbdingsymbol{002}}
\newcommand{\LWR@HTML@ScissorLeftBrokenBottom}{\bbdingsymbol{003}}
\newcommand{\LWR@HTML@ScissorLeft}{\bbdingsymbol{004}}
\newcommand{\LWR@HTML@ScissorLeftBrokenTop}{\bbdingsymbol{005}}
\newcommand{\LWR@HTML@ScissorHo/l.\VarowRight}{\bbdingsymbol{006}}
\newcommand{\LWR@HTML@ScissorHo/l.\VarowLeft}{\bbdingsymbol{007}}
\newcommand{\LWR@HTML@Phone}{\bbdingsymbol{010}}
\newcommand{\LWR@HTML@PhoneHandset}{\bbdingsymbol{011}}
\newcommand{\LWR@HTML@Tape}{\bbdingsymbol{012}}
\newcommand{\LWR@HTML@P/l.\Varane}{\bbdingsymbol{013}}
\newcommand{\LWR@HTML@Enve/l.\Varope}{\bbdingsymbol{014}}
\newcommand{\LWR@HTML@HandCuffRight}{\bbdingsymbol{015}}
\newcommand{\LWR@HTML@HandCuffLeft}{\bbdingsymbol{016}}
\newcommand{\LWR@HTML@HandCuffRightUp}{\bbdingsymbol{017}}
\newcommand{\LWR@HTML@HandCuffLeftUp}{\bbdingsymbol{018}}
\newcommand{\LWR@HTML@HandRight}{\bbdingsymbol{019}}
\newcommand{\LWR@HTML@HandLeft}{\bbdingsymbol{020}}
\newcommand{\LWR@HTML@HandRightUp}{\bbdingsymbol{021}}
\newcommand{\LWR@HTML@HandLeftUp}{\bbdingsymbol{022}}
\newcommand{\LWR@HTML@Peace}{\bbdingsymbol{023}}
\newcommand{\LWR@HTML@HandPenci/l.\VarLeft}{\bbdingsymbol{024}}
\newcommand{\LWR@HTML@Penci/l.\VarRight}{\bbdingsymbol{025}}
\newcommand{\LWR@HTML@Penci/l.\VarLeft}{\bbdingsymbol{026}}
\newcommand{\LWR@HTML@Penci/l.\VarRightUp}{\bbdingsymbol{027}}
\newcommand{\LWR@HTML@Penci/l.\VarLeftUp}{\bbdingsymbol{028}}
\newcommand{\LWR@HTML@Penci/l.\VarRightDown}{\bbdingsymbol{029}}
\newcommand{\LWR@HTML@Penci/l.\VarLeftDown}{\bbdingsymbol{030}}
\newcommand{\LWR@HTML@NibRight}{\bbdingsymbol{031}}
\newcommand{\LWR@HTML@NibLeft}{\bbdingsymbol{032}}
\newcommand{\LWR@HTML@NibSolidRight}{\bbdingsymbol{033}}
\newcommand{\LWR@HTML@NibSolidLeft}{\bbdingsymbol{034}}
\newcommand{\LWR@HTML@Checkmark}{\bbdingsymbol{035}}
\newcommand{\LWR@HTML@CheckmarkBo/l.\Vard}{\bbdingsymbol{036}}
\newcommand{\LWR@HTML@XSo/l.\Varid}{\bbdingsymbol{037}}
\newcommand{\LWR@HTML@XSo/l.\VaridBo/l.\Vard}{\bbdingsymbol{038}}
\newcommand{\LWR@HTML@XSo/l.\VaridBrush}{\bbdingsymbol{039}}
\newcommand{\LWR@HTML@P/l.\Varus/l.\Varine}{\bbdingsymbol{040}}
\newcommand{\LWR@HTML@P/l.\Varus}{\bbdingsymbol{041}}
\newcommand{\LWR@HTML@P/l.\VarusCenterOpen}{\bbdingsymbol{042}}
\newcommand{\LWR@HTML@P/l.\VarusThinCenterOpen}{\bbdingsymbol{043}}
\newcommand{\LWR@HTML@Cross}{\bbdingsymbol{044}}
\newcommand{\LWR@HTML@CrossOpenShadow}{\bbdingsymbol{045}}
\newcommand{\LWR@HTML@CrossOut/l.\Varine}{\bbdingsymbol{046}}
\newcommand{\LWR@HTML@CrossBo/l.\VardOut/l.\Varine}{\bbdingsymbol{047}}
\newcommand{\LWR@HTML@CrossMa/l.\Varate}{\bbdingsymbol{048}}
\newcommand{\LWR@HTML@DavidStarSo/l.\Varid}{\bbdingsymbol{049}}
\newcommand{\LWR@HTML@FourAsterisk}{\bbdingsymbol{050}}
\newcommand{\LWR@HTML@JackStar}{\bbdingsymbol{051}}
\newcommand{\LWR@HTML@JackStarBo/l.\Vard}{\bbdingsymbol{052}}
\newcommand{\LWR@HTML@CrossC/l.\VarowerTips}{\bbdingsymbol{053}}
\newcommand{\LWR@HTML@FourStar}{\bbdingsymbol{054}}
\newcommand{\LWR@HTML@FourStarOpen}{\bbdingsymbol{055}}
\newcommand{\LWR@HTML@FiveStarLines}{\bbdingsymbol{056}}
\newcommand{\LWR@HTML@EightAsterisk}{\bbdingsymbol{057}}
\newcommand{\LWR@HTML@JackStarSolid}{\bbdingsymbol{058}}
\newcommand{\LWR@HTML@JackStarSolid}{\bbdingsymbol{059}}
\newcommand{\LWR@HTML@FourAsterisk}{\bbdingsymbol{060}}
\newcommand{\LWR@HTML@FourStar}{\bbdingsymbol{061}}
\newcommand{\LWR@HTML@FourStarSolid}{\bbdingsymbol{062}}
\newcommand{\LWR@HTML@JackStarSolid}{\bbdingsymbol{063}}
\newcommand{\LWR@HTML@CrossC/l.\VarorerTips}{\bbdingsymbol{064}}
\newcommand{\LWR@HTML@FourStar}{\bbdingsymbol{065}}
\newcommand{\LWR@HTML@FourStarSolid}{\bbdingsymbol{066}}
\newcommand{\LWR@HTML@FiveStarLines}{\bbdingsymbol{067}}
\newcommand{\LWR@HTML@TriangleDown}{\LWR@bbdingsymbo/l.Var{157} {25BC}}
\newcommand{\LWR@HTML@DiamondSolid}{\LWR@bbdingsymbo/l.Var{160} {25C6}}
\newcommand{\LWR@HTML@OrnamentDiamondSo}{\LWR@bbdingsymbo/l.Var{161} {2756}}
\newcommand{\LWR@HTML@Ha/l.VarfCirc/l.VareRight}{\LWR@bbdingsymbo/l.Var{162} {25D7}}
\newcommand{\LWR@HTML@Ha/l.VarfCirc/l.VareLeft}{\LWR@bbdingsymbo/l.Var{163} {25D6}}
\newcommand{\LWR@HTML@Rectang/l.VareThin}{\LWR@bbdingsymbo/l.Var{164} {2758}}
\newcommand{\LWR@HTML@Rectang/l.Vare}{\LWR@bbdingsymbo/l.Var{165} {2759}}
\newcommand{\LWR@HTML@Rectang/l.VareBo/l.Vard}{\LWR@bbdingsymbo/l.Var{166} {275A}}
\newcommand{\LWR@HTML@ArrowBo/l.VardRightStrobe}{\LWR@bbdingsymbo/l.Var{167} {27A0}}
\newcommand{\LWR@HTML@ArrowBo/l.VardUpRight}{\LWR@bbdingsymbo/l.Var{170} {27A6}}
\newcommand{\LWR@HTML@ArrowBo/l.VardDownRight}{\LWR@bbdingsymbo/l.Var{171} {27A5}}
\newcommand{\LWR@HTML@ArrowBo/l.VardRightShort}{\LWR@bbdingsymbo/l.Var{172} {27B2}}
\LWR@formatted{ScissorRightBrokenBottom}
\LWR@formatted{ScissorRight}
\LWR@formatted{ScissorRightBrokenTop}
\LWR@formatted{ScissorLeftBrokenBottom}
\LWR@formatted{ScissorLeft}
\LWR@formatted{ScissorLeftBrokenTop}
\LWR@formatted{ScissorHollowRight}
\LWR@formatted{ScissorHollowLeft}
\LWR@formatted{Phone}
\LWR@formatted{PhoneHandset}
\LWR@formatted{Tape}
\LWR@formatted{Envelope}
\LWR@formatted{HandCuffRight}
\LWR@formatted{HandCuffLeft}
\LWR@formatted{HandCuffRightUp}
\LWR@formatted{HandCuffLeftUp}
\LWR@formatted{HandRight}
\LWR@formatted{HandLeft}
\LWR@formatted{HandRightUp}
\LWR@formatted{HandLeftUp}
\LWR@formatted{Peace}
\LWR@formatted{HandPencilLeft}
\LWR@formatted{PencilRight}
\LWR@formatted{PencilLeft}
\LWR@formatted{PencilRightUp}
\LWR@formatted{PencilLeftUp}
\LWR@formatted{PencilRightDown}
\LWR@formatted{PencilLeftDown}
\LWR@formatted{NibRight}
\LWR@formatted{NibLeft}
\LWR@formatted{NibSolidRight}
\LWR@formatted{NibSolidLeft}
\LWR@formatted{Checkmark}
\LWR@formatted{CheckmarkBold}
\LWR@formatted{XSolid}
\LWR@formatted{XSolidBold}
\LWR@formatted{XSolidBrush}
\LWR@formatted{PlusOutline}
\LWR@formatted{Plus}
\LWR@formatted{PlusCenterOpen}
\LWR@formatted{PlusThinCenterOpen}
\LWR@formatted{Cross}
\LWR@formatted{CrossOpenShadow}
\LWR@formatted{CrossOutline}
\LWR@formatted{CrossBoldOutline}
\LWR@formatted{CrossMaltese}
\LWR@formatted{DavidStarSolid}
\LWR@formatted{DavidStar}
\LWR@formatted{FourAsterisk}
\LWR@formatted{JackStar}
\LWR@formatted{JackStarBold}
\LWR@formatted{CrossCloverTips}
\LWR@formatted{FourStar}
\LWR@formatted{FourStarOpen}
\LWR@formatted{FiveStarLines}
\LWR@formatted{FiveStar}
\LWR@formatted{FiveStarOpen}
\LWR@formatted{FiveStarOpenCircled}
\LWR@formatted{FiveStarCenterOpen}
\LWR@formatted{FiveStarOpenDotted}
\LWR@formatted{FiveStarOutline}
\LWR@formatted{FiveStarOutlineHeavy}
\LWR@formatted{FiveStarConvex}
\LWR@formatted{FiveStarShadow}
\LWR@formatted{AsteriskBold}
\LWR@formatted{AsteriskCenterOpen}
\LWR@formatted{AsteriskThin}
\LWR@formatted{AsteriskThinCenterOpen}
\LWR@formatted{EightStarTaper}
\LWR@formatted{EightStarConvex}
\LWR@formatted{SixStar}
\LWR@formatted{EightStar}
\LWR@formatted{EightStarBold}
\LWR@formatted{TwelveStar}
\LWR@formatted{SixteenStarLight}
\LWR@formatted{SixFlowerPetalRemoved}
\LWR@formatted{SixFlowerOpenCenter}
\LWR@formatted{AsteriskAlternate}
\LWR@formatted{AsteriskPetal}
\LWR@formatted{AsteriskPetalDotted}
\LWR@formatted{AsteriskOpen}
\LWR@formatted{EightFlowerPetal}
\LWR@formatted{SunshineOpenCircled}
\LWR@formatted{SixFlowerAlternate}
\LWR@formatted{SixFlowerPetal}
\LWR@formatted{SixFlowerPetalDotted}
\LWR@formatted{SixFlowerOpen}
\LWR@formatted{FourFlowerPetalAlt}
\LWR@formatted{FourFlowerOpen}
\LWR@formatted{FourFlowerAltPetal}
\LWR@formatted{FourCloverOpen}
\LWR@formatted{FourCloverSolid}
\LWR@formatted{AsteriskRoundedEnds}
\LWR@formatted{EightFlowerPetalRemoved}
\LWR@formatted{EightFlowerBold}
\LWR@formatted{SixFlowerRemovedOpenPetal}
\LWR@formatted{SparkleBold}
\LWR@formatted{Sparkle}
\LWR@formatted{SnowflakeChevron}
\begin{verbatim}
\ifdef\newfloat{addtocontents}{ORI}{
  \let\addtocontents\newfloat@addtocontents@ORI
}\end{verbatim}

File 38  \verb+lwp-biblatex.sty+

§ 137  Package \verb+biblatex+

\verb+(Emulates or patches code by Philipp Lehman.+)\n
\verb+Pkg biblatex+  When \verb+biblatex+ is used, modifications from \verb+newfloat+ may have to be undone.

\textbf{for HTML output:}

1. \textit{lwp} uses \textit{newfloat}.

2. For classes with chapters which \textit{newfloat} does not know about, such as \textit{CTeX}-related classes, \textit{newfloat} may modify \verb+\addtocontents+.\n
3. \textit{biblatex}, though, wants to patch \verb+\addtocontents+, which causes an error if \verb+\addtocontents+ has been changed.\n
4. Therefore, \verb+\addtocontents+ is restored to its original here, since \textit{biblatex} is about to be loaded.\n
5. This means that the \textit{newfloat}'s \textit{chapterlistgaps} option may no longer work.
lwarp

\[ \text{lwp}@\text{ProvidesPackagePass(biblatex)[2018/03/04]} \]

---

**File 39** lwp-bibunits.sty

§ 138 Package **bibunits**

*(Emulates or patches code by Thorsten Hansen.)*

**Pkg bibunits** bibunits is patched for use by lwarp.

**for HTML output:**

1 \LWP@ProvidesPackagePass(bibunits)[2004/05/12]

\text{1} \def\bu@bibdata{\BaseJobname}

---

**File 40** lwp-bigdelim.sty

§ 139 Package **bigdelim**

*(Emulates or patches code by Pieter van Oostrum, Øystein Bache, Jerry Leichter.)*

**Pkg bigdelim** bigdelim is used as-is for print or lateximage, and patched for HTML.

The delimiters are displayed in HTML by printing the delimiter, the text, and a thick border across the side of the \texttt{\multirow} which indicates the actual height of the delimiter. The delimiter character is given a <span> class of \texttt{ldelim} or \texttt{rdelim}, and the default css sets this to font-size:200%

⚠️ **use \texttt{\mrowcell}** \texttt{ldelim} and \texttt{rdelim} use \texttt{\multirow}, so \texttt{\mrowcell} must be used in the proper number of empty cells in the same column below \texttt{ldelim} or \texttt{rdelim}, but not in cells which are above or below the delimiter:

\begin{tabular}{lll}
  $<$ & a & b \\
  \texttt{ldelim}{\{} & c & d \\
  \texttt{\mrowcell} & e & f \\
  \texttt{\mrowcell} & g & h \\
  $<$ & i & j \\
\end{tabular}

---

for HTML output:
First, remove the temporary definitions of \texttt{\delim} and \texttt{\rdelim}, which were previously defined for tabular scanning in case \texttt{bigdelim} was not loaded:

\begin{verbatim}
1 let\delim\relax
2 let\rdelim\relax
\end{verbatim}

Next, load the package's new definitions:

\begin{verbatim}
3 \ProvidesPackagePass{bigdelim}[2018/08/03]
\end{verbatim}

\begin{verbatim}
\delim \rdelim
\begin{verbatim}
\ delim \ rdelim
\end{verbatim}
\end{verbatim}

\begin{verbatim}
4 \NewDocumentCommand{\LWR@HTML@\delim}{m m m O{}}{\renewcommand{\LWR@mu/\varirowborder}{right} \mu/\varirow{#2}{#3}{#4 \InC/\variass{\delim}{#1}}}
5 \NewDocumentCommand{\LWR@HTML@\rdelim}{m m m O{}}{\renewcommand{\LWR@mu/\varirowborder}{left} \mu/\varirow{#2}{#3}{\InC/\variass{\rdelim}{#1} #4}}
\end{verbatim}

\begin{verbatim}
6 \LWR@formatted{\delim}
7 \LWR@formatted{\rdelim}
\end{verbatim}

File 41 \texttt{lwarp-bigfoot.sty}

\section{140 Package \texttt{bigfoot}}

\texttt{bigfoot} is emulated.

\begin{verbatim}
1 \ProvidesPackageDrop{bigfoot}[2015/08/30]
2 \RequirePackage{manyfoot}
3 \RequirePackage{perpage}
4 \def\Resty\footnotefont#1\#2{}
5 \def\FootnoteSpecific#1{}
6 \def\DefineFootnoteStack#1{}
7 \def\PushFootnoteMark#1{}
8 \def\PopFootnoteMark#1{}
9 \hfootfraction{0.9}
10 \vtypefraction{0.7}
11 \footnoteminimum{1sp}
12 \footnotemainminimum{0pt}
13 \footnotecarryratio{2}
\end{verbatim}
§ 141 Package \textbf{bigstrut} \newline
\textit{(Emulates or patches code by Piet van Oostrom, Øystein Bache, Jerry Leichter.)} \newline
\texttt{Pkg \textbf{bigstrut}} \textbf{bigstrut} is used as-is for print or \LaTeXimage, and patched for HTML. \newline
\texttt{for HTML output:} 1 \LWR@ProvidesPackagePass{bigstrut}[2018/08/03] \newline
2 \LetLtxMacro\LWR@origbigstrut\bigstrut \newline
3 \renewcommand\bigstrut[1][x]{\{} \newline
4 \appto\LWR@restoreorigformatting{% \newline
5 \LetLtxMacro\bigstrut\LWR@origbigstrut\}% \newline
6 \LWR@patcherror{bitpattern}{bitpattern} \newline
7 \LWR@patcherror{bitpattern}{bp@Done} \newline

§ 142 Package \textbf{bitpattern} \newline
\textit{(Emulates or patches code by Jean-Marc Bouguet.)} \newline
\texttt{Pkg bitpattern} \textbf{bitpattern} is patched for use by \texttt{lwp}. \newline
\texttt{for HTML output:} 1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11] \newline
2 \xpatchcmd{\bitpattern}{\begingroup}{\begin{lateximage}[{-bitpattern--\packagediagramname}]}{\}{\LWR@patcherror{bitpattern}{bitpattern}} \newline
3 \xpatchcmd{\bp@Done}{\endgroup}{\end{lateximage}}{\}{\LWR@patcherror{bitpattern}{bp@Done}} \newline

§ 143 Package \textbf{blowup} \newline
\texttt{Pkg blowup} \textbf{blowup} is ignored.
lwarp

for HTML output:

1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]
2 \newcommand*\blowup[1]{

File 45 lwarp-booklet.sty

§ 144 Package booklet

(Emulates or patches code by Peter Wilson.)

Pkg booklet booklet is nullified.

for HTML output:

1 \LWR@ProvidesPackageDrop{booklet}[2009/09/02]
2 \newdimen\pageseplength
3 \newdimen\pagesepwidth
4 \newdimen\pagesepoffset
5 \newif\ifsidebyside \sidebysidetrue
6 \newif\ifuselandscape \uselandscapefalse
7 \newif\ifprintoption \printoptionfalse
8 \newcommand*{\pagespersignature}[1]{}
9 \def\magstepminus#1{}
10 \newcommand*{\target}[3]{}
11 \newcommand*{\source}[3]{}
12 \newcommand*{\setpdtargetpages}{}
13 \newcommand*{\setvptargetpages}{}
14 \newcommand*{\targettopbottom}{}
15 \newcommand*{\twoupemptypage}{}
16 \newcommand*{\twoupclearpage}{}
17 \newcommand*{\checkforlandscape}{

File 46 lwarp-bookmark.sty

§ 145 Package bookmark

(Emulates or patches code by Heiko Oberdiek.)

Pkg bookmark bookmark is emulated.

for HTML output:

Discard all options for lwarp-bookmark:

1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]
2 \newcommand*{\bookmarksetup}[1]{
3 \newcommand*{\bookmarksetupnext}[1]{
4 \newcommand*{\bookmark}[2]{
5 \newcommand*{\bookmarkdefinestyle}[2]{
6 \newcommand*{\bookmarkget}[1]{
7 \newcommand*{\BookmarkAtEnd}[1]{

for HTML output:

Discard all options for lwarp-bookmark:
§ 146 Package

(Emulates or patches code by Simon Fear.)

For HTML output, booktabs is emulated during HTML output, and used as-is during print output and inside an HTML lateximage.

First, forget the placeholder macros:

```latex
\LetLtxMacro{topru}{relax}
\LetLtxMacro{midru}{relax}
\LetLtxMacro{cmidru}{cline}
\LetLtxMacro{bottomru}{relax}
\LetLtxMacro{addlinespace}{relax}
\LetLtxMacro{morecmidrules}{relax}
\LetLtxMacro{specialrule}{relax}

\LWR@ProvidesPackagePass{booktabs}[2016/04/27]

\DeclareDocumentCommand{\LWR@HTML@topru}{o d()}%{
  \IfValueTF{\@currentlabel}{%\LWR@docmidru[\@currentlabel](){1-\arabic{LWR@tabulatotolLaTeXcols}}}%%%%%%%%%%%%%%%%%%%%%%%%%
    \Ifbool{FormatWP}{%\LWR@docmidru[\@currentlabel](){1-\arabic{LWR@tabulatotolLaTeXcols}}}%%%%%%%%%%%%%%%%%%%%%%%%%
      \addtocounter{LWR@hlines}{1}%%%%%%%%%%%%%%%%%%%%%%%%%
    \LWR@getmynexttoken}%%%%%%%%%%%%%%%%%%%%%%%%%
\LWR@expandableformatted{toprule}

\DeclareDocumentCommand{\LWR@HTML@midru}{o d()}%{
  \IfValueTF{\@currentlabel}{%\LWR@docmidru[\@currentlabel](){1-\arabic{LWR@tabulatotolLaTeXcols}}}%%%%%%%%%%%%%%%%%%%%%%%%%
    \Ifbool{FormatWP}{%\LWR@docmidru[\@currentlabel](){1-\arabic{LWR@tabulatotolLaTeXcols}}}%%%%%%%%%%%%%%%%%%%%%%%%%
      \addtocounter{LWR@hlines}{1}%%%%%%%%%%%%%%%%%%%%%%%%%
    \LWR@getmynexttoken}%%%%%%%%%%%%%%%%%%%%%%%%%
\LWR@expandableformatted{midrule}

\DeclareDocumentCommand{\LWR@HTML@cmidru}{O{\LWR@cmidruwidth} d() m}{%\LWR@docmidru[\@currentlabel][\@currentlabel](){1-\arabic{LWR@tabulatotolLaTeXcols}}}%%%%%%%%%%%%%%%%%%%%%%%%%
  \LWR@getmynexttoken}%%%%%%%%%%%%%%%%%%%%%%%%%
\LWR@expandableformatted{cmidrule}
```

\LWR@ProvidesPackagePass{booktabs}[2016/04/27]
\texttt{lwp@expandableformatted{cmidrule}}
\Declarations{DocumentCommand}{\texttt{\LWR@HTML@bottomrule}(o d())}{%
  \IfValueTF{\#1}{\texttt{\LWR@docmidrule[#1]()},\texttt{\arabic{\LWR@tabletotaLaTeXcols}}}%}
%
  \global{booltrue(\LWR@doingtbrule)}%
\texttt{\LWR@getmynexttoken}\%
\texttt{\LWR@expandableformatted{bottomrule}}
\Declarations{DocumentCommand}{\texttt{\LWR@HTML@addlinespace}(o())}{%
  \texttt{\LWR@expandableformatted{addlinespace}}
\Declarations{DocumentCommand}{\texttt{\LWR@HTML@morecmidrules}()}{%
  \texttt{\LWR@expandableformatted{morecmidrules}}
\Declarations{DocumentCommand}{\texttt{\LWR@HTML@specialrule}(m m d())}{%
  \texttt{\LWR@expandableformatted{specialrule}}

---

File 48 \texttt{lwp\-bophook.sty}

\S 147 Package \texttt{bophook}

\texttt{bophook} is ignored.

\texttt{\LWR@ProvidesPackageDrop{bophook}[2001/03/29]}

2 \texttt{\newcommand*{\AtBeginPage}[1]{}
3 \texttt{\newcommand*{\PageLayout}[1]{}

---

File 49 \texttt{lwp\-bounddvi.sty}

\S 148 Package \texttt{bounddvi}

\texttt{bounddvi} is ignored.

\texttt{\LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]
lwarp

---

File 50  lwarp-boxedminipage2e.sty

§ 149  Package  boxedminipage2e

(Emulates or patches code by Scott Pakin.)

Pkg  boxedminipage2e  boxedminipage2e is emulated.

for HTML output:  Discard all options for lwarp-boxedminipage2e:

1 \LWR@ProvidesPackageDrop{boxedminipage2e}[2015/03/09]

2 \newenvironment{boxedminipage}{%  
3 \begin{BlockClass}{framebox}%  
4 \minipage%  
5 }  
6 {  
7 \endminipage%  
8 \end{BlockClass}  
9 }

---

File 51  lwarp-breakurl.sty

§ 150  Package  breakurl

(Emulates or patches code by Vilab Camara Neto.)

Pkg  breakurl  breakurl is emulated.

for HTML output:  1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

2 \newcommand*{\burl}{\url}
3  
4 \newcommand*{\LWR@burl}{\url}
5 \LWR@ensuredoppingapar%  
6 \LWR@subhyperref[#2]%  
7 \LWR@subhyperreftext[#3]%  
8 \endgroup% restore catcodes  
9 }
10  
11 \let{s}{\burl}
12  
13 \let{s}{\LWR@burl}
14 \LWR@ensuredoppingapar%  
15 \LWR@subhyperref[#2]%  
16 \LWR@subhyperreftext[#3]%  
17 \endgroup% restore catcodes  
18 \LWR@burl
\let\ur\lVar\lVar\lVar\r\Var\lVar\r\Var\lVar\lVar\Vart\Var\Var\lVar\Var\lVart\lVar\Var\Var\lVar\lVar\lVar\lVar\lVar\lVar\lVar\lVar\
\let\breqnMbreqnNsty

File 52 \texttt{lwarp-breqn.sty}

\textbf{§ 151 Package \texttt{breqn}}

(Emulates or patches code by Michael J. Downes, Morten Høgholm.)

\textbf{Pkg breqn} \texttt{breqn} is patched for use by \texttt{lwarp}.

\textbf{\textbullet darray} darray is not supported.

\textbf{\textbullet MathJax} MathJax does not support \texttt{breqn}.

\texttt{for HTML output:} \begin{verbatim}
1 \LWR@ProvidesPackagePass{breqn}[2017/01/27]

2 \setkeys{breqn}{spread={5pt}}

3 \def\eqnumside{R}

4 \def\eqnumplace{T}

5 \BeforeBeginEnvironment{dmath}{
6 \begin{BlockClass}{displaymathnumbered}
7 \LWR@newautoidanchor
8 \booltrue{LWR@indisplaymathimage}
9 \begin{lateximage}[-breqn dmath- \mathimagename]
10 \end{lateximage}
11 \end{BlockClass}
12 }

13 \AfterEndEnvironment{dmath}{
14 \end{lateximage}\end{BlockClass}
15 }

16 \BeforeBeginEnvironment{dmath*}{
17 \begin{BlockClass}{displaymath}
18 \LWR@newautoidanchor
19 \booltrue{LWR@indisplaymathimage}
20 \begin{lateximage}[-breqn dmath*- \mathimagename]
21 \end{lateximage}
22 \end{BlockClass}
23 }

24 \AfterEndEnvironment{dmath*}{
25 \end{lateximage}\end{BlockClass}
26 }

27 \BeforeBeginEnvironment{dseries}{
28 \begin{BlockClass}{displaymathnumbered}
29 \LWR@newautoidanchor
30 \booltrue{LWR@indisplaymathimage}
31 \begin{lateximage}[-breqn dseries- \mathimagename]
32 \end{lateximage}
33 \end{BlockClass}
34 }

35 \AfterEndEnvironment{dseries}{
lwarp

\end{lateximage}\end{BlockClass}

\BeforeBeginEnvironment{dseries*}{
  \begin{BlockClass}{displaymath}
  \LWR@newautoidanchor%
  \booltrue{LWR@indisplaymathimage}%
  \begin{lateximage}[-breqn dseries* \mathimagename]
  \end{lateximage}\end{B/VarockC/Varass}
}

\AfterEndEnvironment{dseries*}{
  \end{lateximage}\end{BlockClass}
}

\BeforeBeginEnvironment{dgroup}{
  \begin{BlockClass}{displaymath}
  \LWR@newautoidanchor%
  \booltrue{LWR@indisplaymathimage}%
  \begin{lateximage}[-breqn dgroup- \mathimagename]
  \end{lateximage}\end{B/VarockC/Varass}
}

\AfterEndEnvironment{dgroup}{
  \end{lateximage}\end{BlockClass}
}

\BeforeBeginEnvironment{dgroup*}{
  \begin{BlockClass}{displaymath}
  \LWR@newautoidanchor%
  \booltrue{LWR@indisplaymathimage}%
  \begin{lateximage}[-breqn dgroup* \mathimagename]
  \end{lateximage}\end{B/VarockC/Varass}
}

\AfterEndEnvironment{dgroup*}{
  \end{lateximage}\end{BlockClass}
}

File 53 lwarp-bsheaders.sty

§ 152 Package bsheaders

Pkgs bsheaders bsheaders is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop(bsheaders)[1997/10/06]

File 54 lwarp-bxpapersize.sty

§ 153 Package bxpapersize

Pkgs bxpapersize bxpapersize is ignored.
§ 154 Package bytefield

(Emulates or patches code by Scott Pakin.)

bytefield is patched for use by lwpaper.

for HTML output:

1 \ProvidesPackagePass{bytefield}[2017/09/15]
2 \BeforeBeginEnvironment{bytefield}{\begin{/l.Varateximage}(-bytefield--\packagediagramname)\}
3 \AfterEndEnvironment{bytefield}{\end{/l.Varateximage}}

§ 155 Package cancel

cancel is used as-is for SVG math, and emulated for HTML text output.

for HTML output:

1 \ProvidesPackagePass{cancel}[2013/04/12]
2 \cance/l.Varto is math-only, so is used as-is.
3 \LetLtxMacro{LWR@origcancel}{cancel} %
4 \LetLtxMacro{LWR@origbcancel}{bcancel} %
5 \LetLtxMacro{LWR@origxcancel}{xcancel} %
6 \appto{LWR@restoreorigformatting}{%\LetLtxMacro{\cancel}{LWR@origcancel}\;
7 \LetLtxMacro{bcancel}{LWR@origbcancel}\%
8 \LetLtxMacro{xcancel}{LWR@origxcancel}\%
9 }%}
10 \LWR@cancelcolor{{\langle text\rangle}} {{\langle color\rangle}} {{\langle class\rangle}} {{\langle colorstyle\rangle}} {{\langle FormatWPstyle\rangle}}

Add colors if not empty:
11 \newcommand{\\LWR@cancelcolor}[5]{%
12 \ifcempty{\#2}  
13 {{\\LWR@htm/l.Varspanc/l.Varass\[#5;#4:\\LWR@origpound\LWR@tempco/l.Varor\]{\#3}{\#1}}%
14 }%}
\cancel \{(text)\}

\DeclareRobustCommand{\cancel}[1][% 
\begin{group}% 
\CancelColor% 
\LWR@findcurrenttextcolor% 
\color{black}% 
\LWR@cancelcolor(#1){\LWR@tempcolor}{\text{text-decoration-color}}% 
\{text-decoration:line-through}% 
\endgroup% 
\)
\]

\LetLtxMacro{bcancel}{cancel}
\LetLtxMacro{xcancel}{cancel}

\section{lwarp-canoniclayout.sty}

\section{lwarp-caption.sty}

\section{canoniclayout}

\section{caption}

\section{Package canoniclayout}

\section{Package caption}

\section{File 57}

\section{File 58}

\section{Pkg canoniclayout}

\section{Pkg caption}

\section{for HTML output: canoniclayout}

\section{for HTML output: caption}

(\textit{Emulates or patches code by Axel Sommerfeldt.})
\caption@@@make \{(caption label)\} \{(caption text)\}

\renewcommand\caption@@@make[2][%\LWR@startpars lwp\sbox@tempboxa[#1]%\ifdim\wd@tempboxa=\z@ul\caption@/\LWR@separ@\relax\fi\caption@ifempty{#2}{\caption@tfmt@firstofone}\@setpar{\LWR@c/l.\caption@lsep\@@par}&%\LWR@closeparagraph@@par lwp\caption@applyfont\caption@fmt\{(if\caption@star\else\begingroup\captionlabelfont\#1\endgroup\fi\caption@ifempty{#2}{\caption@tfmt\LWR@ensuredoingapar%\caption@ifstrut{\ifhmode\@finalstrut\strutbox\fi}}}
lwarp

\caption{\caption@@make{#1}{#2}}

\renewcommand{\caption@@make}[2]{
\caption@@make{#1}{#2}
}

\Dec{l.VarareCaptionBox}{none}{#2}
\Dec{l.VarareCaptionBox}{parbox}{#2}
\Dec{l.VarareCaptionBox}{colorbox}{#2}

File 59  \texttt{lwarp-cases.sty}

§ 158  Package  \texttt{cases}

\textit{(Emulates or patches code by Donald Arseneau.)}

\texttt{cases} is patched for use by \texttt{lwarp}.

\texttt{MathJax} does not support \texttt{cases}.

\texttt{for HTML output:}  \begin{verbatim}
1 \LWR@ProvidesPackagePass{cases}[2002/05/02]
2 \BeforeBeginEnvironment{numcases}{
3 \begin{BlockClass}{displaymathnumbered}
4 \LWR@newautoidanchor%
5 \booltrue{\LWR@indisplaymathimage}%
6 \begin{lateximage}[-cases- \mathimagename]
7 }
8
9 \AfterEndEnvironment{numcases}{
10 \end{lateximage}\end{BlockClass}
11 }
12
13 \BeforeBeginEnvironment{subnumcases}{
14 \begin{BlockClass}{displaymathnumbered}
15 \LWR@newautoidanchor%
16 \booltrue{\LWR@indisplaymathimage}%
17 \begin{lateximage}[-cases- \mathimagename]
18 }
19
20 \AfterEndEnvironment{subnumcases}{
21 \end{lateximage}\end{BlockClass}
22 \end{verbatim}
File 60  \lwp-changecbar.sty

§ 159  Package  \textbf{changebar}

\pkg{changebar} is ignored.

for HTML output:  1 \LWR@ProvidesPackageDrop{changebar}[2018/03/09]

\begin{verbatim}
2 \newcommand*{\cbstart}{}
3 \newcommand*{\cbend}{}
4 \newenvironment*{\changebar}{\newenvironment*{\cbstart}{}\newenvironment*{\cbend}{}\newcounter{changebargrey}}{}
5 \newcommand*{\nochangebars}{}
6 \newcommand*{\cbco}{\setkeys{KV}{changebar}{#1}}
7 \newcommand*{\changebarwidth}{\newlength{\changebarwidth}}
8 \newlength{\deletebarwidth}
9 \newlength{\changebarsep}
10 \newlength{\changebargrey}
\end{verbatim}

File 61  \lwp-changelayout.sty

§ 160  Package  \textbf{changelayout}

(\textit{Emulates or patches code by Ahmed Musa.})

\pkg{changelayout} is patched for use by \lwp.

for HTML output:  1 \LWR@ProvidesPackagePass{changelayout}[2009/10/07]

\begin{verbatim}
2 \renewrobustcmd{\cbpl@backtodefaults}{}
3 \renewrobustcmd{\cbpl@checkifoddpage}{% \cbpl@oddpagefalse%
4 \renewrobustcmd{\changeplayout}[1]{% \setkeys{KV}{changelayout}[#1]%
5 }% 6
7 \renewrobustcmd{\changeplayout}[1]{% \setkeys{KV}{changelayout}[#1]%
8 }% 9
10 \renewrobustcmd{\changepagelayout}[1]{% \setkeys{KV}{changelayout}[#1]%
11 }% 12
13 \renewrobustcmd{\changeplayout}[1]{% \setkeys{KV}{changelayout}[#1]%
14 }% 15
16 \renewrobustcmd{\changeplayout}[1]{% \setkeys{KV}{changelayout}[#1]%
17 }% 18
19 \renewrobustcmd{\changeplayout}[1]{% \setkeys{KV}{changelayout}[#1]%
20 }% 21
\end{verbatim}
§ 161 Package \texttt{changepage}

(Emulates or patches code by Peter Wilson.)

\texttt{changepage} is emulated.

Discard all options for \texttt{lwp-changepage}:

1 \texttt{\ProvidesPackageDrop{changepage}[2009/10/20]}

2 \newif\ifoddpage
3 \DeclareRobustCommand{\checkoddpage}{\oddpagetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changepage}[9]{}
6
7 \@ifundefined{adjustwidth}{
8 \newenvironment{adjustwidth}[2]{}{}
9 \newenvironment{adjustwidth*}[2]{}{}
10 }{
11 \renewenvironment{adjustwidth}[2]{}{}
12 \renewenvironment{adjustwidth*}[2]{}{}
13 }

14 \DeclareDocumentCommand{\strictpagecheck}{}{}
15 \DeclareDocumentCommand{\easypagecheck}{}{}

§ 162 Package \texttt{changes}

(Emulates or patches code by Eckart Kleinod.)

\texttt{changes} is patched for use by \texttt{lwp}.

\texttt{changes} is patched for use by \texttt{lwp}.

1 \texttt{\ProvidesPackagePass{changes}[2019/01/26]}

2 \renewcommand{\ChangesListine}[4][]{%
3 \IfSubStr{\Changes@show}{#1}{% 
4 \LWR@startpars%
5 #2: #3 \quad}
\nameref{autopage-#4}\n\stoppars\n
\renewcommand{\changes@summary/l.Varine}[4]{\n  \IfSubStr{\changes@/l.Varoc@show}{#1}{\n    \Ifthenelse{\not\equal{\changes@loc@style}{compactsummary} \or #2 > 0}{\n      #3:-#2#4}{}}\n}\n
\xpatchcmd{\changes@listofchanges}{\textbf{\[
\arabic{changes@commentCount#2}:\]
  \textbf{[#3\-
\arabic{changes@commentCount#2}:\] #1}}}{\textbf{\[
\arabic{changes@commentCount#2}:\]
  \textbf{[#3#1\arabic{changes@commentCount#2}:\] #1}}}{\LWR@patcherror{changes}{\changes@listofchanges A}}{\LWR@patcherror{changes}{\changes@listofchanges B}}{\LWR@patcherror{changes}{\changes@listofchanges C}}{\LWR@patcherror{changes}{\changes@listofchanges D}}{\LWR@patcherror{changes}{\changes@Markup@comment A}}
§ 163 Package **chappg**

(Emulates or patches code by Robin Fairbairns.)

Pkg chappg chappg is emulated.

for HTML output:

1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]
2 \renewcommand{\pagename}{\sectionname}
3 \providecommand{\chappgsep}{--}

§ 164 Package **chapterbib**

(Emulates or patches code by Donald Arseneau.)

Pkg chapterbib chapterbib is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{chapterbib}[2010/09/18]
2 \xdef{\savedjobname}{\BaseJobname}
3 \let{\currentjobname}{\savedjobname}

§ 165 Package **chemfig**

(Emulates or patches code by Christian Tellechea.)

Pkg chemfig chemfig is patched for use by lwarp.

If using `polymerdelim` to add delimiters to a `chemfig`, wrap both inside a single `lateximage`:

\begin{lateximage}[-chemfig-\packagediagramname] \chemfig{...} \polymerdelim[...]{...} \end{lateximage}

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

for HTML output:

1 \LWR@ProvidesPackagePass{chemfig}
chemformula is patched for use by lwpap.

The svg images are hashed according to contents and local options. Global options are assumed to be constant document-wide.

chemformula works best without MathJax. If MathJax is used, \displaymathother must be used before array, and then \displaymathnormal may be used after. (The
chemformula package adapts to array, but does not know about MATHJAX, and MATHJAX does not know about chemformula.)

While using MATHJAX, \displaymathother may also be used for other forms of display and inline math which contain chemformula expressions.

**for HTML output:**

1 \LWR@ProvidesPackagePass{chemformula}[2017/03/23]

2 \ExplSyntaxOn

\ch Enclose in an inline svg image or MathJax. The alt tag is is the contents of the \ch expression. The filename is hashed, and also has additional hashing information based on the local options.

3 \RenewDocumentCommand \ch { O{}m }% 

To work inside align with \displaymathother, a simple version must be used to work with chemformula's adaptation to align.

4 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwp

5 { 

6 \chemformula_ch:nn (#1) (#2)% original

7 }

If used as the outer level, must temporarily ensure MATHJAX is disabled:

8 {

9 \begingroup%

10 \boolfalse(mathjax)%

An inline image is used, adjusted for the baseline:

11 \LWR@subsingledollar*% lwp

12 \textbackslash{}ch{\LWR@HTMLsanitize[#2]}% alt text

13 ){%

14 \protect\LWR@HTMLsanitize{\detokenize\expandafter[#1]}% add'l hashing

15 )%

16 {%

17 \chemformula_ch:nn (#1) (#2)% original

18 }%

19 }% endgroup%

20 }

\chcpd Similar to \ch.

21 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2

22 {

23 \begingroup%

24 \boolfalse(mathjax)%

25 \LWR@subsingledollar*% lwp

26 \textbackslash{}chcpd{\LWR@HTMLsanitize[#2]}% 

27 ){%

28 \protect\LWR@HTMLsanitize{\detokenize\expandafter[#1]}% 

29 ){% original 

30 \group_begin:
\tl_if_blank:nF (#2) 
{ 
  \keys_set:nn {chemformula} (#1) 
  \__chemformula_save_catcodes: 
  \__chemformula_sanitize:Nn 
  \l__chemformula_chemformula_ttmpa_tl 
  (#2) 
  \__chemformula_input_compound_no_check:NV 
  \l__chemformula_compound_tl 
  \l__chemformula_chemformula_ttmpa_tl 
  \__chemformula_prepare_output:N \l__chemformula_compound_tl 
  \chemformula_write:V \l__chemformula_compound_tl 
} 
\group_end: 
\} 
\endgroup 

\charrow If standalone, appears in a regular lateximage. 
\RenewDocumentCommand \charrow { mO{}O{} } 
{ 
  \begin{lateximage}[(\textbackslash chemformula- \charrow)] 
  \group_begin: 
  \__chemformula_draw_arrow:nnn (#1) (#2) (#3) 
  \group_end: 
  \end{lateximage} 
}

\chname If standalone, appears in a regular lateximage, hashed according to contents. 
\RenewDocumentCommand \chname { R(){}R(){} } 
{ 
  \begin{lateximage}[^% 
  \textbackslash chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2}) 
  ]% 
  \chemformula_chwritebelow:nn (#1) (#2) 
  \end{lateximage} 
}

\chlewis Placed inline, hashed according to contents and options. 
\RenewDocumentCommand \chlewis { O{}mm } 
{ 
  \begingroup% 
  \boolfalse{mathjax}% 
  \LWR@subsuggestedollar{\textbackslash chlewis(#2)}(#3)\% 
  { 
    \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}\% 
  }(\chemformula_lewis:nnn (#1) (#2) (#3) 
  \} 
  \endgroup% 
}
\textbf{l}warp redefines the $ character, so special handling is required to escape math expressions inside \texttt{\textbackslash ch}.

This boolean tracks a new kind of escaped math:

\begin{verbatim}
\bool_new:N \l__chemformula_first_last_LWRdollar_bool
\end{verbatim}

\texttt{\textbackslash chemformula\_input\_escape\_math}

Adds additional escaping for the new dollar definition:

\begin{verbatim}
\cs_gset_protected:Npn \__chemformula\_input\_escape\_math:n #1
{ \__chemformula\_read\_escape\_math:n {#1} }
\end{verbatim}

Added by \texttt{l}warp:

\begin{verbatim}
\bool_if:NT \l__chemformula\_first\_last\_LWRdollar_bool
{ \bool_set_true:N \l__chemformula\_first\_last\_LWRdollar_bool
\__chemformula\_read\_escape\_LWRdollar:w #1 \q_nil\ }
\end{verbatim}

\texttt{\textbackslash chemformula\_read\_escape\_LWRdollar}

The following parses the contents inside the new dollars. \texttt{l}warp keeps the dollar as its original math shift until the document starts. While \texttt{chemmacros} is being patched, the dollar must temporarily be set to its new meaning during the following definition.

\begin{verbatim}
\begingroup
\catcode\$=\active
\cs_new_protected:Npn \__chemformula\_read\_escape\_LWRdollar:w $#1$ \q_nil\ }
{ \__chemformula\_read\_escape\_math:n {#1} }
\endgroup
\end{verbatim}

\texttt{\textbackslash chemformula\_bool\_set\_if\_first\_last}
The following looks at the first and last tokens for delimiters to escape math inside \ch. The original definition is modified to look for the control sequences which are used by the new meaning of $.

\cs_new_protected:Npn \__chemformula_bool\cs_set_if_first_last:NnNN #1#2#3#4
\int_zero:N \__chemformula_tmpa_int
\int_zero:N \__chemformula_tmpb_int
\int_set:Nn \__chemformula_tmpa_int { \tl_count:n {#2} }
\tl_map_inline:nn {#2}
\int_set:Nn \__chemformula_tmpa_int { \tl_count:n {#2} }
\tl_map_inline:nn {#3}
\int_compare:nT { \__chemformula_tmpb_int = \__chemformula_tmpa_int }
\ifdefstrequal{##1}{#4}{}
\ifdefstrequal{##1}{#3}{ % lwp
\bool_set_true:N #1
%
}{ }
\bool_set_fa:N \__chemformula_first_last_math
\__chemformula_boo\cs_set_if_first_last:Nnnn
\__chemformula_first_last_math

\cs_gset_protected:Npn \__chemformula_first_last_math:n #1
\bool_set_false:N \__chemformula_first_last_math_bool
\bool_set_false:N \__chemformula_first_last_dollar_bool
\bool_set_false:N \__chemformula_first_last_LWRdollar_bool % lwp
\bool_set_false:N \__chemformula_first_last_mathbraces_bool
\__chemformula_bool_set_if_first_last:Nnnn
\__chemformula_first_last_dollar_bool
\__chemformula_first_last_mathbraces_bool
\__chemformula_first_last_math

\chemformula_first_last_math

Modified to check for the new meaning of $ at first/last:
\cs_gset_protected:Npn \__chemformula_first_last_math:n #1
\bool_set_false:N \__chemformula_first_last_math_bool
\bool_set_false:N \__chemformula_first_last_dollar_bool
\bool_set_false:N \__chemformula_first_last_LWRdollar_bool % lwp
\bool_set_false:N \__chemformula_first_last_mathbraces_bool
\__chemformula_bool_set_if_first_last:Nnnn
\__chemformula_first_last_dollar_bool
\__chemformula_first_last_mathbraces_bool
\__chemformula_first_last_math
Added by lwp:\n\bool_if:FN \__chemformula_first_last_mathbraces_bool% lwp\n{\n\__chemformula_bool_cs_set_if_first_last:NnNN \n\__chemformula_first_last_LWRdollar_bool\n\{\LWR@newsigndollar \LWR@newsigndollar\}\% lwp\n} \LWR@newsigndollar\n\}\LWR@newsigndollar\n\} % lwp
\} \LWR@newsigndollar\n\} % lwp
\} % lwp
\}
\Exp\VarSyntaxOff

File 68 lwp-chemgreek.sty

§ 167 Package chemgreek

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemgreek chemgreek is patched for use by lwp.

Greek symbols To use text-mode symbols, use packages textalpha or textgreek. Using the other packages supported by chemgreek will result in math-mode greek characters, which will result in svg images being used. These images will be hashed.

⚠️ X\LaTeX, \textsc{LuaLaTeX} If using X\LaTeX or \textsc{LuaLaTeX}, select the fonts specification:
\selectchemgreekmapping(fontspec)

for HTML output: 1\LWR@ProvidesPackagePass{chemgreek}[2016/02/10]

2\Exp\VarSyntaxOn
3\cs_gset_protected:Npn \chemgreek_text:n #1\n4\{ \text {#1} \}\}
5\appto\LWR@restoreorigformatting{%\n6\cs_set_protected:Npn \chemgreek_text:n #1%\n7\ensuremath { \text {#1} } \%
8\} % \LWR@newsigndollar\n9\}
10\}
11\12\Exp\VarSyntaxOff

File 69 lwp-chemmacros.sty

§ 168 Package chemmacros

(Emulates or patches code by CLEMENS NIEDERBERGER.)
chemmacros is patched for use by lwarp.

SVG file hashing assumes that the relevant options are constant for the entire document.

§ 168.1 Changes to the user’s document

\makepolymerdelims

When using \makepolymerdelims, enclose the entire expression inside a polymerdelims environment, such as (from the chemmacros manual):

\begin{polymerdelims}
\chemfig{-[@{op,.75}\text{CH}_2\text{-CH(-}[6]\text{Cl}]-[@{cl,0.25}]}
\makepolymerdelims[5pt][27pt]{op}{cl}
\end{polymerdelims}

\redoxreaction

Redox reactions must be enclosed inside a redoxreaction environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the chemmacros manual. For HTML output, the extra space is ignored and a lateximage is used instead.

\begin{redoxreaction}{7mm}{7mm}
\text{OX}(a,\text{Na}) \rightarrow \text{OX}(b,\text{Na})\text{pch}\text{redox}(a,b)\{oxidation\}
\end{redoxreaction}

§ 168.2 Code

§ 168.3 Loading modules

Patching chemmacros modules must be done \AtBeginDocument, since modules are invoked by the user in the preamble, and each patch is only done if the module is loaded.

\begin{lstlisting}
\ExplSyntaxOn
4\newcommand{%\ifchemmacrosmoduleloaded}[1]{}
5\cs_ifdefined\IfCond\cs__chemmacros_module_extension_t\cs__chemmacros_module_prefix_t\EndCond#1
6\ExplSyntaxOff
\end{lstlisting}
\$168.4 \textbf{New environments}\\
\LaTeX{} and redox reactions must be enclosed in a \texttt{lateximage} during \LaTeX{} output. These environments are provided here in \LaTeX{} mode, and in the \texttt{lwp} core in print mode, as a high-level semantic syntax which automatically embeds the contents in a \texttt{lateximage} with an appropriate alt tag.

\texttt{Env polymerdelims\\
\texttt{9 \DeclareDocumentEnvironment{polymerdelims}{}\\
10 \begin{lateximage}[-chemmacros- polymer]\end{lateximage}}\\
\texttt{Env redoxreaction} \{ (space above) \} \{ (space below) \}\\
For \LaTeX{} output, the above and below space is ignored, and a \texttt{lateximage} is used instead. For the print output version, see section \texttt{87}.\\
\texttt{12 \DeclareDocumentEnvironment{redoxreaction}{} m m\\
13 \begin{lateximage}[-chemmacros- redoxreaction]\end{lateximage}}\\
\texttt{\ExplSyntaxOn\\
\$168.5 \textbf{Acid-base}\\
\texttt{16 \AtBeginDocument{\\
17 \@ifchemmacrosmoduleloaded{acid-base}{\\
18 PackageInfo{lwp}{Patching-chemmacros-module-acid-base}\\
19 \texttt{20 cs_gset_protected:Npn \chemmacros_p:n #1}
21 {\\
22 \begingroup\\
23 boolfalse(mathjax)\\
24 \LWR@subsinglendollar*{\\
25 \textbackslash{}p\{\LWR@HTMLsanitize{#1}\}\}
26 ){\\
27 \chemmacrosprotect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%\\
28 }{\\
29 \group_begin:\n30 \mbox\\
31 \texttt{\chemmacros_p_style:n \texttt{p}}\\
32 \texttt{\ensuremath \{#1\}}\\
33 \texttt{\}}\\
34 \texttt{\}}\\
35 \group_end:\n36 }\\
37 \endgroup\\
38 }\\
39 \RenewDocumentCommand \pH {} {\\
40 \begingroup\\
41 boolfalse(mathjax)\\
42 \LWR@subsinglendollar*\{\textbackslash{}pH\texttt{\chemmacros}\texttt{\chemmacros_chemformula:n \texttt{H}} \}
\RenewDocumentCommand \pOH {} {
  \begingroup
  \boolfalse{mathjax}
  \LWR@subsing/l.Varedo/l.Var/l.Varar*{\textbackslash{}\textbackslash{}pOH}{chemmacros}{\textbackslash{}{OH}}{chemmacros_p:n}{chemmacros_chemformula:n}{OH}
  \endgroup
}

\RenewDocumentCommand \pKa {O{}} {
  \begingroup
  \boolfalse{mathjax}
  \LWR@subsing/l.Varedo/l.Var/l.Varar*{\textbackslash{}\textbackslash{}pKa}{chemmacros}{\textbackslash{}{#1}}{chemmacros_p:n}
  \Kb \ifb/l.Varank {#1} {} \c_math_subscript_token { \chemmacros_bo/l.Vard:n {#1} }
  \endgroup
}

\RenewDocumentCommand \pKb {O{}} {
  \begingroup
  \boolfalse{mathjax}
  \LWR@subsing/l.Varedo/l.Var/l.Varar*{\textbackslash{}\textbackslash{}pKb}{chemmacros}{\textbackslash{}{#1}}{chemmacros_p:n}
  \Kb \ifb/l.Varank {#1} {} \c_math_subscript_token { \chemmacros_bo/l.Vard:n {#1} }
  \endgroup
}

\LetLtxMacro{\LWR@chemmacros@origKa}{\Ka}
\renewcommand*{\Ka}{\begingroup \boolfalse{mathjax} \LWR@subsing/l.Varedo/l.Var/l.Varar*{\textbackslash{}\textbackslash{}Ka}{chemmacros}{\textbackslash{}Ka}{chemmacros_p:n}{\LWR@chemmacros@origKa}\endgroup}

\LetLtxMacro{\LWR@chemmacros@origKb}{\Kb}
\renewcommand*{\Kb}{\begingroup \boolfalse{mathjax} \LWR@subsing/l.Varedo/l.Var/l.Varar*{\textbackslash{}\textbackslash{}Kb}{chemmacros}{\textbackslash{}Kb}{chemmacros_p:n}{\LWR@chemmacros@origKb}\endgroup}
§ 168.6 Charges

§ 168.7 Nomenclature
(\chemmacros_chemformula:n { ()^{#1} })
\else
  \textsuperscript{\ensuremath{#1}}
\fi
}
}
\LetLtxMacro\LWR@chemmacros@origchemprime\chemprime
\protected\def\chemprime { \HTMLunicode{2032} }
appto\LWR@restoreorigformatting{%
\LetLtxMacro\chemprime\LWR@chemmacros@origchemprime%
}
\ChemCompatibilityFrom{5.8}
\cs_gset_protected:Npn \__chemmacros_cip:n #1
{
\tl_set:Nn \___chemmacros_tmpa_tl {#1}
\int_step_inline:nnnn {0} {1} {9}
{
\tl_replace_all:Nnn \___chemmacros_tmpa_tl
  {##1}
  { { \___chemmacros_cip_number_tl ##1} }
}
\___chemmacros_cip_inner_tl
\LWR@textcurrentcolor{\LWR@textcurrentfont{% l warp
  \___chemmacros_tmpa_tl
}}% l warp
}
\EndChemCompatibility
\RenewDocumentCommand \Sconf { O{S} } {
\begin{lateximage}[\textbackslash\textbackslash()Sconf{[]}#1[[]]]
\chemmacros_sconf:n {#1}
\end{lateximage}
}
\RenewDocumentCommand \Rconf { O{R} } {
\begin{lateximage}[\textbackslash\textbackslash()Rconf{[]}#1[[]]]
\chemmacros_rconf:n {#1}
\end{lateximage}
}
\cs_gset_protected:Npn \chemmacros_hapto:n #1
{
\begin{group}
\boolfalse{mathjax}
\LWR@subsindedollar*{\textbackslash\textbackslash()hapto{[]}#1[[]]}{chemmacros}{
  \chemmacros_coordination_symbol:nnnn
  \___chemmacros_coord_use_hyphen_bool }
  { \___chemmacros_coord_use_hyphen_bool
  \chemmacros_if_compatibility:nnTF {>} {5.7}
§ 168.8 Particles

\begin{verbatim}
\AtBeginDocument\
\IfChemmacrosmoduleloaded{particles}{\PackageInfo{/lwarp}{Patching-chemmacros-module-particles}}
\end{verbatim}
§ 168.9 Phases

\AtBeginDocument{%
\PackageInfo{l warp}{Patching~chemmacros~module~phases}
\cs_undefine:N \chemmacros_phase:n
\cs_new_protected:Npn \chemmacros_phase:n #1
{ \ifnumequal{\va{LWR@lateximagedepth}}{0}
{ \textsubscript{ (#1) }
}
{ \chemformula_subscript:n { (#1) }
}
}
\skip_horizontal:N \__chemmacros_phases_space_dim
\chemmacros_text:n { (#1) }
}
\AtBeginDocument{%
\cs_only_if:nF {\ifchemmacrosmoduloaded}
{\PackageInfo{l warp}{Phasing~chemmacros~module~phases}}
\cs_only_if:nF {\ifchemmacrosmoduloaded}
{\PackageInfo{l warp}{Patching~chemmacros~module~phases}}
\cs_undefine:N \chemmacros_phase:n
\cs_new_protected:Npn \chemmacros_phase:n #1
{ \ifnumequal{\va{LWR@lateximagedepth}}{0}
{ \textsubscript{ (#1) }
}
{ \chemformula_subscript:n { (#1) }
}
}
\skip_horizontal:N \__chemmacros_phases_space_dim
\chemmacros_text:n { (#1) }
}
\section*{Mechanisms}

\begin{verbatim}
\@ifchemmacrosmoduleloaded{mechanisms}{
\PackageInfo{l\Varwarp}{Patching\chemmacros\module\mechanisms}
\chemmacros_define_keys:nn {textmechanisms}
{
  type .choice: ,
type / .code:n =
  {
    \__chemmacros_set_mechanisms:nnn { S } 
    {
      \textsubscript{N}
    },
    type / 1 .code:n =
  {
    \__chemmacros_set_mechanisms:nnn { S } 
    {
      \textsubscript{N}
      1
    },
    type / 2 .code:n =
  {
    \__chemmacros_set_mechanisms:nnn { S } 
    {
      \textsubscript{N}
      2
    },
    type / se .code:n =
  {
    \__chemmacros_set_mechanisms:nnn { S } 
    {
      \textsubscript{E}
    },
    type / 1e .code:n =
  {
    \__chemmacros_set_mechanisms:nnn { S } 
    {
      \textsubscript{E}
      1
    },
    type / 2e .code:n =
  {
    \__chemmacros_set_mechanisms:nnn { S }
    {
      \textsubscript{E}
      2
    }
  }
}
\end{verbatim}
\textsubscript{E}

\textcolor{red}{\textbf{358}} \textcolor{green}{\textbf{359}} \textcolor{blue}{\textbf{360}} \textcolor{yellow}{\textbf{361}} \textcolor{purple}{\textbf{362}} \textcolor{brown}{\textbf{363}} \textcolor{cyan}{\textbf{364}} \textcolor{magenta}{\textbf{365}} \textcolor{olive}{\textbf{366}} \textcolor{gray}{\textbf{367}} \textcolor{orange}{\textbf{368}} \textcolor{teal}{\textbf{369}} \textcolor{lightgray}{\textbf{370}} \textcolor{red}{\textbf{371}} \textcolor{green}{\textbf{372}} \textcolor{blue}{\textbf{373}} \textcolor{yellow}{\textbf{374}} \textcolor{purple}{\textbf{375}} \textcolor{brown}{\textbf{376}} \textcolor{cyan}{\textbf{377}} \textcolor{magenta}{\textbf{378}} \textcolor{olive}{\textbf{379}} \textcolor{gray}{\textbf{380}} \textcolor{orange}{\textbf{381}} \textcolor{teal}{\textbf{382}} \textcolor{lightgray}{\textbf{383}} \textcolor{red}{\textbf{384}} \textcolor{green}{\textbf{385}} \textcolor{blue}{\textbf{386}} \textcolor{yellow}{\textbf{387}} \textcolor{purple}{\textbf{388}} \textcolor{brown}{\textbf{389}} \textcolor{cyan}{\textbf{390}} \textcolor{magenta}{\textbf{391}} \textcolor{olive}{\textbf{392}} \textcolor{gray}{\textbf{393}} \textcolor{orange}{\textbf{394}} \textcolor{teal}{\textbf{395}} \textcolor{lightgray}{\textbf{396}} \textcolor{red}{\textbf{397}} \textcolor{green}{\textbf{398}} \textcolor{blue}{\textbf{399}} \textcolor{yellow}{\textbf{400}} \textcolor{purple}{\textbf{401}} \textcolor{brown}{\textbf{402}} \textcolor{cyan}{\textbf{403}} \textcolor{magenta}{\textbf{404}} \textcolor{olive}{\textbf{405}} \textcolor{gray}{\textbf{406}} \textcolor{orange}{\textbf{407}} \textcolor{teal}{\textbf{408}} \textcolor{lightgray}{\textbf{409}} \textcolor{red}{\textbf{410}} \textcolor{green}{\textbf{411}} \textcolor{blue}{\textbf{412}}

\textcolor{red}{\textbf{358}} \textcolor{green}{\textbf{359}} \textcolor{blue}{\textbf{360}} \textcolor{yellow}{\textbf{361}} \textcolor{purple}{\textbf{362}} \textcolor{brown}{\textbf{363}} \textcolor{cyan}{\textbf{364}} \textcolor{magenta}{\textbf{365}} \textcolor{olive}{\textbf{366}} \textcolor{gray}{\textbf{367}} \textcolor{orange}{\textbf{368}} \textcolor{teal}{\textbf{369}} \textcolor{lightgray}{\textbf{370}} \textcolor{red}{\textbf{371}} \textcolor{green}{\textbf{372}} \textcolor{blue}{\textbf{373}} \textcolor{yellow}{\textbf{374}} \textcolor{purple}{\textbf{375}} \textcolor{brown}{\textbf{376}} \textcolor{cyan}{\textbf{377}} \textcolor{magenta}{\textbf{378}} \textcolor{olive}{\textbf{379}} \textcolor{gray}{\textbf{380}} \textcolor{orange}{\textbf{381}} \textcolor{teal}{\textbf{382}} \textcolor{lightgray}{\textbf{383}} \textcolor{red}{\textbf{384}} \textcolor{green}{\textbf{385}} \textcolor{blue}{\textbf{386}} \textcolor{yellow}{\textbf{387}} \textcolor{purple}{\textbf{388}} \textcolor{brown}{\textbf{389}} \textcolor{cyan}{\textbf{390}} \textcolor{magenta}{\textbf{391}} \textcolor{olive}{\textbf{392}} \textcolor{gray}{\textbf{393}} \textcolor{orange}{\textbf{394}} \textcolor{teal}{\textbf{395}} \textcolor{lightgray}{\textbf{396}} \textcolor{red}{\textbf{397}} \textcolor{green}{\textbf{398}} \textcolor{blue}{\textbf{399}} \textcolor{yellow}{\textbf{400}} \textcolor{purple}{\textbf{401}} \textcolor{brown}{\textbf{402}} \textcolor{cyan}{\textbf{403}} \textcolor{magenta}{\textbf{404}} \textcolor{olive}{\textbf{405}} \textcolor{gray}{\textbf{406}} \textcolor{orange}{\textbf{407}} \textcolor{teal}{\textbf{408}} \textcolor{lightgray}{\textbf{409}} \textcolor{red}{\textbf{410}} \textcolor{green}{\textbf{411}} \textcolor{blue}{\textbf{412}}

\textcolor{red}{\textbf{358}} \textcolor{green}{\textbf{359}} \textcolor{blue}{\textbf{360}} \textcolor{yellow}{\textbf{361}} \textcolor{purple}{\textbf{362}} \textcolor{brown}{\textbf{363}} \textcolor{cyan}{\textbf{364}} \textcolor{magenta}{\textbf{365}} \textcolor{olive}{\textbf{366}} \textcolor{gray}{\textbf{367}} \textcolor{orange}{\textbf{368}} \textcolor{teal}{\textbf{369}} \textcolor{lightgray}{\textbf{370}} \textcolor{red}{\textbf{371}} \textcolor{green}{\textbf{372}} \textcolor{blue}{\textbf{373}} \textcolor{yellow}{\textbf{374}} \textcolor{purple}{\textbf{375}} \textcolor{brown}{\textbf{376}} \textcolor{cyan}{\textbf{377}} \textcolor{magenta}{\textbf{378}} \textcolor{olive}{\textbf{379}} \textcolor{gray}{\textbf{380}} \textcolor{orange}{\textbf{381}} \textcolor{teal}{\textbf{382}} \textcolor{lightgray}{\textbf{383}} \textcolor{red}{\textbf{384}} \textcolor{green}{\textbf{385}} \textcolor{blue}{\textbf{386}} \textcolor{yellow}{\textbf{387}} \textcolor{purple}{\textbf{388}} \textcolor{brown}{\textbf{389}} \textcolor{cyan}{\textbf{390}} \textcolor{magenta}{\textbf{391}} \textcolor{olive}{\textbf{392}} \textcolor{gray}{\textbf{393}} \textcolor{orange}{\textbf{394}} \textcolor{teal}{\textbf{395}} \textcolor{lightgray}{\textbf{396}} \textcolor{red}{\textbf{397}} \textcolor{green}{\textbf{398}} \textcolor{blue}{\textbf{399}} \textcolor{yellow}{\textbf{400}} \textcolor{purple}{\textbf{401}} \textcolor{brown}{\textbf{402}} \textcolor{cyan}{\textbf{403}} \textcolor{magenta}{\textbf{404}} \textcolor{olive}{\textbf{405}} \textcolor{gray}{\textbf{406}} \textcolor{orange}{\textbf{407}} \textcolor{teal}{\textbf{408}} \textcolor{lightgray}{\textbf{409}} \textcolor{red}{\textbf{410}} \textcolor{green}{\textbf{411}} \textcolor{blue}{\textbf{412}}
§ 168.11  Newman

\AtBeginDocument{\@ifchemmacrosmoduleloaded{newman}{\PackageInfo{l.Varwarp}{Patching ~chemmacros ~module ~newman}}\RenewDocumentCommand \newman {od()m}% {\IfVa{l.VarueTF}{#2}{\begin{l.Varateximage}\textbacks{l.Varash}newman(#2){#3}\end{l.Varateximage}}\group_begin:\IfNoVa{l.VarueF}{#1}{\chemmacros_set_keys:nn {newman}{#1}}\IfNoVa{l.VarueTF}{#2}{\chemmacros_newman:nn {#2}{#3}}\group_end:}\end{l.Varateximage}}% \@ifchemmacrosmoduleloaded \AtBeginDocument

§ 168.12  Orbital

\AtBeginDocument{\@ifchemmacrosmoduleloaded{orbital}{\PackageInfo{l.Varwarp}{Patching ~chemmacros ~module ~orbital}}\RenewDocumentCommand \orbital {om}% {\IfValueTF{#1}{\begin{l.Varateximage}\textbacks{l.Varash}orbital\{#2\}\end{l.Varateximage}}\group_begin:\IfNoValueF {#1} {\chemmacros_set_keys:nn {orbital}{#1}}\IfNoValueF {#2} {\chemmacros_orbital:n {#1}{#3}}\group_end:}\begin{l.Varateximage}\textbacks{l.Varash}orbital\{#2\}\end{l.Varateximage}}\group_begin:\IfNoValueF {#1} {\chemmacros_set_keys:nn {orbital}{#1}}\IfNoValueF {#2} {\chemmacros_orbital:n {#2}{#3}}\group_end:}
§ 168.13  Reactions

\chemmacros_declare_reaction_env  \{(chem)\} \{(math)\} \{(args number)\} \{(argument list (#2/#3/...)\}

§ 168.14  Redox
§ 168.15 **Scheme**

Fix for chemmacros as of v5.8b, when using newfloat and babel:

\begin{verbatim}
\AtBeginDocument{\
  \@ifchemmacrosmoduleloaded{scheme}{\PackageInfo{l\Varwarp}{Patching-chemmacros-module-scheme}}\
  \ifdefstring{\schemename}{/\Varos}{\SetupF/\VaroatingEnvironment{scheme}{\chemmacros_trans/\Varate:n {scheme-name}}}}{}\% \@ifchemmacrosmoduleloaded \% AtBeginDocument
\end{verbatim}

§ 168.16 **Spectroscopy**

\begin{verbatim}
\AtBeginDocument{\
  \@ifchemmacrosmoduleloaded{spectroscopy}{\PackageInfo{l\Varwarp}{Patching-chemmacros-module-spectroscopy}}\
  \ChemCompatibilityTo{5.8}\
  \cs_gset_protected:Npn \chemmacros_nmr_base:nn #1#2 {\tl_if_blank:VF \g_chemmacros_nmr_element_coupled_tl { \tl_put_left:Nn \g_chemmacros_nmr_element_coupled_tl { \( } \tl_put_right:Nn \g_chemmacros_nmr_element_coupled_tl { \) }}
\end{verbatim}
\tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl (#2)
\chemmacros_chemformula:n { \(^{#1} \) }
\textsuperscript{#1}
\bool_if:NTF \l__chemmacros_nmr_parse_bool
{ \chemformula_ch:nV {} \g__chemmacros_nmr_element_coupled_tl }
{ \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
\tl_use:N \l__chemmacros_nmr_element_method_connector_tl
\tl_use:N \l__chemmacros_nmr_method_tl
\EndChemCompatibi
\ChemCompatibiFrom{5.8}
\cs_gset_protected:Npn \__chemmacros_nmr_base:nn #1#2
{ \group_begin:
\tl_use:N \l__chemmacros_nmr_base_format_tl
\tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
{ \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \() 
\tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \) }
\tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl (#2)
\chemmacros_chemformula:n { \(^{#1} \) }
\textsuperscript{#1}
\tl_if_b:VF \__chemmacros_nmr_e
{ \chemformu \g__chemmacros_nmr_element_coupled_tl }
{ \chemmacros_chemformu \g__chemmacros_nmr_element_coupled_tl }
\tl_use:N \l__chemmacros_nmr_element_method_connector_tl
\tl_use:N \l__chemmacros_nmr_method_tl
\group_end:
\EndChemCompatibi
\cs_gset_protected:Npn \chemmacros_nmr_position:n #1
{ \chemmacros_chemformu \g__chemmacros_nmr_element_tl
\exp_not:V \g__chemmacros_nmr_element_tl
\bool_if:NTF \l__chemmacros_nmr_position_side_bool
{ \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^} % lwp
{ \textsuperscript{\exp_not:n { {#1} } } % lwp
{ \textsubscript{\exp_not:n { {#1} } } % lwp
{ \exp_not:n { {#1} } % lwp


\bool_if:NTF \l__chemmacros_nmr_position_side_bool
{ \tl_use:N \l__chemmacros_nmr_position_tl
\__chemmacros_nmr_position:n {#1} }
\cs_gset_protected:Npn \__chemmacros_nmr_coupling:w (#1;#2)
  {
\tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
  {
\tl__chemmacros_nmr_coupling_bonds_pre_tl
#1
\tl__chemmacros_nmr_coupling_bonds_post_tl
  }
\bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
  {
\tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
  {
% \c_math_subscript_token
\textsubscript{lwarp}
  {
\tl__chemmacros_nmr_coupling_nuclei_pre_tl
\chemmacros_chemformula:n {#2}
\tl__chemmacros_nmr_coupling_nuclei_post_tl
  }
  }
  }
\bool_if:nTF
  { \l__chemmacros_nmr_coupling_aux_i:w }
  { \bool_set_true:N \l__chemmacros_nmr_list_bool { \item \scan_stop: } }
\group_begin:
  \chemmacros_leave_vmode:
  \bool_set_false:N \l__chemmacros_nmr_frequency_bool
  \bool_set_false:N \l__chemmacros_nmr_solvent_bool
  \tl_if_empty:nF [#3]
  { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
  \tl_if_empty:nF [#4]
  { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
  \bool_if:nT
  { \l__chemmacros_nmr_frequency_bool
  ||
  \l__chemmacros_nmr_solvent_bool
  }
  { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
\bool_if:nTF
{ \l__chemmacros_nmr_comma_bool }
\tl_if:NT \{ \l__chemmacros_nmr_delimitersBool \}
{ ( ) }
\bool_if:nTF \{ \l__chemmacros_nmr_frequency_bool \}
{ ( ( ) ) }
\bool_if:nTF \{ \l__chemmacros_nmr_delimitersBool \}
{ ( ) }
\bool_if:nTF \{ \l__chemmacros_nmr_delimitersBool \}
{ ( ) }
\tl_if_blank:nTF \{ \l__chemmacros_nmr_delimitersBool \}
{ ( ) }
\tl_if:NT \{ \l__chemmacros_nmr_delimitersBool \}
{ ( ) }
§ 168.17  Thermodynamics

\AtBeginDocument{
\IfCheckModuleLoaded{thermodynamics}{
\PackageInfo{\Lwarp}{Patching-chemmacros-module-thermodynamics}}
\PackageInfo{\Lwarp}{AfterEndPreamble}
\RenewDocumentCommand \chemmacros_data:w { smo }

\item
\IfBooleanF {#1} { \IfNoValueF {#3} { - ( #3 ) }
\IfBooleanT {#1} { \bool_if:NT \l_chemmacros_nmr_use_equal_bool { #2 = } }
\bool_if:NT \l_chemmacros_nmr_use_equal_bool { = } }\Lwarp
\IfBooleanF {#1} { \bool_if:NT \l_chemmacros_nmr_use_equal_bool { - = } }
\bool_if:NT \l_chemmacros_nmr_use_equal_bool {~ = } }
\IfBooleanF {#1} { \bool_if:NT \l_chemmacros_nmr_use_equal_bool { = ~ } }
\IfBooleanF {#1} { \bool_if:NT \l_chemmacros_nmr_use_equal_bool { ~ = } }
}
Only add the subscripts if they are being used. This avoids causing an incorrect depth, as the empty subscript will be measured by \TeX{} but cropped out by pdfcrop.
The pre-existing macros are redefined with the new definition:

\RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
\RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
\RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }

\ExplSyntaxOff

\chemnum

\ProvidesPackagePass{chemnum}[2016/04/14]
\ExplSyntaxOn
\cs_gset_protected:Npn \chemnum_compound_write:n #1 
{

\DeclareDocumentCommand #1 { sO{}D(){}m }
{
\group_begin:
\chemmacros_set_keys:xn
{thermodynamics/\chemmacros_remove_backslash:N #1}
(#2)
\tl_if_blank:nF (#3)
{
\chemmacros_set_keys:nx {thermodynamics}
{ subscript-\l__chemmacros_state_sb_pos_t/l.Var = \exp_not:n {##3} }
}
\chemmacros_state:nV {##2} \l__chemmacros_state_symbo/l.Var_t/l.Var
\chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
\IfBooleanF {##1} { = \SI {##4} { \l__chemmacros_state_unit_t/l.Var } }
\group_end:
}
\chemnum_get_compound_property:nn {#1} {pre-main-label-code}
\group_begin:
  \bool_if:NTF \_\chemnum_compound_local_bool
  { \_\chemnum_local_label_format_tl }
  { \chemnum_get_compound_property:nn {#1} {label-format} }
  {
    \LWR@textcurrentfont{
      \chemnum_get_compound_property:nn {#1} {counter-representation}
    }
  }
\group_end:
\chemnum_get_compound_property:nn {#1} {post-main-label-code}
\cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
{
  \group_begin:
  \bool_if:NTF \_\chemnum_compound_local_bool
  { \_\chemnum_local_label_format_tl }
  { \chemnum_get_compound_property:nn {#1} {label-format} }
  {
    \LWR@textcurrentfont{
      \chemnum_get_subcompound_property:nnn {#1} {#2}
      {counter-representation}
    }
  }
  \group_end:
}\ExplSyntaxOff

File 71 \texttt{lwparchkfloat sty}

§ 170 Package \texttt{chkfloat}

\texttt{chkfloat} is ignored.

\texttt{chkfloat} for HTML output:
\texttt{\LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]}

File 72 \texttt{lwparchngpage sty}

§ 171 Package \texttt{chngpage}

(Emulates or patches code by Peter Wilson.)

\texttt{chngpage} is emulated.

\texttt{chngpage} for HTML output:
Discard all options for \texttt{lwparchngpage}:
\texttt{\LWR@ProvidesPackageDrop{chngpage}[2009/10/20]}
lwarp

\LWR@origRequirePackage{lwp-angepage}

---

File 73  **lwarp-cite.sty**

§ 172  Package **cite**

*(Emulates or patches code by Donald Arseneau.)*

**Pkg** cite  **cite** is patched for use by **lwarp**.

**for HTML output:**  1 \LWR@ProvidesPackagePass[cite][2015/02/27]

For the [super] option, the \textsuperscript must be removed:

\begin{verbatim}
2 \def\LWRCT@bib{l.Varabe/l.Var#1}{\@citess{#1}\kern-\l.Varabe/l.Varsep,}
3 \ifdefstrequa/l.Var{\@bib/l.Varabe/l.Var}{\LWRCT@bib/l.Varabe/l.Var}
4 { \def\@bib/l.Varabe/l.Var#1{\@citess{#1}}
5 }{ }
\end{verbatim}

For the [super] option, \textsuperscript is used instead of math superscript:

\begin{verbatim}
8 \def\@citess#1{\textsuperscript{#1}}
9 10 \DeclareDocumentCommand\citepunct{}{,\,\re/l.Varax}
\end{verbatim}

---

File 74  **lwarp-CJK.sty**

§ 173  Package **CJK**

**Pkg** CJK  **CJK** does not work with **lwarp** unless called from **ctex**.

**for HTML output:**  1 \ifpackage{lwpagloaded[xeCJK]}{
2 \LWR@loadnever[CJK]{ctex, xeCJK}
3 }{ }
4 \LWR@ProvidesPackagePass[CJK][2015/04/18]

---

File 75  **lwarp-CJKutf8.sty**

§ 174  Package **CJKutf8**

**Pkg** CJKutf8  **CJKutf8** does not work with **lwarp** unless called from **ctex**.

**for HTML output:**  1 \ifpackage{lwpagloaded[xeCJK]}{
2 \LWR@loadnever[CJKutf8]{ctex, xeCJK}
§ 175 Package clrdblpg

clrdblpg is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]

§ 176 Package cmdtrack

cmdtrack is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]

2 \newcommand{\untrack}[1]{}

§ 177 Package color

color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.

for HTML output:

1 \LWR@ProvidesPackageDrop{color}[2016/07/10]

2 \RequirePackage{xcolor}

§ 178 Package colortbl

colortbl is used as-is for print output, and emulated for HTML.

⚠️ row/cell color

Only use \rowcolor and \cellcolor at the start of a row, in that order.

colortbl ignores the overhang arguments.
A placeholder definition is forgotten first:

```latex
\let\rowcolor\relax
\ProvidesPackagePass{colortbl}[2018/12/12]
```

The following \texttt{\LWR@HTML} versions are used inside an HTML tabular.

\begin{verbatim}
columncolor \((model)\) \{(color)\} \{(left overhang)\} \{(right overhang)\}
\LWR@getmynexttoken is not used here because \texttt{columncolor} is not used inside the data area of the tabular.
\end{verbatim}

\begin{verbatim}
rowcolor \((model)\) \{(color)\} \{(left overhang)\} \{(right overhang)\}
\LWR@getmynexttoken is used for \texttt{rowcolor} because it is used inside the data area of the tabular.
\end{verbatim}

\begin{verbatim}
cellcolor \((model)\) \{(color)\} \{(left overhang)\} \{(right overhang)\}
\end{verbatim}

\begin{verbatim}
arrayrulecolor \((model)\) \{(color)\}
The HTML version for use outside a tabular. Inside a tabular, \texttt{\LWR@HTML@arrayrulecolor@nxt} is used instead.
\end{verbatim}

\begin{verbatim}
\LWR@arrayrulecolor@nxt
\end{verbatim}

The HTML version for use inside a tabular.
\doublerulesepcolor \((\text{model})\) \((\text{color})\)

The version for use outside a tabular.

\newcommand{\LWR@HTML@doublerulesepcolor}[2]{\LWR@expandableformatted{doublerulesepcolor}}
\AtBeginDocument{\LWR@expandab{doublerulesepcolor}}

\doublerulesepcolor \((\text{model})\) \((\text{color})\)

The version for use inside a tabular.

\newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2]{\LWR@getmynexttoken}
\AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}

\LWR@doublerulesepcolornexttoken

---

File 80 \lwp-continue.sty

§ 179 Package \textbf{continue}

\textbf{Pkg} \textbf{continue} \textbf{continue} is ignored.

\textbf{for HTML output:} 1 \LWR@ProvidesPackageDrop{continue}[2018/12/09]

2 \newcommand*{\flagcont}{}
3 \newcommand*{\flagend}{}
4 \newcommand*{\flagword}{}
5 \newcommand*{\preflagword}{}
6 \newcommand*{\postflagword}{}
7 \newlength\contsep
8 \newlength\contdrop

---

File 81 \lwp-copyrightbox.sty

§ 180 Package \textbf{copyrightbox}

\textbf{Pkg} \textbf{copyrightbox} \textbf{copyrightbox} is emulated for use by \textbf{lwp}.

\textbf{copyrightbox} is emulated for use by \textbf{lwp}.

The entire copyright box is placed inside a \texttt{<div>} of class \texttt{copyrightbox}.

The contents are placed inside a \texttt{<div> of class copyrightboxcontents.}
The copyright notice is placed inside a <div> of class copyrightboxnote.

for HTML output:
1 \LWR@ProvidesPackageDrop{copyrightbox}[2011/11/27]

2 \newcommand{copyrightbox}[3][r]{%
3 \begin{BlockClass}
4 \hspace{1cm} display: inline-flex;
5 \hspace{1cm} flex-direction: column ;
6 \end{BlockClass}
7 \begin{BlockClass}{copyrightboxcontents}
8 #2
9 \end{BlockClass}
10 \begin{BlockClass}{copyrightboxnote}
11 #3
12 \end{BlockClass}
13 \end{BlockClass}
14 )
15 \newcommand{\CRB@setcopyrightfont}{}
16 \newcommand{\CRB@setcopyrightparagraphstyle}{}

File 82 \lwp-crop.sty

§ 181 Package crop

(Emulates or patches code by Melchior Franz.)

Pkg crop Emulated.

for HTML output: Discard all options for lwarp-crop:
1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]

2 \newcommand*{\crop}{[]}
3 \newcommand*{\cropdef}{[]}

File 83 \lwp-ctable.sty

§ 182 Package ctable

(Emulates or patches code by Wybo Dekker.)

Pkg ctable ctable is patched for use by lwarp.

⚠️ Misplaced alignment tab character & Use \StartDefiningTabulars before one or more \ctables, and \StopDefiningTabulars after. These change the meaning of the ampersand & character.

for HTML output: 1 \LWR@ProvidesPackagePass{ctable}[2015/10/17]
The following is in the original:

\newcommand{\LWR@HTML@ctable}[]{4}[]{% 
\let\CTtaborfig \dflCTtaborfig 
\let\CTalign \dflCTalign 
\let\CTsideways \dflCTsideways 
\let\CTcontinued \empty 
\let\CTpos \dflCTpos 
\let\CTcaption \empty 
\let\CTcap \undefined 
\let\CTlabel \empty 
\let\CTbotcap \dflCTbotcap 
\let\CTstarred \dflCTstarred 
\let\CTsuper \dflCTsuper 
\let\CTnotespar \dflCTnotespar 
\let\CTdoinside \dflCTdoinside 
\let\CTbgopacity \dflCTbgopacity 
\@CTframerule \dflCTframerule 
\@CTcaptionskip \dflCTcaptionskip 
\@CTframesep \dflCTframesep 
\@CTwidth \dflCTwidth 
\@CTmaxwidth \dflCTmaxwidth 
\@CTincapwidth \dflCTincapwidth 
\@CTfooterwidth \dflCTfooterwidth 
\def\@CTfgactual {\dflCTframefg} 
\def\@CTbgactual {\dflCTframebg} 
\def\@CTbeg {\begin{\CTsideways\CTtaborfig\CTstarred}} 
\def\@CTbegin {\@CTbeg} 
\def\@CTend {\end{\CTsideways\CTtaborfig\CTstarred}} 
\setkeys{CT}{#1}% 
\ifx\CTcap\undefined\let\CTcap\CTcaption\fi 
\ifx\CTcap\empty 
\PackageWarningNoLine{ctable}{\MessageBreak 
An empty cap= option prevents lot/loc entry only\MessageBreak 
if the caption package is loaded!} 
\fi 
\if\@CTinmemoir\else 
\PackageWarningNoLine{ctable}{\MessageBreak 
You can, currently, use the sidecap option only with\MessageBreak 
memoir documents. Use topcap or botcap only} 
\fi 
\ifdim\@CTwidth=0pt\else 
\ifdim\@CTmaxwidth=0pt\else 
\PackageError{ctable}{\MessageBreak 
You may not use the width and maxwidth options together\MessageBreak 
Use either width or maxwidth} 
\fi 
\fi 
\if\@CTpos\empty 
\if\@CTsideways\empty\else 
\PackageError{ctable}{\MessageBreak 
} 
You may not use the pos and sideways options together.

Rotated tables and figures are always typeset on a separate page)

\fi
\fi
\ifx@CTcaption\empty
\ifx@CTlabell\empty\else
\PackageError{ctable}{You may not label a captionless table\MessageBreak
Such a label can’t be referenced}
\fi
\fi

Some of the original, regarding computing the width of \CT@t, is removed here.

\@CTbegin
\ifx@CTcontinued\empty\else\addtocounter{\@Taborfig}{-1}\fi
\@CTalign

\textbf{lwp}ar\textsc{p}’s patches begin here:

\begin{center}
\setlength{\fboxrule}{\@CTframerule}
\setlength{\fboxsep}{\@CTframesep}
\LWR@forceminwidth{\fboxrule}% lwp
\convertcolors{\@CTbgactual}{HTML}\LWR@tempcolor% lwp
\begin{BlockClass}[% lwp
  border:
  \LWR@printlength{\LWR@atleastonept}
  solid
  \LWR@colorstyle{\@CTfgactual} ; %
  padding: \LWR@printlength{\fboxsep} ; %
  \ifdefstring{\LWR@tempcolor}{FFFFFF}{}{%
    background: \LWR@colorstyle{\@CTbgactual} ; %
  }%
  ]{%fminipage}% lwp
  \ifx@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\fi
  \ifx@CTbotcap\undefined%
  \begin{sidecaption}[\@CTcap]{\@CTcaption}
  \ifx@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTCaption\fi
  \@CTdoinside
  \begin{tabularx}{\@CTinewidth}{#2}% lwp
  #4%
  \end{tabularx}% lwp
  \def@CTfootnotes(#3)% lwp
  \ifdef{\@CTfootnotes}{\empty} else{% append footnotes, if any
  \begin{BlockClass}{tnotes}% lwp
  #3%
  \end{BlockClass}% lwp
  }
  \fi
  \ifx@CTbotcap\undefined\end{sidecaption}\fi
  \ifx@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\@CTCaption\fi
  \end{BlockClass}
  \end{center}
\end{document}
Required to properly detect the toprule:

\LWR@formatted{ctable}

Table notes are redefined for HTML:

\newcommand{\LWR@HTML@tmark}{\textsuperscript{\textrm{\textit{#1}}}}
\newcommand{\LWR@HTML@tnote}{\tmark[#1],#2\par}

---

File 84 **lwrap-cuted.sty**

§ 183 Package **cuted**

*Emulates or patches code by Sigita Toliūšis.*

Pkg cuted **cuted** is emulated.

for HTML output:

1 \LWR@ProvidesPackageDrop{cuted}[2012/10/04]

2 \newenvironment{strip}{}{}
3 newskip\stripsep
4 \def\oldcolsbreak\#1{}

---

File 85 **lwrap-cutwin.sty**

§ 184 Package **cutwin**

*Emulates or patches code by Peter Wilson and Alan Hoenig.*

Pkg cutwin **cutwin** Emulated.

for HTML output: Discard all options for lwrap-cutwin:

1 \LWR@ProvidesPackageDrop{cutwin}[2010/09/29]

2 \newcommand*{\opencutleft}{}
3 \newcommand*{\opencutright}{}
4 \newcommand*{\opencutcenter}{}
5 \newcommand*{\cutfuzz}{}

\newenvironment{cutout}{\marginpar{\windowpagestuff}}{} 
\newcommand*{\windowpagestuff}{}

\newenvironment{shapedcutout}{\marginpar{\picinwindow}}{} 
\newcommand*{\picinwindow}{\begin{picture}(0,0)
\putstuffinpic\end{picture}}

File 86  \texttt{larp-dblfloatfix.sty}

§ 185  Package  \texttt{dblfloatfix}

\texttt{Pkg  dblfloatfix}  \texttt{dblfloatfix} is ignored.

\texttt{for HTML output:  }\texttt{\LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]}

File 87  \texttt{larp-dblfnote.sty}

§ 186  Package  \texttt{dblfnote}

\texttt{(Emulates or patches code by Hiroshi Nakashima.)}

\texttt{Pkg  dblfnote}  \texttt{dblfnote} is emulated.

\texttt{for HTML output:  }\texttt{\LWR@ProvidesPackageDrop{dblfnote}[1999/07/14]}

2 \newcounter{DFNsloppiness}
3 \newdimen\DFNcolumnsep
4 \newdimen\DFNcolumnwidth
5 \def\DFNallowcbreak{}
6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}}
\def\DFNru{l.Vare}/l.Vareft{}

File 88 \texttt{lwp-dcolumn.sty}

§ 187 Package \texttt{dcolumn}

\texttt{dcolumn} is emulated by the \texttt{lwp} core.

\texttt{\LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]}

File 89 \texttt{lwp-diagbox.sty}

§ 188 Package \texttt{diagbox}

(\textit{Emulates or patches code by Leo Liu.})

\texttt{diagbox} is patched for use by \texttt{lwp}.

\texttt{\LWR@ProvidesPackagePass{diagbox}[2016/12/28]}

To restore print-mode inside a \texttt{lateximage}:

\begin{verbatim}
\newcommand{\LWR@diagbox@AB}{\langle E/W \rangle \langle A \rangle \langle E/W \rangle \langle B \rangle}
\LetLtxMacro{\new}{\doc@diagbox@double}{\LWR@origdiagbox@double}
\LetLtxMacro{\new}{\doc@diagbox@triple}{\LWR@origdiagbox@triple}
\appto{\LWR@restoreorigformatting}{\LetLtxMacro{\diagbox@double}{\LWR@origdiagbox@double}}
\LetLtxMacro{\diagbox@triple}{\LWR@origdiagbox@triple}
\end{verbatim}

\begin{verbatim}
\newcommand{\LWR@diagboxNW}{\langle A \rangle \langle B \rangle}
\newcommand{\LWR@diagboxAB}{\langle E/W \rangle \langle A \rangle \langle E/W \rangle \langle B \rangle}
\end{verbatim}

Likewise for NE, SW, SE:
\newcommand{\LWR@diagboxNE}[2]{% 
\LWR@diagbox@AB{W}{#1}{E}{#2}%
}

\let{\LWR@diagboxSW}{\LWR@diagboxNE}
\let{\LWR@diagboxSE}{\LWR@diagboxNW}

\newcommand{\LWR@diagboxdouble}[3]{% 
\langle \text{keys} \rangle \langle \text{A} \rangle \langle \text{B} \rangle
}
\def{\diagbox@double}{\langle \text{title} \rangle \langle \text{A} \rangle \langle \text{T} \rangle \langle \text{B} \rangle
}

\newcommand{\LWR@diagboxTNW}[3]{% 
\newcommand{\LWR@diagboxTNE}[3]{% 
\newcommand{\LWR@diagboxTSW}[3]{% 
\newcommand{\LWR@diagboxTSE}[3]{% 
\newcommand{\diagbox@triple}[4]{% 
\langle \text{keys} \rangle \langle \text{A} \rangle \langle \text{T} \rangle \langle \text{B} \rangle
}

\def{\diagbox@triple}{\langle \text{title} \rangle \langle \text{A} \rangle \langle \text{T} \rangle \langle \text{B} \rangle
}

\Package{dingbat}

(Emulates or patches code by Scott Pakin.)
Pkg dingbat

For HTML output:

1 \LWR@ProvidesPackagePass{dingbat}[2001/04/27]

2 \newcommand*{\LWR@dingbatsymbo/l.Var}{\HTMLunicode{#1}}

3 \newcommand{\LWR@HTML@rightpointright}{\LWR@dingbatsymbo/l.Var{261E}}

4 \newcommand{\LWR@HTML@leftpointright}{\LWR@dingbatsymbo/l.Var{261E}}

5 \newcommand{\LWR@HTML@leftthumbsdown}{\LWR@dingbatsymbo/l.Var{1F44E}}

6 \newcommand{\LWR@HTML@leftthumbsup}{\LWR@dingbatsymbo/l.Var{1F44D}}

7 \newcommand{\LWR@HTML@rightpointright}{\LWR@dingbatsymbo/l.Var{261E}}

8 \newcommand{\LWR@HTML@rightthumbsdown}{\LWR@dingbatsymbo/l.Var{1F44E}}

9 \newcommand{\LWR@HTML@rightthumbsup}{\LWR@dingbatsymbo/l.Var{1F44D}}

10 \newcommand{\LWR@HTML@squarewithdots}{\LWR@dingbatsymbo/l.Var{25C7}}

11 \newcommand{\LWR@HTML@fi/l.Var/l.Varedsquarewithdots}{\LWR@dingbatsymbo/l.Var{25C6}}

12 \newcommand{\LWR@HTML@Sborder}{\LWR@dingbatsymbo/l.Var{271A}}

13 \newcommand{\LWR@HTML@Zborder}{\LWR@dingbatsymbo/l.Var{274B}}

14 \newcommand{\LWR@HTML@largepencil}{\LWR@dingbatsymbo/l.Var{270E}}

15 \newcommand{\LWR@HTML@anchor}{\LWR@dingbatsymbo/l.Var{2693}}

16 \newcommand{\LWR@HTML@carriagereturn}{\LWR@dingbatsymbo/l.Var{23CE}}

17 \newcommand{\LWR@HTML@checkmark}{\LWR@dingbatsymbo/l.Var{2713}}

18 \newcommand{\LWR@HTML@eye}{\LWR@dingbatsymbo/l.Var{1F441}}

19 \newcommand{\LWR@HTML@satellitedish}{\LWR@dingbatsymbo/l.Var{1F4E1}}

20 \newcommand{\LWR@HTML@smallpencil}{\LWR@dingbatsymbo/l.Var{270E}}

21 \LWR@formatted{rightpointright}

22 \LWR@formatted{leftpointright}

23 \LWR@formatted{leftthumbsdown}

24 \LWR@formatted{leftthumbsup}

25 \LWR@formatted{rightpointright}

26 \LWR@formatted{rightthumbsdown}

27 \LWR@formatted{rightthumbsup}

28 \LWR@formatted{squarewithdots}

29 \LWR@formatted{fi/l.Var/l.Varedsquarewithdots}

30 \LWR@formatted{Sborder}

31 \LWR@formatted{Zborder}

32 \LWR@formatted{largepencil}

33 \LWR@formatted{anchor}

34 \LWR@formatted{carriagereturn}

35 \LWR@formatted{checkmark}

36 \LWR@formatted{eye}

37 \LWR@formatted{satellitedish}

38 \LWR@formatted{smallpencil}

File 91  \texttt{lwpardprogressty}

§ 190 Package \texttt{dprogress}

Pkg dprogress

dprogress is ignored.

For HTML output:

1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]
**lwarp-draftcopy.sty**

§ 191 Package **draftcopy**

Pkg draftcopy draftcopy is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftcopy}[2002/02/25]

2 \newcommand{draftcopyVersion}[1]{}
3 \newcommand{draftcopySetGrey}[1]{}
4 \newcommand{draftcopySetScale}[1]{}
5 \newcommand{draftcopySetScaleFactor}[1]{}
6 \newcommand{draftcopyFirstPage}[1]{}
7 \newcommand{draftcopyLastPage}[1]{}
8 \newcommand{draftcopyName}[2]{}
9 \newcommand{draftcopyPgfint}[1]{}
10 \newcommand{draftcopyPgfintX}[1]{}
11 \newcommand{draftcopyPgfintY}[1]{}
12 \newcommand{draftcopyPgfintXScale}[1]{}
13 \newcommand{draftcopyPgfintYScale}[1]{}
14 \newcommand{draftcopyPgfintXScaleFactor}[1]{}

**lwarp-draftfigure.sty**

§ 192 Package **draftfigure**

Pkg draftfigure draftfigure is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftfigure}[2017/07/19]

2 \RequirePackage{xkeyval}

3 \define@key{draftfigure}{code}{}
4 \define@key{draftfigure}{noframe}[true]{}
5 \define@key{draftfigure}{filename}[true]{}
6 \define@key{draftfigure}{content}{normal}{}
7 \define@key{draftfigure}{style}{normal}{}
8 \define@key{draftfigure}{position}{left}{}
9 \define@key{draftfigure}{size}{normal}{}
10 \newcommand{\setdf}[1]{\setkeys{draftfigure}{#1}}

**lwarp-draftwatermark.sty**

§ 193 Package **draftwatermark**

(Emulates or patches code by Sergio Callegari.)
\texttt{lwarp}

\pkg{draftwatermark} \texttt{draftwatermark} is emulated.

\begin{verbatim}
\LWR@ProvidesPackageDrop{draftwatermark}[2015/02/19]
\end{verbatim}

\begin{verbatim}
\newcommand{\SetWatermarkAngle}[1]{}
\newcommand{\SetWatermarkColor}[1]{}
\newcommand{\SetWatermarkLightness}[1]{}
\newcommand{\SetWatermarkFontSize}[1]{}
\newcommand{\SetWatermarkScale}[1]{}
\newcommand{\SetWatermarkHorCenter}[1]{}
\newcommand{\SetWatermarkVertCenter}[1]{}
\newcommand{\SetWatermarkText}[1]{}
\end{verbatim}

File 95 \texttt{lwarp-easy-todo.sty}

\section{Package easy-todo}

(\textit{Emulates or patches code by Juan Rada-Vilela}.)

\pkg{easy-todo} \texttt{easy-todo} is patched for use by \texttt{lwarp}.

\begin{verbatim}
\LWR@ProvidesPackagePass{easy-todo}[2014/01/01]
\end{verbatim}

\begin{verbatim}
\listoftodos  Modified to correct buggy use of flushright.
1 \let\LWR@origlistoftodos\listoftodos
2 \renewcommand{\listoftodos}{\begin{comment}
3 \renewcommand{\flushright}{\end{comment}
4 \LWR@origlistoftodos
5 \endgroup
6 \renewcommand{\flushright}{}
7 \LWR@origlistoftodos
8 \endgroup
9 }
\end{verbatim}

\begin{verbatim}
\todoii  Modified to use \textcolor instead of \color.
10 \renewcommand{\todoii}[2]{% 11 \ifthenelse{\equal{\@todoobeyfinal}{true}}{% 12 { % 13 \ifoptionfinal{\todoenable=false}{\todoenable=true}% 14 }% 15 }% 16 \ifthenelse{\equal{\@todoenable}{true}}{% 17 { % 18 \refstepcounter{todos}% 19 \noindent% 20 \textcolor{\todocolor}{% 21 \LWR@textcurrentcolor{% 22 \normalfont\scriptsize\bfseries{\thetodos.#1}% 23 }% 24 }% 25 \addcontentsline{lof}{todos}{\protect{\thetodos.}}% 26 }% 27 \LWR@isolate[#2]}
\end{verbatim}
File 96  *lwp-ebook.sty*

### § 195 Package *ebook*

*(Emulates or patches code by Jørgen Steensgaard.)*

**Pkg ebook** *ebook* is emulated.

**for HTML output:**

```latex
\LWR@ProvidesPackageDrop{ebook}
\setcounter{secnumdepth}{0}
\setcounter{tocdepth}{2}
\providecommand{\pagefi/l.Var/l.Var}
\LWR@ProvidesPackageDrop{ebook}
```

File 97  *lwp-ed.sty*

### § 196 Package *ed*

*(Emulates or patches code by Michael Kohlhase.)*

**Pkg ed** *ed* is patched for use by *lwp*.

**for HTML output:**

```latex
\LWR@ProvidesPackagePass{ed}[2012/01/29]
```

**Bugs:**

1. todolist fails with the hide option, as does \edexpansion.
2. \edstubURI is actually \edstuURI.

```latex
\RequirePackage{xcolor}
\renewenvironment{edstub}[2][The following blue text]
\begin{center}
\huge
\textcolor{red}{% #1 is only a provisional stub\Large
```
the Office document contains more text which will be merged for the final document.

\ifx\ed@stubURI\@empty{#2}\else\href{\ed@stubURI}{#2}\fi\end{center}\Brockass[correction]{edstub}{\endBrockass}

---

File 98 \texttt{l warp-ellipsis.sty}

§ 197 Package \texttt{ellipsis}

\textit{(Emulates or patches code by Peter J. Heslin.)}

\texttt{Pkg ellipsis} \texttt{ellipsis} is emulated.

\begin{verbatim}
\LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
\newcommand{\ellipsisgap}{0.1em}
\newcommand*{\midwordellipsis}{\,\textellipsis\,}
\end{verbatim}

---

File 99 \texttt{l warp-embrac.sty}

§ 198 Package \texttt{embrac}

\textit{(Emulates or patches code by Clemens Niederberger.)}

\texttt{Pkg embrac} \texttt{embrac} is nullified for HTML and used as-is for print.

\texttt{for HTML output:} \begin{verbatim}
\LWR@ProvidesPackagePass{embrac}[2017/07/04]
\newcommand{\emph}{\LWR@orig@HTML@emph\LWR@HTML@emph}
\RenewDocumentCommand{\emph}{s m}{\LWR@orig@HTML@emph{#2}}
\RenewDocumentCommand{\textit}{s m}{\LWR@orig@HTML@textit{#2}}
\RenewDocumentCommand{\texts}{s m}{\LWR@orig@HTML@texts{#2}}
\Ifetexorluatex
\LetLtxMacro{\LWR@orig@HTML@emphsi}{\LWR@orig@HTML@textsi}
\RenewDocumentCommand{\emphsi}{s m}{\LWR@orig@HTML@emphsi{#2}}
\RenewDocumentCommand{\textits}{s m}{\LWR@orig@HTML@textits{#2}}
\AtBeginDocument{
\LWR@formatted{emph}
}\end{verbatim}
lwarp

\LWR@formatted{textit}
\LWR@formatted{textst}
\ifxetexorluatex
  \LWR@formatted{textsi}
\fi
\newcommand{\LWR@HTML@EmbracOff}{}
\newcommand{\LWR@HTML@EmbracOn}{}

File 100 lwarp-emptypage.sty

§ 199 Package emptypage

Pkg emptypage emptypage is ignored.

for HTML output: Discard all options for lwarp-emptypage:

1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]

File 101 lwarp-endfloat.sty

§ 200 Package endfloat

Pkg endfloat endfloat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{endfloat}[2018/03/24]

2 \newcommand{\figurep{}{}}
3 \newcommand{\tab{}{}}
4 \newcommand{\f{}{}}
5 \newcounter{posttable}
6 \newcounter{postfigure}
7 \newcommand*{\theposttbl{}}
8 \newcommand*{\thepostfig{}}
9 \newcommand{\AtBeginFigures}[1]{}
10 \newcommand{\AtBeginTables}[1]{}
11 \newcommand{\AtBeginDelayedFloats}[1]{}
12 \newcommand{\processdelayedfloats}{}
13 \newcommand{\efseparator{}}
14 \def{\ef{}}
15 \providecommand{\efheading[1]{}}
16 \providecommand{\efpreamble{}}
17 \providecommand{\efpostamble{}}
§ 201 Package \textbf{endheads}

endheads is ignored.

\begin{verbatim}
\LWR@ProvidesPackageDrop{endheads}[2017/04/06]
\end{verbatim}

\begin{verbatim}
1 \newcommand{\changesing/l.Varepageabbrev}{}
2 \newcommand{\changemu/l.Vartip/l.Varepageabbrev}{}
3 \newcommand{\changenotesname}{}
4 \newcommand{\changenotesheader}{}
5 \newcommand{\changenotescontentsname}{}
6 \newcommand{\changechapternotes}{}
7 \newcommand{\checknoteheaders}{}
8 \newif\ifnotesincontentson \notesincontentsonfalse
9 \newcommand{\notesincontents}{\notesincontentsontrue}
10 \newif\ifendnoteheaderson \endnoteheadersonfalse
11 \newcommand{\setupendnoteheaders}{\endnoteheadersontrue}
12 \newcommand{\setupendnoteheaders}{% 
13 \endnoteheadersontrue%
14 )
15 \newif\iftit/l.Vareinnotes \tit/l.Vareinnotestrue
16 \newcommand{\styleforcaptionsbegin}{}
17 \newcommand{\styleforcaptionsend}{}
18 \newcommand{\setstyleforcaptionsbegin}[1][% 
19 \newcommand{\setstyleforcaptionsbegin}[1][#1]% 
20 ]
21 \newcommand{\setstyleforcaptionsend}[1][% 
22 \newcommand{\setstyleforcaptionsend}[1][#1]% 
23 ]
24 \newcommand{\resetendnotes}{}
25 \newif\ifnotesbychapteron \notesbychapteronfalse
26 \newcommand{\notesbychapter}{\notesbychapterontrue}
\end{verbatim}

§ 202 Package \textbf{endnotes}

(Emulates or patches code by John Lavagnino.)

\begin{verbatim}
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional
\end{verbatim}
To additionally have the endnotes on their own HTML page, if FileDepth allows:

\ForceHTMLPage
\theendnotes

for HTML output:

1 \LWR@ProvidesPackagePass{endnotes}

2 \def\enoteformat{%
3 \leftskip\z@ \rightskip\z@ \parindent=1.8em
4 \leavevmode
5 \llap{
6 \makeenmark
7 } }
8 9
10 \def\@makeenmark{\hbox{\LWR@htm/l.Varspan{sup}{\normalfont\theenmark}}}
11 \def\makeenmark{\@makeenmark}

---

File 104 lwpars-enumerate.sty

§ 203 Package enumerate

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by lwarp and thus must no longer be dropped.

for HTML output:

1 \LWR@ProvidesPackagePass{enumerate} [2015/07/23]

---

File 105 lwpars-enumitem.sty

§ 204 Package enumitem

(Emulates or patches code by Javier Bezos.)

This package is supported with minor adjustments.

for HTML output:

1 \LWR@ProvidesPackagePass{enumitem} [2018/11/30]

for HTML output:

2 \begin{warpHTML}
\newlist{(name)}{(type)}{(maxdepth)}
\renewlist{(name)}{(type)}{(maxdepth)}

For enumitem lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.
\let\LWR@enumitem@orignewlist\newlist
\renewcommand*{\newlist}[3]{%
  \LWR@enumitem@orignewlist[#1]{#2}{#3}%
  \AtBeginEnvironment{#1}{\@nameuse{LWR@#2start}}%
  \AtEndEnvironment{#1}{\@nameuse{LWR@#2end}}%
}
\def\DrawEnumitemLabe{}\end{warpHTML}

File 106  \texttt{lwp-epigraph.sty}

§ 205  Package \texttt{epigraph}

\textit{(Emulates or patches code by Peter Wilson.)}

\textbf{Pkg}  \texttt{epigraph}  \texttt{epigraph} is emulated.

\textbf{for HTML output:}  \begin{verbatim}
1 \LWR@ProvidesPackageDrop{epigraph}[2009/09/02]
2 \DeclareDocumentCommand{\qitem}{m m}{
3 \begin{BlockClass}{qitem}
4 #1
5 \ifbool{FormatWP}{\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}
6 {\begin{BlockClass}{epigraphsource}}
7 #2
8 {\end{BlockClass}}
9 \end{BlockClass}
10 \end{BlockClass}
11 \end{BlockClass}
12 }
13 \DeclareDocumentCommand{\epigraph}{m m}{{
14 \begin{LWR@BlockClassWP}{\LWR@print@mbox[text-align:right]}{epigraph}
15 qitem[#1][#2]
16 \end{LWR@BlockClassWP}
17 }
18 }
19 \DeclareDocumentEnvironment{epigraphs}{}
20 {\begin{LWR@BlockClassWP}{\LWR@print@mbox[text-align:right]}{epigraph}
21 {\end{LWR@BlockClassWP}}
22 }
\end{verbatim}

Use css to format epigraphs.

The following are null commands for source compatibility:

\begin{verbatim}
23 \newenvironment*(flushepinormal){}
\end{verbatim}
\ifclassloaded{memoir}
\setlength{\epigraphwidth}{.5\linewidth}
\renewcommand{\textflush}{flushleft}
\renewcommand{\epigraphhead}[2][0]{#2}
\renewcommand{\dropchapter}[1]{}
\renewcommand*{\undodrop}{% not memoir
\newlength{\epigraphwidth}
\setlength{\epigraphwidth}{.5\linewidth}
\newcommand{\textflush}{flushleft}
\newcommand{\epigraphhead}[2][0]{#2}
\newcommand{\dropchapter}[1]{}
\newcommand*{\undodrop}{% not memoir
\let\cleartotenpage\relax% also in nextpage
\newcommand{\cleartotenpage}[1]{}}

\newcommand{\c{art}@evenpage}{\re{ax}}% a so in nextpage
\newcommand{\c{art}@evenpage}[1]{}}

File 107 \texttt{lwp-epsfig.sty}

\section{epsfig}

\texttt{epsfig} is emulated for use by lwp.

\textbf{⚠️ Only the \LaTeXe{} syntax is emulated.}

\textbf{for HTML output:} \LaTeX{}-\ProvidesPackageDrop{epsfig}[2017/06/25]

A few additional keys to capture the filename:

\begin{verbatim}
2 \RequirePackage{graphics}
3 \define@key{igraph}{file}{%  
4 \xdef\LWR@epsfig@filename{#1}%
5 }
6
7 \define@key{igraph}{figure}{%  
8 \xdef\LWR@epsfig@filename{#1}%
9 }
10 }
11
12 \define@key{igraph}{prolog}{}
13
14 \define@key{igraph}{silent}{}
\end{verbatim}

The captured filename is used as the argument to \texttt{\includegraphics}:
Previous versions of `lwarp` had a nullified version, but now `epstopdf-base` is supported. `lwarp-epstopdf` becomes a placeholder to overwrite previous versions. See package `epstopdf-base` for details.

Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

```
\lwrpmk pdftosvg <listofPDFfiles>
```

to generate `.svg` versions.

Redefine to remember the image filename, replacing `.pdf` with `.svg`. Use the `epstopdf` print version inside a `lateximage`.

```
\newcommand*(\LWR@HTML@ETE@OrgGin@setfile)[3]{% 
  \edef\LWR@tempone(#3)% 
  \StrSubstitute{\LWR@tempone}{(.pdf)}{(.svg)}{\LWR@tempone}% 
  \StrSubstitute{\LWR@tempone}{(.PDF)}{(.SVG)}{\LWR@tempone}% 
  \xdef\LWR@parsedfilename{\LWR@tempone}% 
  }% 
\LWR@formatted{ETE@OrgGin@setfile}

\includegraphics in HTML mode redefines \Gin@setfile to be \LWR@HTML@Gin@setfile, which is now redirected to `epstopdf`'s version:

```
\renewcommand*(\LWR@HTML@Gin@setfile)[3]{% 
  \ETE@Gin@setfile[#1](#2)(#3)% 
  }% 
```
Allow `.eps` images to be found if a suffix is not provided:

```
\AtBeginDocument{
  \DeclareGraphicsExtensions{%.eps,.EPS,.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG
  }
  \DeclareGraphicsRule{.svg}{svg}{.svg}{}
}
```

Likewise when inside a `\lateximage`:

```
\Atto\LWR@restoreorigformatting{
  \DeclareGraphicsExtensions{%.eps,.EPS,.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG
  }
}
```

---

**File 110**  
`lwarp-eqlist.sty`

§ 209  Package `eqlist`

Pkg `eqlist` `eqlist` is emulated.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{eqlist}[2002/08/15]
2 \newenvironment{eqlist}[1][\description]{\enddescription}
3 \newenvironment{eqlist*}[1][\description]{\enddescription}
4 \newenvironment{Eqlist}[2][\description]{\enddescription}
5 \newenvironment{Eqlist*}[2][\description]{\enddescription}
6 \newcommand*[\longitem][1][\item[#1]]{}
7 \newcommand*[eqlistinit]{}
8 \newcommand*[eqliststarinit]{}
9 \newcommand*[eqlistinitpar]{}
10 \def\eqlistlabel#1[#1]{}
11 \newcommand[\eqlistauto][1]{}
12 \newcommand[\eqlistnoauto]{}
```

---

**File 111**  
`lwarp-eqparbox.sty`

§ 210  Package `eqparbox`

(Emulates or patches code by Scott Pakin.)

Pkg `eqparbox` `eqparbox` is patched for use by `lwarp`.

for HTML output:

```
1 \LWR@ProvidesPackagePass{eqparbox}[2017/09/03]
2 \NewDocumentCommand{\LWR@HTML@eqparbox}{O(t) O{t} O{t} m +m}{%
```

---
errata

(Emulates or patches code by Michael Kohlhase.)

errata is patched for use by lwarp.

This is for v0.3 of errata. A newer version of errata with more features is under development, at which time the lwarp version will have to be updated.

for HTML output:

Macros are being defined with the math dollar, so enable the HTML version during package loading:

\StartDefiningMath
Now load the package:

2\LWR@ProvidesPackagePass{errata}[2006/11/12]

Patches for dynamic inline math:

\xpatchcmd{\erratumAdd}{$_a^{\arabic{erratum}}$}{\textsubscript{a}\textsuperscript{\arabic{erratum}}}{}
\LWR@patcherror{erratum}{erratumAdd}

\xpatchcmd{\erratumDelete}{$_d^{\arabic{erratum}}$}{\textsubscript{d}\textsuperscript{\arabic{erratum}}}{}
\LWR@patcherror{erratum}{erratumDelete}

\xpatchcmd{\erratumReplace}{$_r^{\arabic{erratum}}$}{\textsubscript{r}\textsuperscript{\arabic{erratum}}}{}
\LWR@patcherror{erratum}{erratumReplace}

Finish the current page's errata before closing and reloading the list:

44\preto\PrintErrata{\LWR@orignewpage}

No longer defining math macros with the HTML $:
lwarp

File 113  lwarp-eso-pic.sty

§ 212  Package eso-pic

(Emulates or patches code by ROLF NIEPASCHK.)

Pkg eso-pic  eso-pic is emulated.

for HTML output:

1 \LWR@ProvidesPackageDrop{eso-pic}[2018/04/12]

2 \newcommand*\{\LenToUnit\}
3 \newcommand*\{\AtPageUpperLeft\}
4 \newcommand*\{\AtPageLowerLeft\}
5 \newcommand*\{\AtPageCenter\}
6 \newcommand*\{\AtStockLowerLeft\}
7 \newcommand*\{\AtStockUpperLeft\}
8 \newcommand*\{\AtStockCenter\}
9 \newcommand*\{\AtTextUpperLeft\}
10 \newcommand*\{\AtTextLowerLeft\}
11 \newcommand*\{\AtTextCenter\}
12 \newcommand\{\AddToShipoutPictureBG\}

13 \newcommand\{\AddToShipoutPicture\}
14 \newcommand\{\AddToShipoutPictureFG\}
15 \newcommand\{\ClearShipoutPicture\}
16 \newcommand\{\ClearShipoutPictureBG\}
17 \newcommand\{\gridSetup\}


File 114  lwarp-eurosym.sty

§ 213  Package eurosym

(Emulates or patches code by HENRIK THEILING.)

Pkg eurosym  eurosym is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]

2 \renewrobustcmd\officialeuro\{\HTMLentity{euro}\}
3 \let\geneuro\officialeuro
4 \let\geneuronarrow\officialeuro
5 \let\geneurowide\officialeuro
6 \let\euro\officialeuro
7 \renewrobustcmd\eurobars()
8 \renewrobustcmd\eurobarsnarrow()
9 \renewrobustcmd\eurobarswide()
§ 214 Package \texttt{everypage}

(Emulates or patches code by Sergio Callegari.)

\texttt{everypage} is emulated.

\texttt{for HTML output:}
\begin{itemize}
\item 1 \texttt{\LWR@ProvidesPackageDrop{everypage}[2007/06/20]}
\item 2 \texttt{\newcommand*{\AddEverypageHook}[1]{}}
\item 3 \texttt{\newcommand*{\AddThispageHook}[1]{}}
\end{itemize}

§ 215 Package \texttt{everyshi}

(Emulates or patches code by Martin Schröder.)

\texttt{everyshi} is emulated.

\texttt{for HTML output:}
\begin{itemize}
\item Discard all options for \texttt{lwr-everyshi:}
\item 1 \texttt{\LWR@ProvidesPackageDrop{everyshi}[2001/05/15]}
\item 2 \texttt{\newcommand*{\EveryShipout}[1]{}}
\item 3 \texttt{\newcommand*{\AtNextShipout}[1]{}}
\end{itemize}

§ 216 Package \texttt{extramarks}

(Emulates or patches code by Piet van Oostrom.)

\texttt{extramarks} is emulated.

\texttt{for HTML output:}
\begin{itemize}
\item Discard all options for \texttt{lwr-extramarks:}
\item 1 \texttt{\LWR@ProvidesPackageDrop{extramarks}[2019/01/31]}
\item 2 \texttt{\newcommand*{\extramarks}[2]{}}
\item 3 \texttt{\newcommand*{\firstleftxmark}{}}
\item 4 \texttt{\newcommand*{\lastleftxmark}{}}
\item 5 \texttt{\newcommand*{\firstrightxmark}{}}
\item 6 \texttt{\newcommand*{\lastrightxmark}{}}
\item 7 \texttt{\newcommand*{\firstxmark}{}}
§ 217 Package \texttt{fancybox}

\textit{(Emulates or patches code by Timothy Van Zandt.)}

\texttt{fancybox} is supported with some patches.

\textbf{framed equation example} \texttt{fancybox}'s documentation has an example \texttt{FramedEqn} environment which combines math, \texttt{\textbackslash Sbox}, a \texttt{minipage}, and an \texttt{\fbox}. This combination requires that the entire environment be enclosed inside a \texttt{\textbackslash lateximage}, which is done by adding \texttt{\textbackslash lateximage} at the very start of \texttt{FramedEqn}'s beginning code, and \texttt{\end{lateximage}} at the very end of the ending code. Unfortunately, the \texttt{HTML} \texttt{alt} attribute is not used here.

\begin{verbatim}
\newenvironment{FramedEqn}{\lateximage\setlength{\fboxsep}{15pt}
\begin{\fbox}{\centerline{\textbackslash TheSbox}}\end{\fbox}\lateximage}{\end{lateximage}}
\end{verbatim}

\begin{verbatim}
\fbox\text{works with \texttt{fancybox}. Also see lwarp's \texttt{\fboxBlock} macro and \texttt{fminipage} environment for alternatives to \texttt{\fbox} for framing environments.}
\end{verbatim}

\begin{verbatim}
\fbox\text{The \texttt{fancybox} documentation's example framed table using an \texttt{\fbox} containing a \texttt{tabular} does not work with lwarp, but the \texttt{FramedTable} environment does work if \texttt{\fbox} is replaced by \texttt{\fboxBlock}. This method loses \texttt{HTML} formatting. A better method is to enclose the table’s contents inside a \texttt{fminipage} environment. The caption may be placed either inside or outside the \texttt{fminipage}:}
\begin{verbatim}
\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{|r|}
\hline
... \hline
\end{tabular}
\end{fminipage}
\end{table}
\end{verbatim}
\end{verbatim}

\begin{verbatim}
\textcircled{△} \texttt{framed verbatim} lwarp does not support the \texttt{verbatim} environment inside a span, box, or \texttt{fancybox}'s
\end{verbatim}
\Sbox, but a verbatim may be placed inside a \fminipage. The fancybox documentation's example FramedVerb may be defined as:

\newenvironment{FramedVerb}[1] % width
  {
    \VerbatimEnvironment
    \fminipage{#1}
    \beginVerbatim
  }{
    \endVerbatim
    \endfminipage
  }

\verbBox's \verbBox may be used inside \verbBox.

\verbBox may be placed inside a \verbBox.

\section{VerbatimFootnotes}

If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

\subsection[Subsection Name]{Subsection Name}
{Subsection Name}\protect\footnotemark
\footnotetext{A footnote with \verb+verbatim+.}

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when \VerbatimFootnotes are selected. The browser usually compensates.

1 \lW@ProvidesPackagePass{fancybox}[2010/05/15]

After the preamble is loaded, after any patches to Verbatim:

2 \AfterEndPreamble{
  \lW@traceinfo{Patching fancybox.}
}

\VerbatimFootnotes

Patched to use the new version.

4 \def\VerbatimFootnotes{%
  5 \let@Footnotetext\V@footnotetext%
  6 \let\lW@Footnotetext\V@footnotetext% \lWarp
  7 }

\V@@footnotetext

Patches in a subset of \lWarp's \lW@footnotetext to the fancyvrb version of \V@@footnotetext.

8 \def\V@@footnotetext{%
  9 \lW@traceinfo{\V@@footnotetext}%
 10 \global\let\lW@Footnotebox=\vbox\bgroup%

Add to any current footnotes:
Remember the footnote number for \ref:
\protected@edef\@current/l.Varabe/l.Var{\csname p@footnote\endcsname\@thefnmark}

Use HTML superscripts in the footnote even inside a lateximage:
\renewrobustcmd{\textsuperscript}[1]{\LWR@htm/l.Varspan{sup}{##1}}

Use paragraph tags if in a tabular data cell or a lateximage:
\ifndef{LWR@doingstartpars}{\AND\cnttest{\l Varue{LWR@/l.Varateximagedepth}}{=}0}{\LWR@htm/l.Vartagc{\LWR@tagregu/l.Vararparagraph}\LWR@orignew/l.Varine}

Append the footnote to the list:
\@makefntext{}
\bgroup\aftergroup{\V@@@footnotetext}\ignorespaces

Convert minipages, parboxes, and lists into linear text using the \LWR@nestspan environment:
\let\LWR@origSbox\Sbox
\def\Sbox{\LWR@origSbox\LWR@nestspan}
\def\endSbox{\endLWR@nestspan\LWR@origendSbox}

\begin{array}{l}
\text{Beqnarray is adapted for MATHJAX or enclosed inside a lateximage:}
\end{array}

\RenewEnviron{Beqnarray}{\LWR@eqnarrayfactor}
\csgpreto{Beqnarray*}{\boo/l.Varfa/l.Varse{LWR@numbereqnarray}}

\GenericCaption is enclosed in an HTML block:
\renewcommand{\GenericCaption}[1]{\LWR@figcaption\LWR@iso/l.Varate{#1}\endLWR@figcaption}

\textbf{Btrivlist} is enclosed in an HTML block. This is a tabular, and does not use \item.

\begin{tabular}{|l|c|r|}
\hline
\textbf{(l/c/r)} & \textbf{(t/c/b)} \\
\hline
\end{tabular}

\textbf{Btrivlist} is also neutralized when used inside a span:
\AtBeginEnvironment{LWR@nestspan}{%}
\RenewDocumentEnvironment{Btrivlist}{m o}{%}

\textbf{lwarp}'s handling of \item is patched to accept fancybox's optional arguments:
\let\LWRFB@origitemizeitem\LWR@itemizeitem
\let\LWRFB@origdescitem\LWR@descitem
\RenewDocumentCommand{\LWR@itemizeitem}{d()o}{%}
\IfValueTF{#2}{%}
\LWRFB@origitemizeitem[#2]{%}
\LWRFB@origitemizeitem%
The various boxed lists become regular lists:

\renewenvironment{Bitemize}[1][1]{\begin{itemize}}{\end{itemize}}
\renewenvironment{Benumerate}[1][1]{\begin{enumerate}}{\end{enumerate}}
\renewenvironment{Bdescription}[1][1]{\begin{description}}{\end{description}}

boxput simply prints one then the other argument, side-by-side instead of above and behind:

\RenewDocumentCommand{\boxput}{s d() m m}{%
  \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
}{}

Neutralized commands:

\RenewDocumentCommand{\fancyput}{s d() m m}{}
\RenewDocumentCommand{\thisfancyput}{s d() m m}{}
\def\fancypage{m m}{}
\RenewDocumentCommand{\fancypage}{m m}{}
\RenewDocumentCommand{\thisfancypage}{m m}{}
\def\LandScape#1{}
\def\endLandScape{}
\def\@Landscape#1#2#3{}
\def\endLandscape{}
\RenewDocumentCommand{\UseVerbatim}{s d() m m}{%}
\renewcommand*{\UseVerbatim}[1]{%
  \LWR@atbeginverbatim{3}{Verbatim}\
  \LWRFB@UseVerbatim{#1}\
  \LWR@afterendverbatim{.5}\
}{}
\RenewDocumentCommand{\LUseVerbatim}{s d() m m}{}
\RenewDocumentCommand{\LUseVerbatim}{s d() m m}{%}
\let\LWRFB@UseVerbatim\UseVerbatim
\let\LWRFB@LUseVerbatim\LUseVerbatim


File 119  lwarp-fancyhdr.sty

§ 218  Package  fancyhdr

(Emulates or patches code by Piet van Oostrum.)

fancyhdr is nullified.

for HTML output:

Discard all options for lwarp-fancyhdr:

1 \LWR@ProvidesPackageDrop{fancyhdr}[2019/01/31]

2 \newcommand*{\fancyhead}{[]}
3 \newcommand*{\fancyfoot}{[]}
4 \newcommand*{\fancyhf}{[]}
5 \newcommand*{\fancypagestyle}{[]}
6 \newcommand*{\head}{[]}
7 \newcommand*{\chead}{[]}
8 \newcommand*{\rhead}{[]}
9 \newcommand*{\lfoot}{[]}
10 \newcommand*{\cfoot}{[]}
11 \newcommand*{\rfoot}{[]}
12 \newcommand*{\headrulewidth}{[]}
13 \newcommand*{\footrulewidth}{[]}
14 \newcommand*{\headrule}{[]}
15 \newcommand*{\footrule}{[]}
16 \newlength{\headwidth}
17 \newcommand*{\fancyheadoffset}{[]}
18 \newcommand*{\fancyfootoffset}{[]}
19 \newcommand*{\fancyhoffset}{[]}
20 \newcommand*{\iffloatpage}{[]}
21 \newcommand*{\ifftopfloat}{[]}
22 \newcommand*{\iffbotfloat}{[]}
23 \newcommand*{\iffnotext}{[]}
Package \texttt{fancyref} is emulated.

For HTML output:

1 \LR@ProvidesPackagePass{fancyref}[1999/02/03]

To remove the margin option, if \texttt{\fancyrefhook} is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since \texttt{lwp} has revised the meaning of \texttt{\mbox} so the comparison failed.)

\begin{verbatim}
2 \newcommand*{\LWRfref@parenfancyrefhook}{(#1)}
3 \ifdefstrequa/l VAR{\fancyrefhook}{\LWRfref@parenfancyrefhook}
4 {}{
5 \renewcommand*{\fancyrefhook}{#1} %
6 }
\end{verbatim}

Modified to ignore the page number and \texttt{varioref}.

\begin{verbatim}
8 \renewcommand*{\@f@ref}{% 9 \@ifundefined{#1r@#2@#3}{% 10 \PackageError{fancyref}{% 11 \backslash char\#1ref\space format ‘‘#2’’ 12 undefined\MessageBreak 13 for label type ‘‘#3’’% 14 }{% 15 The format ‘‘#2’’ was not defined for the label type 16 ‘‘#3’’\MessageBreak 17 and the \backslash char\#1ref\space command. Perhaps 18 you have only misspelled its name.\MessageBreak 19 Otherwise you will have to define it with 20 \protect\new#1refformat\MessageBreak 21 prior to using it.% 22 }{}}% 23 \fancyrefhook{% 24 \@nameuse{#1r@#2@#3}{% 25 \ref{#3\fancyrefargdelim#4}% 26 \pageref{#3\fancyrefargdelim#4}% original 27 \fancyref@page@ref{#3\fancyrefargdelim#4}% original 28 }% lwp
29 {} lwp
30 {} lwp
31 }%
32 %}
33 }
\end{verbatim}
§ 220 Package \texttt{fancytabs}

\texttt{fancytabs} is ignored.

\begin{verbatim}
\newcommand{\fancytab}{\{} \newcommand{\fancytabssty}{\{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \newcommand{\fancytabssection}{1}{ \newcommand{\fancytabsheight}{1}{ \newcommand{\fancytabswidth}{1}{ \newcommand{\fancytabscount}{1}{ \newcommand{\fancytabsleftcos}{1}{ \newcommand{\fancytabsrightcos}{1}{ \newcommand{\fancytabsleft}{1}{ \newcommand{\fancytabsright}{1}{ \newcommand{\fancytabsbottom}{1}{ \begin{verbatim}
\subsection{Subsection Name}
\footnotemark{Subsection Name}\protect\footnotetext{A footnote with \verb+verbtim+.}
\end{verbatim}
\end{verbatim}

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when \texttt{VerbatimFootnotes} are selected. The browser usually compensates.

\begin{verbatim}
1\RequirePackage{xcolor}\ for \convertcolorspec
2\LWR@ProvidesPackagePass{fancyvrb}[2008/02/07]
\end{verbatim}
Initial default patch for fancyvrb:

4 \fvset(frame=none)\% 

After the preamble is loaded, after any patches to Verbatim:

5 \AfterEndPreamble{ 
6 \LWR@traceinfo(Patching fancyvrb.) 

\VerbatimFootnotes Patched to use the new version. 

7 \def\VerbatimFootnotes{% 
8 \let@footnotetext\V@footnotetext% 
9 \let\footnote\V@footnote% 
10 \let\LWR@Footnotetext\V@Footnotetext\% lwp 
11 ) 

\V@footnotetext Patches in a subset of lwp's \LWR@Footnotetext to the fancyvrb version of \V@footnotetext. 

12 \def\V@@footnotetext{% 
13 \LWR@traceinfo{\V@footnotetext}% 
14 \global\setbox\LWR@footnotebox=vbox\bgroup% 

Add to any current footnotes:

15 \unvbox\LWR@footnotebox% 

Remember the footnote number for \ref:

16 \protected@edef\@currentlabel{% 
17 \csname p@footnote\endcsname\@thefnmark% 
18 } % @currentlabel 

Use HTML superscripts in the footnote even inside a lateximage:

19 \renewrobustcmd{\textsuperscript}{[1]{\LWR@htmlspan{sup}{##1}}}% 

Use paragraph tags if in a tabular data cell or a lateximage:

20 \ifthenelse{% 
21 \boolean\LWR@doingstartpars \AND% 
22 \cnttest{\value\LWR@lateximagedepth}{=}{}\% 
23 }% 
24 { }% 
25 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}% 

Append the footnote to the list:

26 \@makefntext{}% 

27 \bgroup% 
28 \aftergroup{\V@@footnotetext}% 
29 \ignorespaces% 
30 }% 
31 \preto\V@@Verbatim{\LWR@forcenewpage} 
32 \preto\V@@LVerbatim{\LWR@forcenewpage} 
33 % \preto\V@@Verbatim{\LWR@forcenewpage}% Fails, so done below.
Simplified to remove PDF formatting:

```latex
\def\FV@BeginListFrame@Sing/l.Vare{% 
\FV@Sing/l.VareFrameLine{\z@}%
}
\def\FV@EndListFrame@Sing/l.Vare{% 
\FV@Sing/l.VareFrameLine{\@ne}%
}
\def\FV@BeginListFrame@Lines{% 
\FV@Sing/l.VareFrameLine{\z@}%
}
\def\FV@EndListFrame@Lines{% 
\FV@Sing/l.VareFrameLine{\@ne}%
}
\renewcommand*{\FV@Sing/l.VareFrameSep}{}
```

Adds HTML formatting:

```latex
\def\FV@BUseVerbatim#1{% 
\LWR@atbeginverbatim[\LWR@FVsty/l.Vare]{0}{verbatim}% 
\FV@BVerbatimBegin#1\FV@BVerbatimEnd%
\LWR@afterendverbatim{0}%
}
\def\FV@BVerbatimBegin{\FV@BVerbatimEnd{\FV@BUseVerbatim{}}}

\LWR@FVsty/l.Vare \text{Holds the style of the verbatim.}
```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame. Original code is from the fancyvrb package.

```latex
\newcommand*{\LWR@fvstartnone}{% 
\LWR@traceinfo{fvstartnone}%
\LWR@atbeginverbatim[\LWR@FVstyle]{0}{verbatim}% 
\FV@BeginListFrame@Sing/l.Vare%
}
\newcommand*{\LWR@fvendnone}{% 
\LWR@traceinfo{fvendnone}%
\LWR@afterendverbatim{0}%
}
\newcommand*{\LWR@fvstartsing/l.Vare}{% 
\LWR@traceinfo{fvstartsing/l.Vare}%
\LWR@fvstartnone%
\FV@BeginListFrame@Sing/l.Vare%
}
\newcommand*{\LWR@fvfstartnone}{% 
\LWR@traceinfo{fvfstartnone}%
\LWR@atbeginverbatim[\LWR@FVstyle]{0}{verbatim}% 
\LWR@traceinfo{fvfstartnone}%
\LWR@afterendverbatim{0}%
}
```

\LWR@FVstyle \text{Holds the style of the verbatim.}
The following patches select the start/left/right/end behaviors depending on frame. Original code is from the fancyvrb package.
\def\FV@Frame@lines{% 
\renewcommand*{\LWR@FVstyle}{% 
  \LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}\LWR@FVborderstyle{-bottom}% 
}% 
\let\FV@BeginListFrame\LWR@fvstartline% 
\let\FV@LeftListFrame\relax% 
\let\FV@RightListFrame\relax% 
\let\FV@EndListFrame\LWR@fvendline} 

\def\FV@Frame@topline{% 
\renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}}% 
\let\FV@BeginListFrame\LWR@fvstartline% 
\let\FV@LeftListFrame\relax% 
\let\FV@RightListFrame\relax% 
\let\FV@EndListFrame\LWR@fvendnone} 

\def\FV@Frame@bottomline{% 
\renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-bottom}}% 
\let\FV@BeginListFrame\LWR@fvstartnone% 
\let\FV@LeftListFrame\relax% 
\let\FV@RightListFrame\relax% 
\let\FV@EndListFrame\LWR@fvendnone} 

\def\FV@Frame@leftline{% 
\renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-left}}% 
\ifx\FancyVerbFi{\LWR@Co\var}{\relax} 
% To define the \FV@FrameFillline macro (from \FV@BeginListFrame) 
\ifx\FancyVerbRu{\LWR@Co\var}{\relax} 
\edef\FV@FrameFillline{% 
{\noexpand\FancyVerbFi{\LWR@Co\var}{\vru/\LWR@@width\number\@tempdima sp}}% 
\kern-\number\@tempdima sp}}% 
\else 
\edef\FV@FrameFillline{% 
{\noexpand\FancyVerbRuleColor{\vrule@width\number\@tempdima sp}% 
\kern-\number\@tempdima sp}}% 
\fi 
\fi 
\let\FV@BeginListFrame\LWR@fvstartnone% 
\let\FV@LeftListFrame\FV@LeftListFrame@Single% 
\let\FV@RightListFrame\relax% 
\let\FV@EndListFrame\LWR@fvendnone} 

Adds the optional label to the top and bottom edges. Original code is from the fancyvrb package.

\def\FV@SingleFrameLine#1{% 
% \hbox to\z@{ 
% \kern\leftmargin 
% \ifnum#1=\z@ \relax 
% \let\FV@Label\FV@LabelBegin 
% \else 
% \let\FV@Label\FV@LabelEnd 
% \fi 
% \ifx\FV@Label\relax 
% \FancyVerbRuleColor{\vrule@width\linewidth \@height\FV@FrameRule}% 
% \else 
% \ifnum#1=\z@ 

Processes each line, adding optional line numbers. Original code is from the `fancyvrb` package.

\def\FV@ListProcessLine#1{\hbox to \hsize{\hbox to \VerbatimHTMLWidth {\ifcsvoid{FV@LeftListNumber}{\kern 2.5em}{\FV@LeftListNumber}\FancyVerbFormatLine{#1}\hss\FV@RightListFrame\FV@RightListNumber\fss}\hss}}\AtBeginEnvironment{BVerbatim}{\LWR@forcenewpage% instead of \preto\LWR@atbeginverbatim{0}{bverbatim}%}
End of the modifications to make at the end of the preamble:

\AfterEndPreamble

---

**lwp-figcaps.sty**

§ 222 Package **figcaps**

(Emulates or patches code by Patrick W. Daly.)

Pkg figcaps Emulated.

for HTML output: Discard all options for lwp-figcaps:

1 \LWR@ProvidesPackageDrop{figcaps}[1999/02/23]

2 \newcommand{\figcapson}{}
3 \newcommand{\figcapsoff}{}
4 \newcommand{\printfigures}{}
5 \newcommand{\figmarkon}{}
6 \newcommand{\figmarkoff}{}
7 \def{\figurecapname}{Figure Captions}
8 \def{\tablepagename}{Tables}
9 \def{\figurepagename}{Figures}

---

**lwp-figsize.sty**

§ 223 Package **figsize**

(Emulates or patches code by Anthony A. Tanbakuchi.)

Pkg figsize figsize is emulated.

for HTML output: Emulates a virtual 6×9 inch textsize.

1 \LWR@ProvidesPackageDrop{figsize}[2002/03/18]

2 \newlength{\figwidth}
3 \newlength{\figheight}
4 5 \newcommand{\SetFigLayout}[3][0]{%
6 \setlength{\figwidth}{8in}%
\begin{verbatim}
7 \setlength{\figheight}{\figheight / #2} \\
8 \% \\
9 \setlength{\figwidth}{5.5in} \\
10 \setlength{\figwidth}{\figwidth / #3} \\
11 }
\end{verbatim}

File 125  \texttt{lwp–fitbox.sty}

\textbf{\textsection} 224 Package  \texttt{fitbox}

\texttt{Pkg}  \texttt{fitbox}  \texttt{fitbox} is ignored.

\texttt{for HTML output:}  1 \LWR@ProvidesPackageDrop{fitbox}[2019/02/20]

\begin{verbatim}
2 \NewDocumentCommand{\fitbox}{s o m}{% \\
3 \begin{BlockClass}{\fitbox} \\
4 #3 \\
5 \end{BlockClass} \\
6 } \\
7 \newcommand*{\fitboxset}[1]{% \\
8 \newcommand*{\fitboxnatheight}{% \\
9 \newcommand{\fitboxnatwidth}{% \\
10 \newcommand\SetFitboxLayout[3][]{} \\
11 \\
12 \\
13 \\
\end{verbatim}

File 126  \texttt{lwp–fix2col.sty}

\textbf{\textsection} 225 Package  \texttt{fix2col}

\texttt{Pkg}  \texttt{fix2col}  \texttt{fix2col} is ignored.

\texttt{for HTML output:}  1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]

---

File 127  \texttt{lwp–fixme.sty}

\textbf{\textsection} 226 Package  \texttt{fixme}

\texttt{(Emulates or patches code by Didier Verna.)}

\texttt{Pkg}  \texttt{fixme}  \texttt{fixme} is patched for use by \texttt{lwp}.

\texttt{⚠️ external layouts}  External layouts (\texttt{\fxloadlayouts}) are not supported.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after \texttt{fixme} is loaded:
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}

for HTML output: \LWR@ProvidesPackagePass{fixme}[2017/03/05]

Restore \lwrap\’s version of \@wrindex, ignoring the fixme package\’s target option:

\let@wrindex\LWR@wrindex

Float-related macros required by \lwrap:

\newcommand{\ext@fixme}{/l.Varox}
\renewcommand{\@fixme}[2]{\hypertocf/l.Varoat{1}{fixme}{/l.Varox}{#1}{#2}}

Other modifications:

\def\FXFaceInlineHTMLStyle{font-weight:bold}
\renewcommand*{\FXLayoutInline[3]}{ %
\InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline} %
{\@fxtxtstd[#1][#2][#3]} %
}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\renewcommand*{\FXEnvLayoutPlain[2]}{ %
\BlockClass[\FXFaceEnvHTMLStyle]{fixmebold} %
\ignorespaces\fxnotename[#1]: \ignorespaces %
}
\renewcommand*{\FXEnvLayoutSignatureBegin[2]}{ %
\BlockClass[\FXFaceEnvHTMLStyle]{fixmebold} %
\fxnotename[#1]: \ignorespaces %
}
\renewcommand*{\FXEnvLayoutSignatureEnd[2]}{\@fxsignature{#2}\endBlockClass %
}\def\FXFaceSignatureHTMLStyle{font-style:italic}
\DeclareRobustCommand*{\fxsignature}[1]{%\ifthenelse{equal[#1][]}{% 
\{ -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}[#1]}}% 
\}
\def\FXFaceTargetHTMLStyle{font-style:italic}
\renewcommand{\FXTargetLayoutPlain[2]}{ %
\InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}[#2]% 
}
lwarp

File 128 lwarp-fixmetodonotes.sty

§ 227 Package fixmetodonotes

(Emulates or patches code by Gioele Barabucci.)

Pkg fixmetodonotes fixmetodonotes is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]

2 \renewcommand{\NOTES@addtolist}[2]{
3 \refstepcounter{NOTES@note}%
4 \% phantomsection% REMOVED
5 \addcontentsline{notes}{NOTES@note}{%
6 \protect\numberline{\theNOTES@note}{{#1}: {#2}}%
7 %}
8 }
9 \renewcommand{\NOTES@marker}[2]{\fbox{%
10 \textco{#2}{% WAS \color
11 \textbf{#1}}%
12 }}
13 \renewcommand{\NOTES@colorline}[2]{%
14 \bgroup%
15 \ULon{\LWR@backgroundcolor(#1)(#2)}%
16 }

File 129 lwarp-flafter.sty

§ 228 Package flafter

Pkg flafter flafter is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]
2 \providecommand\fl@trace[1]{}

File 130 lwarp-flippdf.sty

§ 229 Package flippdf

Pkg flippdf flippdf is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]
File 131 lwarp\-float.sty

§ 230 Package float

\begin{quote}
\emph{(Emulates or patches code by Anselm Lingnau.)}
\end{quote}

Pkg float float is emulated.

Float styles boxed and ruled are emulated by css and a float class according to style.

The HTML $<$figure$>$ class is set to the float type, so css may also be used to format the float and its caption, according to float type. Furthermore, an additional class is set to the float style: plain, plaintop, boxed, or ruled, so css may be used to format float by float style as well. Default formatting by css is provided for ruled and boxed styles.

\begin{quote}
\textbf{for HTML output:}
\end{quote}

\begin{lstlisting}
\LWR@ProvidesPackageDrop{float}[2001/11/08]
\end{lstlisting}

\listof See section 76.2 for the \listof command.

\LWR@floatstyle The default float style:

\begin{lstlisting}
\newcommand*{\LWR@floatstyle}{plain}
\end{lstlisting}

\newfloat\{(I: type)}\{(2: placement)}\{(3: ext)}\{(4: within)}

Emulates the \newfloat command from the float package.

"placement" is ignored.

\begin{lstlisting}
\NewDocumentCommand{\newfloat}{m m m o}{%  
  \IfValueTF{#4}{%  
    \DecF@atingEnvironment[fiext=#3,within=#4]{#1}%  
  }{\DecF@atingEnvironment[fiext=#3]{#1}}%
\end{lstlisting}

Remember the float style:

\begin{lstlisting}
\csedef{\LWR@floatstyle@#1}{\LWR@floatstyle}%
\end{lstlisting}

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later.

\begin{lstlisting}
\cset{listof#1s}\relax%  
\cset{listof#1es}\relax%
\end{lstlisting}

Likesize, newfloat also creates $l@<type>$, but float does not, so remove it here:

\begin{lstlisting}
\cset{l@#1}\relax%  
\end{lstlisting}

\floatname\{(type)}\{(name)}
Sets the text name of the float, such as “Figure”.
\NewDocumentCommand{\floatname}{m +m}{% 
  \SetupFloatingEnvironment[#1]{name=#2} %}

\floatplacement \langle(type)\rangle \langle(placement)\rangle
Float placement is ignored.
\newcommand*{\floatplacement}{% 
  \SetupFloatingEnvironment{#1}{placement=#2} %}

\floatstyle \langle(style)\rangle
Remember the style for future floats:
\newcommand{\floatstyle}{% 
  \def\LWR@floatstyle{#1} %}

\restylefloat * \langle(type)\rangle
Remember the style for this float:
\newcommand{\restylefloat}{% 
  \csedef{LWR@floatstyle@#2}{\LWR@floatstyle} %}

\texttt{lwarp\-floatflt.sty}

\section{\texttt{floatflt}}
\textit{(Emulates or patches code by Mats Dahlgren.)}

\package{floatflt} Emulated.

\texttt{for HTML output:}
\begin{verbatim}
\LWR@ProvidesPackageDrop{floatflt}[1997/07/16]
\end{verbatim}

\texttt{Env \[\] offset \langle(type)\rangle \langle(width)\rangle Borrowed from the \texttt{lwarp} version of \texttt{keyfloat}:
\NewDocumentEnvironment{KFLTfloatflt@marginfloat}{O{-1.2ex} m m}{% 
\setlength{\LWR@templeNGTHone}{#3} %
\LWR@BlockClassWF{ %
 float:right; %
 width:\LWR@printlength{\LWR@templeNGTHone}; % extra space
 margin:10pt%}
\}(%
\width:\LWR@printlength{\LWR@templeNGTHone} %
\}
\end{verbatim}
lwarp

\begin{KFLTf\varoat}{figure}{#2}
\end{KFLTf\varoat}

\begin{KFLTf\varoat}{tab}{1.5in}
\end{KFLTf\varoat}

\LWR@ProvidesPackageDrop{floatpag}[2012/05/29]
\newcommand*{\floatpagstyle}[1]{}
\newcommand*{\rotfloatpagstyle}[1]{}
\newcommand*{\thisfloatpagstyle}[1]{}

\LWR@ProvidesPackageDrop{floatrow}[2008/08/02]
\begin{itemize}
\item Misplaced alignment tab character & macros using $\ttabbox$ with a tabular inside. See section 9.10.1.
\item Subfig package When combined with the subfig package, while inside a subfloatrow $\figbox$ and $\ttabbox$ must have the caption in the first of the two of the mandatory arguments.
\end{itemize}
The emulation of floatrow does not support \texttt{\FBwidth} or \texttt{\FBheight}. These values are pre-set to .3\texttt{\linewidth} and 2in. Possible solutions include:

- Use fixed lengths. \texttt{lwarp} will scale the HTML lengths appropriately.
- Use \texttt{warpprint} and \texttt{warpHTML} environments to select appropriate values for each case.
- Inside a \texttt{warpHTML} environment, manually change \texttt{\FBwidth} or \texttt{\FBheight} before the \texttt{\figbox} or \texttt{\ttabbox}. Use \texttt{\FBwidth} or \texttt{\FBheight} normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether \texttt{subcaption} was loaded. If not, it is assumed that \texttt{subfig} is used instead:

\begin{verbatim}
\newbool{LWR@subcaptionloaded}
\AtBeginDocument{
\ifbool{LWR@subcaptionloaded}{
\else{
\@nameuse{subcaption}
}\fi
}
\ifbool{LWR@subcaptionloaded}{
\NewDocumentCommand{\floatbox}{o m o o o +m +m}{{
\IfValueTF{#3}{{\@nameuse{sub#2}{#3}}}{{\@nameuse{sub#2}{\linewidth}}}}
}{#6}{#7}
\end{verbatim}

\texttt{\floatbox} \langle 1 \texttt{preamble} \rangle \langle 2 \texttt{captype} \rangle \langle 3 \texttt{width} \rangle \langle 4 \texttt{height} \rangle \langle 5 \texttt{vert pos} \rangle \langle 6 \texttt{caption} \rangle \langle 7 \texttt{object} \rangle

Only parameters for \texttt{captype}, \texttt{width}, \texttt{caption}, and \texttt{object} are used.

\texttt{LWR@insubfloatrow} is true if inside a \texttt{subfloatrow} environment.

There are two actions, depending on the use of \texttt{subcaption} or \texttt{subfig}.

For \texttt{subcaption}:

\begin{verbatim}
\ifbool{LWR@insubfloatrow}{}{\% subcaption in a subfloatrow}
\end{verbatim}

\texttt{subfigure} and \texttt{subtable} environments take width as an argument.

\begin{verbatim}
\IfValueTF{#3}{{\@nameuse{sub#2}{#3}}}{{\@nameuse{sub#2}{\linewidth}}}
\end{verbatim}

\texttt{figure} and \texttt{table} environments do not take a width argument.

\begin{verbatim}
\@nameuse{#2}{}
\end{verbatim}
End the environments:
\[
\begin{align*}
&\text{\% subcaption} \\
&\text{\% assume subfig}
\end{align*}
\]

For subfig:
\[
\begin{align*}
&\text{\% subfig in a subfloatrow} \\
&\text{\% subfig package, but not a subfig}
\end{align*}
\]

\textbf{Subfloat is a macro, not an environment.}

Package \texttt{subfig}'s \texttt{subfloat} command takes an optional argument which is the caption, but \texttt{floatbox} argument \texttt{#6} contains commands to create the caption and label, not the caption itself. Thus, \texttt{\caption} is temporarily disabled to return its own argument without braces.

\[
\begin{align*}
&\text{\% subfig in a subfloatrow} \\
&\text{\% subfig package, but not a subfig}
\end{align*}
\]

\textbf{Figure and table are environments:}
\[
\begin{align*}
&\text{\% subfig package, but not a subfig} \\
&\text{\% assume subfig}
\end{align*}
\]

\textbf{Not used:}
\[
\begin{align*}
&\newcommand*{\nocapbeside}{} \\
&\newcommand*{\capbeside}{} \\
&\newcommand*{\captop}{} \\
&\newcommand*{\useFCwidth}{} \\
&\newcommand*{\thisfsetup}[1]{} \\
&\newcommand*{\cifarsty}{(1 command)} (2 captype) (3 preamble) (4 default width)
\end{align*}
\]

\textbf{Preamble and default width are ignored.}
\[
\begin{align*}
&\text{\% NewDocumentCommand{\newfloatcommand}{m m o o}{%} \\
&\text{\% \namedef{#1}{}}
\end{align*}
\]
\renewfloatcommand \{\langle\text{1 command}\rangle\}\{\langle\text{2 captype}\rangle\}\{\langle\text{3 preamble}\rangle\}\{\langle\text{4 default width}\rangle\}

Preamble and default width are ignored.

\NewDocumentCommand{\renewfloatcommand}{mmoom}{\@namedef{\text{#1}}{\fbox{\text{#2}}}}

\ffigbox \{\langle\text{width}\rangle\}\{\langle\text{height}\rangle\}\{\langle\text{vposn}\rangle\}\{\langle\text{caption commands}\rangle\}\{\langle\text{contents}\rangle\}

\ttabbox \{\langle\text{width}\rangle\}\{\langle\text{height}\rangle\}\{\langle\text{vposn}\rangle\}\{\langle\text{caption commands}\rangle\}\{\langle\text{contents}\rangle\}

\fcapside \{\langle\text{width}\rangle\}\{\langle\text{height}\rangle\}\{\langle\text{vposn}\rangle\}\{\langle\text{caption commands}\rangle\}\{\langle\text{contents}\rangle\}

\newenvironment*{floatrow}{\text{\textbackslash LWR@forcenewpage \LWR@frowkeyplacement\{frowkeyplacement\} \textbackslash BlockClass\{frowkeyplacement\}}}{\text{\textbackslash LWR@infloatafloatrow}}

The row of floats is placed into a <div> of class floatrow.

\newenvironment*{floatrow}{\text{\textbackslash LWR@forcenewpage \LWR@frowkeyplacement\{frowkeyplacement\} \textbackslash BlockClass\{frowkeyplacement\}}}{\text{\textbackslash LWR@infloatafloatrow}}

While inside the floatrow, divide the \textbackslash linewidth by the number of floats.

\textbf{Keys for \textbackslash DeclareNewFloatType:}

\newcommand*{\LWR@frowkeyplacement}{\text{\textbackslash LWR@frowkeyplacement\{frowkeyplacement\}}}\newcommand*{\LWR@frowkeyname}{\text{\textbackslash LWR@frowkeyname\{frowkeyname\}}}\newcommand*{\LWR@frowkeyfileext}{\text{\textbackslash LWR@frowkeyfileext\{frowkeyfileext\}}}\newcommand*{\LWR@frowkeywithin}{\text{\textbackslash LWR@frowkeywithin\{frowkeywithin\}}}\newcommand*{\LWR@frowkeycapstyle}{\text{\textbackslash LWR@frowkeycapstyle\{frowkeycapstyle\}}}\newcommand*{\LWR@frowkeyfileext}{\text{\textbackslash LWR@frowkeyfileext\{frowkeyfileext\}}}%
\DeclareNewFloatType{(type)}{(options)}
Use \listoffloats\{Title\} to print a list of the floats.
\newcommand*{\DeclareNewFloatType}[2]{% 
  Reset key values:
  \renewcommand*{\LWR@frowkeyplacement}{}% 
  \renewcommand*{\LWR@frowkeyname}{}% 
  \renewcommand*{\LWR@frowkeyfileext}{}% 
  \renewcommand*{\LWR@frowkeywithin}{}% 
  \renewcommand*{\LWR@frowkeycapstyle}{}% 

  Read new key values:
  \LWR@traceinfo{about to setkeys frowkeys}% 
  \setkeys{frowkeys}{#2}% 
  \LWR@traceinfo{finished setkeys frowkeys}% 

  Create a new float with optional [within]:
  \ifthenelse{\equal{\LWR@frowkeywithin}{}}{% 
    \LWR@traceinfo{about to newf\{#1\} \LWR@frowkeyplacement \ % \LWR@frowkeyfileext}% 
    \newf{#1}{\LWR@frowkeyplacement}{\LWR@frowkeyfileext}% 
    \LWR@traceinfo{finished newf\{#1\}}% 
  }{% 
    \LWR@traceinfo{about to newf\{#1\} \LWR@frowkeyplacement \ % \LWR@frowkeyfileext \LWR@frowkeywithin}% 
    \newf{#1}{\LWR@frowkeyplacement}{\LWR@frowkeyfileext}\LWR@frowkeywithin% 
    \LWR@traceinfo{finished newf\{#1\}}% 
  }% 

  Rename the float if a name was given:
  \ifthenelse{\equal{\LWR@frowkeyname}{}}{% 
    {}% 
  }{% 
    {\floatname{#1}{\LWR@frowkeyname}}% 
  }% 

Not used:
\newcommand{\buildFbbox}[2]{% 
\newcommand*{\CenterFloatBoxes}{% 
\newcommand*{\TopFloatBoxes}{% 
\newcommand*{\BottomFloatBoxes}{% 
\newcommand*{\PlainFloatBoxes}{% 
\newcommand{\capsbrowsettings}{% 
\NewDocumentCommand{\RawFloats}{o o}{%
\RawCaption \{{(text)}\}
To be used inside a minipage or parbox.
127 \newcommand{\RawCaption}[1][]{#1}

\floatfoot \{{(text)}\}
Places additional text inside a float, inside a \texttt{css <div>} of class \texttt{floatfoot}.
128 \NewDocumentCommand{\floatfoot}{s +m}{% 
129 \begin{BlockClass}{floatfoot} 
130 #2 
131 \end{BlockClass} 
132 } 

Used to compute \texttt{\linewidth}.
133 \newbool{LWR@insubfloatrow} 
134 \boolfalse{LWR@insubfloatrow}

\Env subfloatrow [\langle num\_floats \rangle]
135 \newenvironment*{subfloatrow}[1][2]{ 
136 { 
The row of floats is placed into a \texttt{<div>} of class \texttt{floatrow}:
137 \LWR@forcenewpage 
138 \BlockClass{floatrow} 

While inside the floatrow, \texttt{LWR@insubfloatrow} is set true, which tells \texttt{\floatbox} to use \texttt{\subfigure} or \texttt{\subtable}.
139 \begingroup 
140 \booltrue{LWR@insubfloatrow} 
141 \endgroup 
142 { 
143 \endgroup 
144 \endBlockClass 
145 \boolfalse{LWR@insubfloatrow} 
146 }

File 135 \texttt{lwarf-fltrace.sty}

§ 234 Package \texttt{fltrace}

Pkg \texttt{fltrace} \texttt{fltrace} is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fltrace}[2018/01/08]

2 \def\tracefloats{} 
3 \def\tracefloatsoff{} 
4 \def\tracefloatvals{()}
§ 235 Package **flushend**

(Emulates or patches code by Sigita Tolišis.)

**Pkg** flushend Emulated.

**for HTML output:** Discard all options for lwarp-flushend:

1. \LWR@ProvidesPackageDrop{flushend}[2017/03/27]

2. \newcommand*{\flushend}{}
3. \newcommand*{\raggedflushend}{}
4. \newcommand*{\flushclosend}{}
5. \newcommand*{\raggedclosend}{}
6. \newcommand*{\atColsBreak}[1]{}
7. \newcommand*{\atColsEnd}[1]{}
8. \newcommand*{\showclosendrule}{}

---

§ 236 Package **fnbreak**

**Pkg** fnbreak fnbreak is ignored.

**for HTML output:**

1. \LWR@ProvidesPackageDrop{fnbreak}[2012/01/01]

2. \newcommand*{\fnbreakverbose}{}
3. \newcommand*{\fnbreaknonverbose}{}
4. \newcommand*{\fnbreaklabel}{}
5. \newcommand*{\fnbreaknolabel}{}

---

§ 237 Package **fncychap**

(Emulates or patches code by Ulf A. Lindgren.)

**Pkg** fncychap fncychap is emulated.

**for HTML output:** Discard all options for lwarp-fncychap:

1. \LWR@ProvidesPackageDrop{fncychap}[2007/07/30]
File 139  \texttt{lwpars-fnlineno.sty}

\textbf{§ 238} Package \texttt{fnlineno}

\textbf{Pkg} \texttt{fnlineno} \texttt{fnlineno} is ignored.

\textbf{for HTML output:} \texttt{1 \LaTeX@ProvidesPackageDrop{fnlineno}[2011/01/07]}

File 140  \texttt{lwpars-fnpara.sty}

\textbf{§ 239} Package \texttt{fnpara}

\textbf{Pkg} \texttt{fnpara} \texttt{fnpara} is ignored.

\textbf{for HTML output:} \texttt{1 \LaTeX@ProvidesPackageDrop{fnpara}}

File 141  \texttt{lwpars-fnpos.sty}

\textbf{§ 240} Package \texttt{fnpos}

(\textit{Emulates or patches code by Hiroshi Nakashima.})
lwarp

fnpos is emulated.

\newcommand*{\makeFNbottom}{}
\newcommand*{\makeFNmid}{}
\newcommand*{\makeFNbe/l.Varow}{}
\newcommand*{\makeFNabove}{}

\newfontfamily{\LWR@orig@FA}{FontAwesome}
\newcommand*{\LWR@fontawesome@xe/l.Varatex@symbo/l.Var}[1]{%}
\begin{l.Varateximage}[(icon)][fontawesomexetex#1]%
\begingroup%
\LWR@orig@FA
\LWR@orig@symbo/l.Var{#1}%
\endgroup%
\end{l.Varateximage}%
\RenewDocumentCommand{\FA}{}{%}
\LetLtxMacro{\symbo/l.Var}{\LWR@fontawesome@xe/l.Varatex@symbo/l.Var}%

\newcommand*{\LWR@fontawesome@symbo/l.Varone}[1]{%
Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.
2 \ExplSyntaxOn
3 \cs_set:Nn \fontawesome_use_icon:n { \begin{lateximage} (*[#2][#1]*)
4 \exp_last_unbraced:Nv
5 \__fontawesome_icon_at:nnn
6 (c__fontawesome_slot_#2_t \fontawesome{#1}[#2])
7 \end{lateximage}
8 \msg_error:nnxx {fontawesome5} {icon-not-found} {#2} {#1}
9 }
10 \ExplSyntaxOff

File 144 \lwpfontenc.sty

§ 243 Package \fontenc

Pkg \fontenc  If using pdf\TeX, \lwp used to require \fontenc be loaded before \lwp, but now \lwp itself loads \fontenc with T1 encoding, which \lwp requires. \fontenc is now allowed to be loaded with another encoding after \lwp.

\lwpfontenc is no longer necessary, but is still provided to overwrite older versions.

for HTML output: 1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]

File 145 \lwpfootmisc.sty

§ 244 Package \footmisc

(Emulates or patches code by ROBIN FAIRBAIRNS.)

Pkg \footmisc \footmisc is emulated.

\lwp incidentally happens to emulate the stable option.

1 \LWR@ProvidesPackageDrop{footmisc}[2011/06/06]

Some nullified commands:

2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}{T1}{}
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}
5 \newdimen\footnotemargin
6 \footnotemargin1.8em\relax
7 \footnotemargin1.8em\relax
8 \newcommand{\hangfootparskip}{0.5\baselineskip}
Using `cleveref`:

```latex
\providecommand*{\footref}{\labelcref{#1}}
```

The following work as-is:

```latex
\newcommand{\mpfootnotemark}{\stepcounter{mpfn} \protected@edef\@currentlabel{\thempfn} \@footnotemark}
\def{\@xmpfootnotemark}{\begingroup\csname c@\@mpfn\endcsname #1\redef\unrestored@protected@edef\@thefnmark{\thempfn} \@footnotemark \endgroup}
```

---

File 146 `lwp-footnote.sty`

**§ 245 Package footnote**

(Emulates or patches code by Mark Wooding.)

**Pkg footnote** footnote is used with minor patches.

For HTML output:

```latex
\LWR@ProvidesPackagePass{footnote}[1997/01/28]
```

Removed print-version formatting:

```latex
\newcommand{\hangfootparindent}{0em}%
\let{\pagefootnoterule}{footnoterule}
\let{\mpfootnoterule}{footnoterule}
\def{\splitfootnoterule}{\kern-3\p@ \hrule \kern2.6\p@}
\providecommand*{\multiplefootnotemarker}{3sp}
\providecommand*{\multfootsep}{,}
```
Removed print-version formatting:

\def\fn@startfntext{%
  \setbox\z@\vbox\bgroup%
  \fn@startnote%
  \fn@prefntext%
  \ignorespaces%
%
\def\fn@endfntext{%
  \LWR@htm/l.Vartagc{/LWR@tagregularparagraph}%
  \LWR@orignew/l.Varine%
  \fn@postfntext%
  \egroup%
  \begingroup%
  /l.Varet\@makefntext\@empty%
  /l.Varet\@fina/l.Varstrut\@gobb/l.Vare%
  \LetLtxMacro\ru/l.Vare\@gobb/l.Varetwo% *8* a/l.Varso the optiona/l.Var argument?
  \@footnotetext{\unvbox\z@}%
  \endgroup%
%
These have been redefined, so re-/\let them again:

\let\endFootnote\fn@endfntext
\let\endFootnotetext\fn@endfntext
\endfootnote

---

**lwrap**

---

**File 147**

lwarp–footnotebackref.sty

---

§ 246 **Package**

footnotebackref

---

Pkg footnotebackref**footnotebackref** is ignored.

---

for HTML output: 1\LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

---

**File 148**

lwarp–footnotehyper.sty

---

§ 247 **Package**

footnotehyper

---

Pkg footnotehyper**footnotehyper** is a hyperref-safe version of footnote. For lwarp, footnotehyper is emulated.

---

for HTML output:
Discard all options for \lwp-footnotehyper:

\begin{enumerate}
\item \requirepackage{footnote}
\item \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]
\end{enumerate}

File 149 \texttt{lwp-footnoterange sty}

§ 248 Package \texttt{footnoterange}

(Emulates or patches code by H.-Martin Münch.)

\texttt{footnoterange} is patched for use by \lwp.

\texttt{Pkg footnoterange} \texttt{footnoterange} is patched for use by \lwp.

\texttt{for HTML output:} \texttt{1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]}

\texttt{2 \csletcs{footnoterange}{footnoterange*}}
\texttt{3 \csletcs{endfootnoterange}{endfootnoterange*}}

File 150 \texttt{lwp-footnpag sty}

§ 249 Package \texttt{footnpag}

\texttt{Pkg footnpag} \texttt{footnpag} is ignored.

\texttt{for HTML output:} \texttt{1 \LWR@ProvidesPackageDrop{footnpag}}

File 151 \texttt{lwp-foreign sty}

§ 250 Package \texttt{foreign}

(Emulates or patches code by Philip G. Ratcliffe.)

\texttt{Pkg foreign} \texttt{foreign} is patched for use by \lwp.

\texttt{for HTML output:} \texttt{1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]}
\texttt{2 \renewcommand{foreignabbrfont}{\emph}}

File 152 \texttt{lwp-forest sty}

§ 251 Package \texttt{forest}

(Emulates or patches code by Sašo Živanović.)
lwarp

Pkg forest forest is patched for use by lwarp.

\Forest* The starred version of the macro \Forest* is not supported. lwarp encases each \lateximage in an environment, so the global results of the starred \Forest* are lost.

for HTML output:
1 \LWR@ProvidesPackagePass{forest}[2017/07/14]
2 BeforeBeginEnvironment{forest}{\begin{lateximage}[forest]}
3 AfterEndEnvironment{forest}{\end{lateximage}}
4 \RenewDocumentCommand{\Forest}{s D(){} m}{\forest@config{#2}}
5 \IfBooleanTF{#1}{\PackageError{lwarp-forest}{Starred \Forest is not supported}{lwarp uses an environment for images, but \Forest* cannot work in an environment.}}{\let\forest@next\forest@group@env}
6 \begin{lateximage}[forest] lwarp
7 \forest@next{#3}
8 \end{lateximage} lwarp

OlNvarwarpMframedNsty

File 153 lwarp-framed.sty

§ 252 Package framed

(Emulates or patches code by Donald Arseneau.)

Pkg framed framed is supported and patched by lwarp.

for HTML output:
1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2 \RequirePackage{xcolor}\%
3 \renewenvironment{framed}{\LWR@forcenewpage}{\end{framed}}
4 \renewenvironment{oframed}{\LWR@forcenewpage}{\end{framed}}
5 \renewenvironment{shaded}{\convertcolors spec{named}{shadecolor}{HTML}\LWR@tempcolor}{\convertcolors spec{named}{shadecolor}{HTML}\LWR@tempcolor}
\ifthenelse{\isempty{#2}}{% not empty
\convertcolor{\textcolor{\framecolor}{\textbf{#2}}}%}
\begin{BlockClass}[background: \origpound{\framespec}]{framedtitle}%
\textcolor{\frametitlecolor}{\textbf{#2}}%
\end{BlockClass}%
\end{BlockClass}

\TitleBarFrame[(marker)]{(title)}{(contents)}

\renewcommand\TitleBarFrame[3][]{
\CustomFBox
{#2}{}
\fboxru\fboxru\fboxru\fboxru{#3}{}
}
\renewcommand{\TF@Title}[1][]{#1}

\textbf{MakeFramed} \{\textbf{settings}\}

\let\MakeFramed\relax
\let\endMakeFramed\relax
\NewEnviron{MakeFramed}[1][]{
\FrameCommand{\begin{minipage}{\linewidth}\BODY\end{minipage}}%
}

\fb@put@frame \{\textbf{frame cmd no split}\} \{\textbf{frame cmd split}\}

\ProvidesPackageDrop{ftcap}
lwpaper 726

---

File 155  \texttt{lwpaper-ftnright.sty}

\textsection{254} Package \texttt{ftnright}

\texttt{Pkg ftnright} ftnright is ignored.

\texttt{for HTML output:} Discard all options for lwpaper-ftnright:

1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]

---

File 156  \texttt{lwpaper-fullminipage.sty}

\textsection{255} Package \texttt{fullminipage}

\texttt{Pkg fullminipage} fullminipage is nullified.

\texttt{for HTML output:} 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

2 \newenvironment{fullminipage}[1][{}]{}

---

File 157  \texttt{lwpaper-fullpage.sty}

\textsection{256} Package \texttt{fullpage}

\texttt{Pkg fullpage} fullpage is ignored.

\texttt{for HTML output:} Discard all options for lwpaper-fullpage:

1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]

---

File 158  \texttt{lwpaper-fullwidth.sty}

\textsection{257} Package \texttt{fullwidth}

(\textit{Emulates or patches code by Marco Daniel.})

\texttt{Pkg fullwidth} fullwidth is emulated.

A minipage is used, of no HTML width.

\texttt{for HTML output:} 1 \LWR@ProvidesPackageDrop{fullwidth}[2011/11/18]
§ 258 Package **fwlw**

File 159  **lwarf-fwlw.sty**

**fwlw** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{fwlw}
2 \newbox\FirstWordBox \global\setbox\FirstWordBox\hbox{}
3 \newbox\NextWordBox \global\setbox\NextWordBox\hbox{}
4 \newbox\LastWordBox \global\setbox\LastWordBox\hbox{}
5 \def\ps@fwlwhead{}
6 \def\ps@NextWordFoot{}
```

§ 259 Package **gentombow**

File 160  **lwarf-gentombow.sty**

**gentombow** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{gentombow}[2018/05/17]
2 \newcommand{\settombowbanner}{}{1}{}
3 \newcommand{\settombowbannerfont}{}{1}{}
4 \newcommand{\settombowwidth}{}{1}{}
5 \newcommand{\settombowbleed}{}{1}{}
6 \newcommand{\settombowcolor}{}{1}{}
```

§ 260 Package **geometry**

File 161  **lwarf-geometry.sty**

**(Emulates or patches code by HIDEU UMEX.)**

**geometry** is preloaded by **lwarf**, but must be nullified as seen by the user's source code.

**for HTML output:**

```
2 \newenvironment*{fullwidth}[1][]{%
3 \minipagefullwidth%
4 \minipagemarginwidth%
5 )
6 (%
7 \endminipage%
8 )
```
Discard all options for lwpark-geometry:

1 \ProvidesPackageDrop{geometry}[2018/04/16]

2 \renewcommand*{\geometry}[1]{}
3 \renewcommand*{\newgeometry}[1]{}
4 \renewcommand*{\restoregeometry}{}
5 \renewcommand*{\savegeometry}[1]{}
6 \renewcommand*{\Varoadgeometry}[1]{}

---

§ 261 Package **gloss**

*(Emulates or patches code by Jose Luis Diaz, Javier Bezos.)*

**Pkg** gloss gloss is patched for use by lwpark.

To process the HTML glossary:

```
\bibitem{<projectname>\_htm/l.Var.g/l.Vars}
```

**for HTML output**: 1 \ProvidesPackagePass{g/l.Vars}[2002/07/26]

2 \patchcmd{\g/l.Vars\g/l.Vars@iii}
3 \the\lwpark@previousautopagelabel
4 \the\lwpark@previousautopagelabel
5 \the\lwpark@previousautopagelabel
6 \the\lwpark@previousautopagelabel
7 \the\lwpark@previousautopagelabel
8 \the\lwpark@previousautopagelabel
9 \the\lwpark@previousautopagelabel
10 \the\lwpark@previousautopagelabel

---

§ 262 Package **glossaries**

*(Emulates or patches code by Nicola L.C. Talbot.)*

**Pkg** glossaries processing glossaries

**Opt** GlossaryCmd

Default: makeglossaries

**Opt [lwpark]** printglossary

**Opt [lwpark]** htmlglossary

**\lwpark** has the commands lwpark printglossary and lwpark htmlglossary, which process the glossaries created by the glossaries package using that package’s makeglossaries program.

The shell command to execute is set by the lwpark option GlossaryCmd, which defaults to makeglossaries. The print or HTML glossary filename is appended to this command.

In some situations it may be required to modify the default command, such as to add

---

**makeglossaries** not found
the `perl` command in front:

\usepackage[
  GlossaryCmd={\texttt{perl makeglossaries}},
] {lwarp}

\textit{xindy} language

To set the language to use for processing glossaries with \textit{xindy}:

\usepackage[
  GlossaryCmd={makeglossaries -L english},
] {lwarp}

Other options for \textit{makeglossaries} may be set as well.

placement and toc options

The glossaries may be placed in a numbered or unnumbered section, given a toc entry, and placed inline or on their own HTML page:

\textbf{Numbered section, on its own HTML page:}

\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
\printglossaries

\textbf{Unnumbered section, inline with the current HTML page:}

\usepackage[xindy,toc]{glossaries}
\printglossaries

\textbf{Unnumbered section, on its own HTML page:}

\usepackage[xindy,toc]{glossaries}
\ForceHTMLPage
\printglossaries

\textbf{⚠️ glossary style}

The default `style=item` option for \textit{glossaries} conflicts with \textit{lwarp}, so the style is forced to `index` instead.

\textbf{⚠️ number list}

The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

\textbf{print/html versions}

The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

\textbf{for HTML output:}

1 \PassOptionsToPackage{xindy}{glossaries}
2 \LWR@ProvidesPackagePass{glossaries}[2018/07/23]
3 \setupglossaries{nonumberlist}
4 \setglossarystyle{index}

Patched to fix `toc` pointing to the previous page:

7 \renewcommand*{\@p@glossarysection}[2]{%
In the original, the toc entry was made before the section, thus linking to the phantomsection in the printed version, but for html, this caused the link to point to the page before the glossaries, which could be a different html file. Here, the toc entry is made after the section is created:

\csname\@@g/l.Varossarysec\endcsname*{#2} % Moved after the previous /l.Varine.
\@g/l.Vars@toc{#1}{\@@g/l.Varossarysec}% Moved after the previous /l.Varine.

lwarp's sectioning commands cannot handle robust macros when splitting html into named filenames. glossaries uses \translate in sectioning names, and \translate is robust and cannot be expanded. The following pre-expands the translations at this moment, making use of \translatelet.

\newcommand*{\LWR@comp@g/l.Varossaryname}{\translate{G/l.Varossary}}
\ifdefstrequa/l.Var{\g/l.Varossaryname}{\LWR@comp@g/l.Varossaryname}{\trans/l.Varate/l.Varet\LWR@trans/l.Varatetemp{G/l.Varossary}}
\edef\g/l.Varossaryname{\LWR@trans/l.Varatetemp}
\newcommand*{\LWR@comp@acronymname}{\translate{Acronym}}
\ifdefstrequa/l.Var{\acronymname}{\LWR@comp@acronymname}{\trans/l.Varate/l.Varet\LWR@trans/l.Varatetemp{Acronym}}
\edef\acronymname{\LWR@trans/l.Varatetemp}
\newcommand*{\LWR@comp@g/l.Varsgroupn\Varsgroupname}{\translate{Symbo/l.Vars (g/l.Varossaries)}}
\ifdefstrequa/l.Var{\g/l.Varsgroupname}{\LWR@comp@g/l.Varsgroupname}{\trans/l.Varate/l.Varet\LWR@trans/l.Varatetemp{Symbo/l.Vars (g/l.Varossaries)}}
\edef\g/l.Varsgroupname{\LWR@trans/l.Varatetemp}
\newcommand*{\LWR@comp@g/l.Varsnumbers\Varsnumbersgroupname}{\translate{Numbers (g/l.Varossaries)}}
\ifdefstrequa/l.Var{\g/l.Varsnumbers\Varsnumbersgroupname}{\LWR@comp@g/l.Varsnumbers\Varsnumbersgroupname}{\trans/l.Varate/l.Varet\LWR@trans/l.Varatetemp{Numbers (g/l.Varossaries)}}
\edef\g/l.Varsnumbers\Varsnumbersgroupname{\LWR@trans/l.Varatetemp}
§ 263 Package \texttt{gmeometric}

\texttt{gmeometric} is ignored.

\texttt{\LWR@ProvidesPackageDrop\{gmeometric\}}[2008/11/22]

§ 264 Package \texttt{graphics}

(Emulates or patches code by D. P. Carlisle.)

\texttt{\LWR@ProvidesPackagePass\{graphics\}}[2017/06/25]

\texttt{\LWR@RestoreOrigFormatting\{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG\}}

\texttt{\AtBeginDocument\{\Dec/l.VarareGraphicsExtensions\{.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG\}\}}

Inside a \texttt{lvarateximage}, allow \texttt{PDF} instead of \texttt{SVG}:

\texttt{\Dec/l.VarareGraphicsExtensions\{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG\}}

\texttt{\Dec/l.VarareGraphicsRule\{.svg\}{svg}{.svg}{}}

\texttt{\Dec/l.VarareGraphicsRule\{.SVG\}{svg}{.SVG}{}}

\texttt{\Dec/l.VarareGraphicsExtensions\{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG\}}

\texttt{\Dec/l.VarareGraphicsExtensions\{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG\}}

\texttt{\appto{\LWR@RestoreOrigFormatting}{\Dec/l.VarareGraphicsExtensions\{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG\}}}
§ 264.2  

**Length conversions and graphics options**

A scaled image in \texttt{\LaTeX} by default takes only as much space on the page as it requires, but HTML browsers use as much space as the original unscaled image would have taken, with the scaled image over- or under-flowing the area.

Used to store the user's selected dimensions and HTML class.

The class defaults to “inlineimage” unless changed by a class=\texttt{xyx} option.

\begin{verbatim}
22 \newlength{\LWR@igwidth}
23 \newlength{\LWR@igheight}
24 \newcommand*{\LWR@igwidthstyle}{()}
25 \newcommand*{\LWR@igheightstyle}{()}
26 \newcommand*{\LWR@igorigin}{()}
27 \newcommand*{\LWR@igangle}{()}
28 \newcommand*{\LWR@igxsca}{1}
29 \newcommand*{\LWR@igysca}{1}
30 \newcommand*{\LWR@igclass}{inlineimage}
31 \newcommand*{\LWR@igalt}{(image)}

Set the actions of each of the key/value combinations for \texttt{\includegraphics}. Many are ignored.

If an optional width was given, set an HTML style:

\begin{verbatim}
32 \define@key{igraph}{width}{%
33 \setlength{\LWR@igwidth}{#1}%
34 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}% \%
35 {%
36 \renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
37 \end{verbatim}

Default to use the converted fixed length given:

\begin{verbatim}
38 \renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
\end{verbatim}

If ex or em dimensions were given, use those instead:

\begin{verbatim}
39 \IfEndWith{#1}{(ex)}% \%
40 \renewcommand*{\LWR@igwidthstyle}{width:#1}% yes ex \%
41 \end{verbatim}
\begin{verbatim}
42 \IfEndWith{#1}{(em)}% \%
43 \renewcommand*{\LWR@igwidthstyle}{width:#1}% yes em \%
44 \end{verbatim}
\begin{verbatim}
45 \IfEndWith{#1}{(\%)% \%
46 \renewcommand*{\LWR@igwidthstyle}{width:#1}% yes percent \%
47 \end{verbatim}
\begin{verbatim}
48 \IfEndWith{#1}{(px)}% \%
49 \renewcommand*{\LWR@igwidthstyle}{width:#1}% yes px \%
50 \end{verbatim}
\end{verbatim}

\end{verbatim}
If an optional height was given, set an HTML style:

\define@key{igraph}{height}{%
\setlength{\LWR@igheight}{#1}%
\ifthenelse{\lengthtest{\LWR@igheight > 0pt}}{% 
Default to use the converted fixed length given:

\renewcommand*{\LWR@igheightstyle}{%
height:\LWR@printlength{\LWR@igheight} % extra space
}%

If ex or em dimensions were given, use those instead:

\IfEndWith{#1}{ex}\
{\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes ex\n\}% not ex\n\IfEndWith{#1}{em}\
{\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes em\n\}% not em\n\IfEndWith{#1}{\\%}\
{\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes percent\n\}% not percent\n\IfEndWith{#1}{px}\
{\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes px\n\}% not px
%(} % end of length > 0pt
1)%

Handle origin key:

\define@key{igraph}{origin}[c]{%
\renewcommand*{\LWR@igorigin}{#1}%
}%

Handle angle key:

\define@key{igraph}{angle}{\renewcommand*{\LWR@igangle}{#1}}%

Handle class key:

\define@key{igraph}{class}{\renewcommand*{\LWR@igclass}{#1}}%

Handle alt key:

\define@key{igraph}{alt}{\renewcommand*{\LWR@igalt}{#1}}%

It appears that graphicx does not have separate keys for xscale and yscale. scale adjusts both at the same time.

\define@key{igraph}{scale}{%
\ifthenelse{\equal(#1){1}}{% must expand #1
\PackageWarning{l warp}{%
It is recommended to use \MessageBreak
[width=xx\protect\linewidth]\MessageBreak
instead of [scale=yy],%
\renewcommand*{\LWR@igxsca/l.Var}{#1}
\renewcommand*{\LWR@igysca/l.Var}{#1}

Numerous ignored keys:
\define@key{igraph}{bb}{()}
\define@key{igraph}{bbllx}{()}
\define@key{igraph}{bbly}{()}
\define@key{igraph}{bburx}{()}
\define@key{igraph}{bbury}{()}
\define@key{igraph}{natwidth}{()}
\define@key{igraph}{natheight}{()}
\define@key{igraph}{hiresbb}{true}{()}
\define@key{igraph}{viewport}{()}
\define@key{igraph}{trim}{()}
\define@key{igraph}{totalheight}{()}
\define@key{igraph}{keepaspectratio}{true}{()}
\define@key{igraph}{clip}{true}{()}
\define@key{igraph}{draft}{true}{()}
\define@key{igraph}{type}{()}
\define@key{igraph}{ext}{()}
\define@key{igraph}{read}{()}
\define@key{igraph}{command}{()}

New in v1.1a:
\define@key{igraph}{quite}{()}
\define@key{igraph}{page}{()}
\define@key{igraph}{pagebox}{()}
\define@key{igraph}{interpolate}{true}{()}

New in v1.1b:
\define@key{igraph}{decodearray}{()}

§ 264.3 Printing HTML styles
\LWR@rotstyle{((prefix))}{((degrees))}

Prints the rotate style with the given prefix.

prefix is \texttt{-ms-} or \texttt{-webkit-} or nothing, and is used to generate three versions of the transform:rotate style.
\LWR@scalestyle \{(prefix)\} \{(xscale)\} \{(yscale)\}

Prints the scale style with the given prefix.

prefix is -ms- or -webkit- or nothing, and is used to generate three versions of the transform:scale style.

\newcommand*{\LWR@scalestyle}[3]{%
\begin{transform:scale(#2,#3);
\end{transform:scale}}%

§ 264.4 \includegraphics

\bool LWR@infloatrow

Used to compute \linewidth.

\newbool{LWR@infloatrow}
\boolfalse{LWR@infloatrow}

\LWR@opacity

For HTML, used only for \includegraphics.

\LWR@opacity may be set by the transparent package.

\def{LWR@opacity}{1}

\LWR@imagesizebox

Used to determine the actual image size if needed.

\savebox{LWR@imagesizebox}

\LWR@HTML@Gin@setfi[\{w\}\{h\}\{filename\}]

Sets the parsed filename for HTML output.

\newcommand*{\LWR@HTML@Gin@setfi}[3]{%
\xdef{LWR@parsedfilename}{#3}%
}\end{transform:scale}}%

\Key{Gin} class CSS class for the image.

Define the new class key for the print-mode version of \includegraphics, which is enabled inside a lateximage.

\AtBeginDocument{\def{Gin}{}}
\end{transform:scale}}%

\LWR@replaceEPSSVG

Usually, references to eps files become svg files, but if the epstopdf package is being used, it automatically converts eps to pdf, and the following must NOT be done.

\AtBeginDocument{\ifpackage{epstopdf}{\newcommand*{\LWR@replaceEPSSVG}{}}

\end{transform:scale}}%
\newcommand*{\LWR@replaceEPSSVG}{\
  \StrSubstitute{\LWR@tempone}{.eps}{.svg}\[\LWR@tempone\]
  \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}\[\LWR@tempone\]
}\%

\LWR@includegraphicsb * [(2: options)] [(3: options)] {(4: filename)}

\textbf{graphics} syntax is \includegraphics * [(\textit{llx, lly})] [(\textit{urx, ury})] {\textit{file}}

\textbf{graphicx} syntax is \includegraphics [(key values)] {\textit{file}}

If #3 is empty, only one optional argument was given, thus graphicx syntax.

If using \epsfig or \psfig from the epsfig package, #4 will be \LWR@epsfig@filename, which will have been set by the file or figure keys. Therefore, #4 must not be used until after the keys have been processed.

\NewDocumentCommand{\LWR@includegraphicsb}{s o o m}{%
\begin{figure*}[t]
\centering
\includegraphics{\LWR@filename}
\end{figure*}
\end{document}
\%

Start the image tag on a new line, allow PDF output word wrap:

\LWR@origtilde \LWR@orignew\%

Temporarily compute\linewidth, \textwidth, \textheight arguments with a 6x9 inch size until the next \endgroup.

\begin{figure*}[t]
\centering
\includegraphics{\LWR@filename}
\end{figure*}
\end{document}
\%

For correct em sizing during the width and height conversions:

\Large

Reset some defaults, possibly will be changed below if options were given:

\setlength{\LWR@igwidth}{0pt}\%
\setlength{\LWR@igheight}{0pt}\%
\renewcommand*{\LWR@igwidthstyle}{}\%
\renewcommand*{\LWR@igheightstyle}{}\%
\renewcommand*{\LWR@igorigin}{}\%
If \#3 is empty, only one optional argument was given, thus \texttt{graphicx} syntax:

\begin{verbatim}
165 \IfValueF{#3}{}
166 \IfValueTF{#2}{
167 \setkeys{igraph}{#2}{}
168 \setkeys{igraph}{}{}
169 }
\end{verbatim}

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

\begin{verbatim}
170 \begingroup
171 \LetLtxMacro\Gin@setfi\LWR@HTML@Gin@setfi\LWR@tempone
172 \edef\LWR@tempone{#4}
173 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}{\LWR@tempone}
174 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}{\LWR@tempone}
175 \LWR@rep\LWR@parsedfile
176 \xdef\LWR@parsedfile{\LWR@tempone}
177 \Gin@de@graphics{\detokenize\expandafter{\LWR@tempone}}
178 \endgroup
179 \ifbool{FormatWP}{}
180 \LWR@restoreorigformatting%
181 \ifdefpdf
182 \appto\LWR@restoreorigformatting{%
183 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
184 }
185 \ifndefpdf
\end{verbatim}

If formatting for a word processor, find and set the actual image size, without rotation, using \texttt{PDF} instead of \texttt{svg} to find the original bounding box:

\begin{verbatim}
182 \ifdefpdf%
183 \begingroup
184 \LWR@restoreorigformatting%
185 \ifndefpdf
186 \appto\LWR@restoreorigformatting{%
187 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
188 }
189 \else
\ifdefpdf%
190 \ifndefpdf
\end{verbatim}
Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class.

The \LWR@origtilde adds space between tags in case this is being done inside a \savebox where \newline has no effect.
Only include a style tag if a width, height, angle, or scale was given:

245 \ifthenelse{
246 \NOT\equal({\LWR@igwidthstyle}{}) \OR
247 \NOT\equal({\LWR@igheightstyle}{}) \OR
248 \NOT\equal({\LWR@igorigin}{}) \OR
249 \NOT\equal({\LWR@igangle}{}) \OR
250 \NOT\equal({\LWR@igxscale}{1}) \OR
251 \NOT\equal({\LWR@igyscale}{1})
252 }%
253 {
254 style="\LWR@indentHTML
255 \ifthenelse{\NOT\equal({\LWR@igwidthstyle}{})}{}
256 {\LWR@igwidthstyle;\LWR@indentHTML}{}
257 \ifthenelse{\NOT\equal({\LWR@igheightstyle}{})}{}
258 {\LWR@igheightstyle;\LWR@indentHTML}{}
259 \ifthenelse{\NOT\equal({\LWR@igorigin}{})}{}
260 {
261 transform-origin: \LWR@originnames({\LWR@igorigin};\LWR@indentHTML%
262 )}{}
263 \ifthenelse{\NOT\equal({\LWR@igangle}{})}{}
264 {\LWR@giangle}\LWR@indentHTML
265 \ifthenelse{\NOT\equal({\LWR@igxscale}{1})\OR}{\NOT\equal({\LWR@igyscale}{1})}{}
266 \LWR@xscale{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
267 \LWR@yscale{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
268 }{}
269 \ifthenelse{\NOT\equal{}}{}
270 \LWR@opacity\LWR@indentHTML%
271 }{}
272 %
273 % Set the class and alt tag:
274 class="{\LWR@igclass}{\LWR@indentHTML%
275 alt="{\LWR@igalt}\LWR@indentHTML%
276 }% end of image tags
277 % end of href
278
279 % Return to original page size and font size:
280 \endgroup
281 \LWR@traceinfo{\LWR@includegraphicsb done}
\includegraphics [(key=val)] {filename} 

Handles width and height, converted to fixed width and heights.

The user should always use no file suffix in the document source.

\AtBeginDocument{
\LWR@traceinfo{Patching \includegraphics.}
\LetLtxMacro{\LWR@originc/l.Varudegraphics}{\inc/l.Varudegraphics}
\renewcommand*{\inc/l.Varudegraphics}{
This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:
% \LWR@traceinfo{inc/l.Varudegraphics}
% \LWR@ensuredoingapar
% \LWR@inc/l.Varudegraphicsb
% }
%
% This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:
}

\LWR@rotboxorigin

\LWR@rotboxorigin

Holds the origin key letters.

\newcommand*{\LWR@rotboxorigin}{}

\LWR@originname

Given one \LaTeX origin key value, translate into an HTML origin word:

\newcommand*{\LWR@originname}{[1]{% 
\ifthenelse{equal(#1)(t)}{top}{}% 
\ifthenelse{equal(#1)(b)}{bottom}{}% 
\ifthenelse{equal(#1)(c)}{center}{}% 
\ifthenelse{equal(#1)(l)}{left}{}% 
\ifthenelse{equal(#1)(r)}{right}{}% 
}}

\LWR@originnames

Given one- or two-letter \LaTeX origin key values, translate into HTML origin words:

\newcommand*{\LWR@originnames}{[1]{% 
\StrChar{#1}{1}\LWR@strresult\LWR@originname{\LWR@strresult}% 
\StrChar{#1}{2}\LWR@strresult\LWR@originname{\LWR@strresult}% 
}}
Handle the origin key for `\rotatebox`:

\begin{verbatim}
define@key{krotbox}{origin}\
  \renewcommand*{\LWR@rotboxorigin}{#1}\
}

These keys are ignored:

\begin{verbatim}
define@key{krotbox}{x}{}\
define@key{krotbox}{y}{}\
define@key{krotbox}{units}{}
\end{verbatim}

\rotatebox \langle \text{keyval list} \rangle \langle \text{angle} \rangle \langle \text{text} \rangle

\AtBeginDocument{

The HTML version:

\begin{verbatim}
NewDocumentCommand{\LWR@HTML@rotatebox}{O{} m +m}{
  Reset the origin to “none-given”:
  \renewcommand*{\LWR@rotboxorigin}{}
  Process the optional keys, which may set \LWR@rotboxorigin:
  \setkeys{krotbox}{#1}
  \LWR@tagc{\LWR@HTML\LWR@indentHTML}
  \text{in/l.Varine-b/l.Varock so that \LWR@HTML\LWR@indentHTML will transform this span:}
  \LWR@rotsty{-ms-}{#2}\LWR@indentHTML
  \LWR@rotsty{-webkit-}{#2}/quotedbl.Var\LWR@orignew/l.Varine%
  \LWR@orignew/l.Varine%
}
\end{verbatim}

If an origin was given, translate and print the origin information:

\begin{verbatim}
  \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{}%\{
    \LWR@tagc{\LWR@HTML\LWR@indentHTML}%
    \LWR@tagc{\LWR@HTML\LWR@indentHTML}%
    transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@HTML\LWR@indentHTML%\}
  \%
\end{verbatim}

Print the rotation information:

\begin{verbatim}
  \LWR@rotstyle{-ms-}{#2}\LWR@HTML\LWR@indentHTML
  \LWR@rotstyle{-webkit-}{#2}\LWR@HTML\LWR@indentHTML
  \LWR@rotstyle{}{#2}“\LWR@orignewline%
  \LWR@orignewline%
\end{verbatim}

Print the text to be rotated:

\begin{verbatim}
  \begin{LWR@nestspan}%
  #3%
\end{verbatim}
Close the span:
\LWAR@htmltagc{/span} 
\end{LWAR@nestspan}

The high-level interface:
\LWAR@formatted{rotatebox}
\% AtBeginDocument
\scalebox \{(h-scale)\}[(v-scale)]{(text)}
\AtBeginDocument{

The HTML version:
\NewDocumentCommand{\LWAR@HTML@scalebox}{m o m}{%
Select inline-block so that HTML will transform this span:
\LWAR@htmltagc(%
span\LWAR@indentHTML
style="\LWAR@indentHTML
display: inline-block;\LWAR@indentHTML

Print the scaling information:
\LWAR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWAR@indentHTML
\LWAR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWAR@indentHTML
\LWAR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}}
"\LWAR@orignewline
\LWAR@orignewline%}

Print the text to be scaled:
\begin{LWAR@nestspan}%
#3%

Close the span:
\LWAR@htmltagc{/span} 
\end{LWAR@nestspan}
}

The high-level interface:
\LWAR@formatted{scalebox}
\% AtBeginDocument
\reflectbox \{(text)\}

\AtBeginDocument{
\newcommand{\LWR@HTML@reflectbox}[1]{\scalebox{-1}{#1}}
\LWR@formatted{\reflectbox}
}% AtBeginDocument

\resizebox \{(h-length)\} \{(v-length)\} \{(text)\}

Simply prints its text argument.

\AtBeginDocument{
\NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{\LWR@formatted{\resizebox}}
}% AtBeginDocument

---

File 166 \lwp-

§ 265 Package \texttt{graphicx}

\texttt{graphicx} is emulated.

\texttt{graphicx} loads \texttt{graphics}, which also loads \texttt{lwp-graphics}, which remembers the original \texttt{graphics} definitions for use inside a \texttt{lateximage}, and then patches them \AtBeginDocument for \texttt{HTML} output.

\texttt{lwp-graphics} handles the syntax of either \texttt{graphics} or \texttt{graphicx}.

\texttt{for HTML output: 1 \LWR@ProvidesPackagePass{graphicx}[2017/06/01]}

---

File 167 \lwp-grffile.sty

§ 266 Package \texttt{grffile}

\texttt{grffile} is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each \texttt{PDF} image for print mode should be accompanied by an \texttt{SVG}, \texttt{PNG}, or \texttt{JPG} version for \texttt{HTML}.
lwarp-grf file now exists as a placeholder since grf file used to be emulated by lwarp, and thus older versions of lwarp-grf file may exist and should be overwritten by this newer version.

for HTML output: 1\LWR@ProvidesPackagePass{grf}[2017/06/30]

File 168 lwarp-grid.sty

§ 267 Package grid

Pkg grid grid is ignored.

for HTML output: 1\LWR@ProvidesPackageDrop{grid}[2009/06/16]

2\newenvironment*(gridenv)(){}

File 169 lwarp-grid-system.sty

§ 268 Package grid-system

(Emulates or patches code by Marcus Bizzi.)

Pkg grid-system grid-system is patched for use by lwarp.

for HTML output: 1\LWR@ProvidesPackagePass{grid-system}[2014/02/16]

(\ifdef is in case the older syntax is removed.)

2\AtBeginEnvironment{Row}{\set/l.Varength{\l.Varinewidth}{6in}}
3\ifdef{endrow}{
4\AtBeginEnvironment{row}{\setlength{\linewidth}{6in}}
5\ifdef{endrow}{
6}{
7\renewcommand{\gridsystem@finishcell}{\hspace{\gridsystem@cellsep}}

File 170 lwarp-gridset.sty

§ 269 Package gridset

Pkg gridset gridset is ignored.

for HTML output: 1\LWR@ProvidesPackageDrop{gridset}

2\newcommand*{\gridbase}{}
§ 270 Package **hang**

*(Emulates or patches code by Andreas Nolda.)*

**Pkg ** hang ** hang is emulated.**

**for HTML output:**

1. \LWR@ProvidesPackageDrop{hang}[2017/02/18]

2. \newlength{\hangingindent}
3. \setlength{\hangingindent}{1em}
4. \newlength{\hangingleftmargin}
5. \setlength{\hangingleftmargin}{0em}
6. \newcommand*{\LWR@findhangingleftmargin}%
7. \setlength{\LWR@templengthone}{\hangingleftmargin}%
8. \addtolength{\LWR@templengthone}{\hangingindent}%
9. \newenvironment{hangingpar}
10. {
11. \LWR@findhangingleftmargin%
12. \BlockClass[
13. \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; 
14. \LWR@print@mbox{text-indent:-\LWR@printlength{\hangingindent}}% 
15. ]% 
16. }% 
17. \endBlockpar%
18. }
19. \newenvironment{hanginglist}
20. {
21. \newenvironment{hanginglist}
22. {
23. \newenvironment{hanginglist}
24. {
25. \newenvironment{hanginglist}
26. \newenvironment{hanginglist}
27. \newenvironment{hanginglist}
28. \newenvironment{hanginglist}
29. \newenvironment{hanginglist}
30. \newenvironment{hanginglist}
31. \newenvironment{hanginglist}
32. \newenvironment{hanginglist}
33. \newenvironment{hanginglist}
34. \newenvironment{hanginglist}
35. \newenvironment{hanginglist}
36. }%
File 172  lwarp-hanging.sty

§ 271  Package  hanging

Pkg  hanging  hanging is emulated.

for HTML output:  1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]

2 \ifclassloaded{memoir}{
3 \let\hangpara\relax 
4 \let\hangparas\relax 
5 \let\endhangparas\relax 
6 \let\hangpunct\relax 
7 \let\endhangpunct\relax 
8 }{}

\hangpara  {{(indent)}} {{(afternum)}}

Use hangparas instead.

9 \newcommand*{\hangpara}[2]{

\newenvironment*{hangparas}[2][]{\BlockClass{\text-indent:-\printlength{#1}}}{\endBlockClass}
\newenvironment*{hangpunct}[]{\BlockClass{hangpunct}}{\endBlockClass}
\newcommand{\nhpt}{.}
\newcommand{\nhq}{'}
\newcommand{\nhrq}{'}

\ProvidesPackage{hypcap}[2016/05/16]
\newcommand*{\capstart}{}
\newcommand*{\hypcapspace}{}
\newcommand*{\hypcapredef}[1]{}
\newcommand*{\capstartfalse}{}
\newcommand*{\capstarttrue}{

\ProvidesPackage{hypdestopt}[2016/05/21]
\newcommand*{\capstart}{}
\newcommand*{\hypcapspace}{}
\newcommand*{\hypcapredef}[1]{}
\newcommand*{\capstartfalse}{}
\newcommand*{\capstarttrue}{

\ProvidesPackage{hypdestopt}[2016/05/21]
\newcommand*{\capstart}{}
\newcommand*{\hypcapspace}{}
\newcommand*{\hypcapredef}[1]{}
\newcommand*{\capstartfalse}{}
\newcommand*{\capstarttrue}{

File 175  lwarp-hypernat.sty

§ 274  Package  hypernat

Pkg  hypernat  hypernat is ignored.

for HTML output:  \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

File 176  lwarp-hyperref.sty

§ 275  Package  hyperref

(Emulates or patches code by Sebastian Rahtz, Heiko Oberdiek.)

Pkg  hyperref  hyperref is emulated.

for HTML output:  1 \LWR@ProvidesPackageDrop{hyperref}
2 \typeout{Using the lwarp html version of package ‘hyperref’, discarding options.}
3 \typeout{ Are not using ProvidesPackage, so that other packages}
4 \typeout{ do not attempt to patch lwarp’s version of ‘hyperref’.}
5 \ProvidesPackage{lwarmp-#1-#2}
6 \DeclareOption{}{}
7 \ProcessOptions\relax
8 \let\ds\@empty from the original \ProcessOptions
9 \edef\curroptions{}  lwarp modification to \ProcessOptions
10 \processoptions\relax from the original \ProcessOptions

11 \newcommand*{\hypersetup}[1]{}
12 \newcommand*{\hyperbaseurl}[1]{}

\hyperimage  \{(URL)\} \{(alt text)\}

Insert an image with alt text:

13 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{% 
14 \LWR@ensuredoingapar%
15 \def\LWR@templink{#1}%
16 \onelinelevel@sanitize\LWR@templink%
17 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
18 \LWR@ensuredoingapar%
19 \endgroup%
20 }
21 
22 \newrobustcmd*{\hyperimage}{% 
23 \begingroup%
24 \catcode\#=12%
25 \catcode\%=12%
\hyperdef \{(1: category)\} \{(2: name)\} \{(3: text)\}

Creates an HTML anchor to category.name with the given text.

\newcommand*{\LWR@hyperdefb}{m m +m}{% 
\LWR@ensuredoingapar% 
\LWR@sub/l.Varabe/l.Var{#1.#2}% 
#3% 
\endgroup% 
}\

\newcommand{\hyperdef}{% 
\begingroup% 
\catcode\#=12% 
\catcode\%=12% 
\catcode\&=12% 
\catcode\_=12% 
\LWR@hyperdefb% 
}\

\LWR@hyperreffinish

\newcommand*{\LWR@hyperreffinish}{[1]{% 
\newcommand{\LWR@hyperreffinish}[1]{% 
\begingroup% 
\RenewDocumentCommand[\ref](){}{\LWR@ref@ignorestar}% 
#1% 
\endgroup% 
\LWR@htm/l.Vartag{/a}% 
}\

\newcommand*{\LWR@hyperreffinishbb}[3]{% 
\LWR@htmltag[/a]% 
\LWR@hyperreffinish% 
}\

\newrobustcmd*{\LWR@hyperreffinishb}{% 
\begingroup% 
\catcode\#=12% 
\catcode\%=12% 
\catcode\&=12% 
\catcode\_=12% 
\LWR@hyperreffinish% 
}\

\LWR@hyperreffinish

\newcommand{\LWR@hyperreffinishb}{% 
\begingroup% 
\catcode\#=12% 
\catcode\%=12% 
\catcode\&=12% 
\catcode\_=12% 
\LWR@hyperreffinish% 
}
\LWR@hyperrefcb \langle\text\rangle}{\langle\label\rangle}\{\langle\text\rangle\}
Creates text as an HTML link to the L\TeX\ label.

\hypertarget \langle\text\rangle}{\langle\name\rangle}\{\langle\text\rangle\}
Creates an anchor to \name with the given text.
\hyperlink \{\langle \text{name} \rangle \} \{\langle \text{text} \rangle \}

Creates a link to the anchor created by hypertarget, with the given link text. Declared because also defined by memoir.

\begin{verbatim}
112 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%  
113 \LWR@hyperrefcb[LWR-ht-#1]%  
114 )  
115 }  
116 \DeclareDocumentCommand{\hyperlink}{%  
117 \LWR@ensuredoingapar%  
118 \begingroup%  
119 \catcode'\#=12%  
120 \catcode'\%=12%  
121 \catcode'\&=12%  
122 \catcode'\-=12%  
123 \catcode'\_=12%  
124 \LWR@hyperlinkb%  
125 )
\end{verbatim}

\autoref \* \{\langle \text{label} \rangle \}

For HTML, \cleveref is used instead.

\begin{verbatim}
126 \NewDocumentCommand{\autoref}{s m}{%  
127 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%  
128 )
\end{verbatim}

\autopageref \{\langle \text{label} \rangle \}

For HTML, \cleveref is used instead.

\begin{verbatim}
129 \NewDocumentCommand{\autopageref}{s m}{%  
130 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%  
131 )
\end{verbatim}

\pdfstringdef \{\langle \text{macroname} \rangle \} \{\langle \text{TEXstring} \rangle \}

\begin{verbatim}
132 \newcommand{\pdfstringdef}[2]{}
\end{verbatim}

\pdfbookmark \[\langle \text{level} \rangle \} \{\langle \text{text} \rangle \} \{\langle \text{name} \rangle \}

\begin{verbatim}
133 \newcommand{\pdfbookmark}[3][]{()}
\end{verbatim}

\currentpdfbookmark \{\langle \text{text} \rangle \} \{\langle \text{name} \rangle \}

\begin{verbatim}
134 \newcommand{\currentpdfbookmark}[2]{()}
\end{verbatim}

\subpdfbookmark \{\langle \text{text} \rangle \} \{\langle \text{name} \rangle \}

\begin{verbatim}
135 \newcommand{\subpdfbookmark}[2]{()}
\end{verbatim}

\belowpdfbookmark \{\langle \text{text} \rangle \} \{\langle \text{name} \rangle \}

\begin{verbatim}
136 \newcommand{\belowpdfbookmark}[2]{()}
\end{verbatim}
\textorpdfstring{(\texttt{TEXstring})}{(\texttt{PDFstring})}

137 \newcommand{\textorpdfstring}[2]{#1}

\hypercalcbp\{\dimen\} From \texttt{hyperref}.

138 \def{\hypercalcbp#1}{\strip@pt\dimexpr \texttt{#1}\relax\relax%

139 \strip@pt\dimexpr \texttt{0.99626401}\dimexpr\texttt{#1}\relax\relax%

140 )%

\acrobatmenu\{\texttt{menuoption}\}{\texttt{text}}

141 \newcommand{\acrobatmenu}[2]{\texttt{}}

\textfield\{\texttt{parameters}\}{\texttt{label}}

142 \DeclareRobustCommand{\textfield}[2][]{}

\checkbox\{\texttt{parameters}\}{\texttt{label}}

143 \DeclareRobustCommand{\checkbox}[2][]{}

\choicemenu\{\texttt{parameters}\}{\texttt{label}}\{\texttt{choices}\}

144 \DeclareRobustCommand{\choicemenu}[3][]{}

\pushbutton\{\texttt{parameters}\}{\texttt{label}}

145 \DeclareRobustCommand{\pushbutton}[2][]{}

\submit\{\texttt{parameters}\}{\texttt{label}}

146 \DeclareRobustCommand{\submit}[2][]{}

\reset\{\texttt{parameters}\}{\texttt{label}}

147 \DeclareRobustCommand{\reset}[2][]{}

\gauge\{\texttt{parameters}\}{\texttt{label}}

148 \DeclareRobustCommand{\gauge}[2][]{}

\layouttextfield\{\texttt{label}\}{\texttt{field}}

149 \newcommand*{\layouttextfield}[2]{}

\layoutchoicefield\{\texttt{label}\}{\texttt{field}}

150 \newcommand*{\layoutchoicefield}[2]{}
\LayoutCheckField  \{(label)\} \{(field)\}
\newcommand*{\LayoutCheckField}[2]{}

\MakeRadioField  \{(width)\} \{(height)\}
\newcommand*{\MakeRadioField}[2]{}

\MakeCheckField  \{(width)\} \{(height)\}
\newcommand*{\MakeCheckField}[2]{}

\MakeTextField  \{(width)\} \{(height)\}
\newcommand*{\MakeTextField}[2]{}

\MakeChoiceField  \{(width)\} \{(height)\}
\newcommand*{\MakeChoiceField}[2]{}

\MakeFieldButton \{(text)\}
\newcommand{\MakeFieldButton}[1]{}

---

**File 177**  
\texttt{lwp-hyperxmp.sty}

§ 276  
Package  
\texttt{hyperxmp}

\texttt{Pkg hyperxmp}  
Emulated.

\texttt{for HTML output:}  
Discard all options for lwarp-hyperxmp:

1 \texttt{\LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]}

---

**File 178**  
\texttt{lwp-hyphenat.sty}

§ 277  
Package  
\texttt{hyphenat}

\texttt{Pkg hyphenat}  
\texttt{hyphenat} is emulated during HTML output, while the print-mode version is used inside a \texttt{lateximage}.

\texttt{for HTML output:}

1 \texttt{\LWR@ProvidesPackagePass{hyphenat}[2009/09/02]}

2 \texttt{\LetLtxMacro{\LWRHYNAT@origtextnhtt}{\textnhtt}}

3 \texttt{\LetLtxMacro{\LWRHYNAT@orignhttfamily}{\textfamily}}

4 \texttt{\LWRHYNAT@orignohyphens\nohyphens}

5 \texttt{\LWRHYNAT@origbshyp\bshyp}
§ 278 Package \texttt{idxlayout}

\begin{quote}
(Emulates or patches code by Thomas Titz.)

\textbf{Emulated.}

\textbf{for HTML output:}

Discard all options for \texttt{lwp-idxlayout}:

\begin{verbatim}
\renewcommand{\LWR@indexprenote}{}
\newcommand{\noindexprenote}{\renewcommand{\LWR@indexprenote}{}}
\end{verbatim}
\end{quote}
§ 279 Package \texttt{ifoddpage}

\textit{(Emulates or patches code by Martin Scharrer.)}

\texttt{ifoddpage} is emulated.

\textbf{for HTML output:} Discard all options for \texttt{lwp-ifoddpage}:

\begin{verbatim}
\LWR@ProvidesPackageDrop{ifoddpage}[2016/04/23]
\newif\ifoddpage
\newif\ifoddpageoroneside
\Dec/l.VarareRobustCommand{\checkoddpage}{\oddpagetrue\oddpageoronesidetrue}
\def\oddpage@page{1}
\def\@ifoddpage{\expandafter\@firstoftwo}
\def\@ifoddpageoroneside{\expandafter\@firstoftwo}
\end{verbatim}

§ 280 Package \texttt{imakeidx}

\textit{(Emulates or patches code by Enrico Gregorio.)}

\texttt{imakeidx} is patched for use by \texttt{lwp}.

\textbf{letter headings} When using \texttt{makeindex}, to match the print and HTML output's display of index letter headings, specify the \texttt{lwp.ist} style:

\begin{verbatim}
\makeindex[options={-s \lwp.ist}]
\end{verbatim}

(For HTML, the \texttt{lwp.ist} style is used automatically, which displays letter headings. When using \texttt{xindy} the default style also displays letter headings.)
See section 9.6.17 for how to setup \texttt{lwarpmk} to process the indexes with \texttt{imakeidx}, both with and without shell escape.

for HTML output: \LWR@ProvidesPackagePass{imakeidx}[2016/10/15]

Use the new HTML suffix:

\catcode\_=12%
\define@key{imki}{name}{\def\imki@name{#1_htm/l.Var}}
\catcode\_=8%

The HTML version of \texttt{printindex}:

\catcode\_=12%
\renewcommand*{\printindex}[1]{\imki@jobname}{% \LWR@orignewpage% \LWR@startpars% \ifstrequa/l.Var{#1}{\imki@jobname}{% \@ifundefined{#1@idxfi/l.Vare}{\imki@error{#1}}{\imki@putindex{#1}}% }{% \imki@putindex{#1_htm/l.Var}}%}{% \
\@index[#1]{% \ifstrequa/l.Var{#1}{\imki@jobname}{% \@ifundefined{#1@idxfi/l.Vare}{\PackageWarning{imakeidx}{Undefined index fi/l.Vare '#1'}}%\begingroup\@sanitize\imki@nowrindex%}{} \edef\@idxfi/l.Vare{#1}\begingroup\@sanitize\@wrindex\@idxfi/l.Vare\endgroup\@ifundefined{#1_htm/l.Var@idxfi/l.Vare}{\imki@error{#1_htm/l.Var}}{\imki@putindex{#1_htm/l.Var}}\endgroup\imki@nowrindex%}%}\endgroup%}%
While writing index entries, adds an HTML label, and writes the label's index instead of the page number:

```latex
\renewcommand{\imki@wrindexentrysplit}[3][]{
  \addtocounter{LWR@autoindex}{1}
  \LWR@new@/l.Varabe/l.Var{LWRindex-\arabic{LWR@autoindex}}
  \expandafter\protected@write\csname#1@idxfi/l.Vare\endcsname{}
  \indexentry{#2}{\arabic{LWR@autoindex}}
}
\renewcommand{\imki@wrindexentryunique}[3][]{
  \addtocounter{LWR@autoindex}{1}
  \LWR@new@/l.Varabe/l.Var{LWRindex-\arabic{LWR@autoindex}}
  \protected@write\@indexfi/l.Vare{}\indexentry[#1]{#2}{\arabic{LWR@autoindex}}
}
\def{\imki@wrindexentrysplit}{((file}){(entry}){(page})
\def{\imki@wrindexentryunique}{((file}){(entry}){(page})
```

HTML versions of item, etc.:
Sets the xindy HTML options, ignoring the user's settings.

\LWR@imki@setxdydefopts

\LWR@imki@setdefopts

{(user options)}

Sets the HTML options, added to the user's settings, depending on whether makeindex or xindy are used.

For makeindex, the user's choice is ignored, and only the lwarp version is used. (Only one style at a time is possible.)

For xindy, multiple modules may be specified, and the lwarp version is appended.

Use the new HTML options:

\imki@makeindex

\imki@resetdefaults

Use the new HTML options:
theindex was already defined \AtBeginDocument by the \texttt{lwp} core, so it must be redefined here similarly, but patched for \texttt{imakeidx}:

\begin{verbatim}
Env \theindex
\AtBeginDocument{
  \renewenvironment*{theindex}{%
    \imki@maybeaddtotoc
    \imki@indexlevel{\indexname}
    \let\item\imki@indexitem%
    \let\subitem\imki@indexsubitem%
    \let\subsubitem\imki@indexsubsubitem%
  }{}
}% AtBeginDocument

Update to the new defaults:
\imki@resetdefaults

Update to the new patches:
\AtBeginDocument is because \texttt{@wrindex} is previously defined as \texttt{AtBeginDocument} in the \texttt{lwp} core.
\imki@splitindex
\let\imki@startidx\imki@startidxunique
\AtBeginDocument{\let@\wrindex\imki@wrindexunique}
\let\imki@putindex\imki@putindexunique
\let\imki@wrindexentry\imki@wrindexentryunique
\let\imki@startidxsplit\undefined
\let\imki@wrindexsplit\undefined
\let\imki@putindexsplit\undefined
\else
\let\imki@startidx\imki@startidxsplit
\AtBeginDocument{\let@\wrindex\imki@wrindexsplit}
\let\imki@putindex\imki@putindexsplit
\let\imki@wrindexentry\imki@wrindexentrysplit
\let\imki@startidxunique\undefined
\let\imki@wrindexunique\undefined
\let\imki@putindexunique\undefined
\fi
\end{verbatim}

File 182 \texttt{lwp-index.sty}

\section{281 Package index}

\textit{(Emulates or patches code by David M. Jones.)}

\texttt{index} is patched for use by \texttt{lwp}.

\texttt{for HTML output:} \texttt{\LWRProvidesPackagePass{index}[2004/01/20]}
Use \theLWR@autoindex instead of \thepage. \@tempswatrue is used to force an immediate write to the index file instead of waiting until the end of the page.

\begin{verbatim}
2 \xpatchcmd{\newindex}
3 {\x@newindex[thepage]}
4 {}% \@tempswatrue% \x@newindex[theLWR@autoindex]%
5 }
6 {}% \@tempswatrue% \x@newindex[theLWR@autoindex]%
7 }
8 {}% \@tempswatrue% \x@newindex[theLWR@autoindex]%
9 }% \@tempswatrue% \x@newindex[theLWR@autoindex]{}
10 {\LWR@patcherror{index}{newindex}}

11 \xpatchcmd{\renewindex}
12 {\x@renewindex[thepage]}
13 {}% \@tempswatrue% \x@renewindex[theLWR@autoindex]%
14 }
15 {}% \@tempswatrue% \x@renewindex[theLWR@autoindex]{}
16 {\LWR@patcherror{index}{renewindex}}

Patched to set a new autoindex:

19 \xpatchcmd{\@wrindex}
20 {\begingroup}
21 {}% \@tempswatrue% \x@wrindex[theLWR@autoindex]{}
22 }% \@tempswatrue% \x@wrindex[theLWR@autoindex]{}
23 {\LWR@patcherror{index}{@wrindex}}

\AtBeginDocument lwarp core \let \@wrindex to \LWR@wrindex. Since the index package has been loaded, \let to its version instead:

28 \let\LWR@index\@wrindex\LWR@wrindex
29 \AtBeginDocument{
30 \let@\wrindex\LWR@index\@wrindex
31 }

Modified to add \index@prologue:

33 \AtBeginDocument{
34 \renewenvironment*{theindex}{{}% \LWR@indexsection{\indexname}%
35 {\LWR@indexprologue{\empty}\else
36 \index@prologue
37 \bigskip
38 \fi
39 {\let@item\LWR@indexitem%
40 {\let@subitem\LWR@indexsubitem%
41 {\let@subsubitem\LWR@indexsubsubitem%
42 }}}()
\end{verbatim}
\% AtBeginDocument

\edef\showidx#1{}
\let\texttop\relax
\renewcommand*{\raggedbottom}{}
\renewcommand*{\footnotesize}{}
\renewcommand*{\markboth}[2]{}
\renewcommand*{\markright}[1]{}

\PackageInfo{inputtrc}{2012/10/10}

\PackageInfo{lwp@ProvidesPackagePass}{inputtrc}{2012/10/10}

\PackageInfo{intopdf}{2018/03/15}

\NewDocumentCommand{\attachandlink}{m o m m}{
  \href{#1}{#4}%
}

\PackageInfo{lwp@ProvidesPackageDrop}{intopdf}{2018/03/15}
lwarp

File 185 lwarp-karnaugh-map.sty

§ 284 Package karnaugh-map

(Emulates or patches code by Mattias Jacobsson.)

Pkg karnaugh-map karnaugh-map is patched for use by lwarp.

for HTML output:

1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

(It is hard to patch this macro, so the entire thing is redefined here, with the lwarp modifications identified in comments.)

2 \begin{quote}
3 \begin{verbatim}
4 \RevDocEn{karnaugh-map}{s O(4) O(4) O(1) O($X_1$) O($X_2$) O($X_3$) O($X_4$)}[{\%}
5 \begin{quote}
6 % store map size [[START]
7 \renewcommand{\@karnaughmap@var@mapsize}{#2}\%
8 \renewcommand{\@karnaughmap@var@mapsizey}{#3}\%
9 \renewcommand{\@karnaughmap@var@mapsizez}{#4}\%
10 % [END]}
11 % determine if markings should be color or black and white
12 \IfBooleanTF{#1}[{\%}
13 % should be black and white
14 \renewcommand{\@karnaughmap@var@bw}{1}\%
15 ){\%}
16 % should be color
17 \renewcommand{\@karnaughmap@var@bw}{0}\%
18 ]%}
19 %
20 % find matching matrix template and alignment parameters [[START]
21 \newcommand{\@karnaughmap@local@matrixtemplate}[0]{{\%} '0' is considered as missing matrix template
22 \newcommand{\@karnaughmap@local@mapalignmentx}[0]{{\%}
23 \newcommand{\@karnaughmap@local@mapalignmenty}[0]{{\%}
24 \ifnum\@karnaughmap@var@mapsize\@karnaughmap@var@mapsizey\@karnaughmap@var@mapsizez=221
25 \renewcommand{\@karnaughmap@local@matrixtemplate}[0]{{\%}
26 \& 0 \& 1 \& \phantom{0} \%
27 \& 0 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \%
28 \& 1 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \%
29 \& \phantom{0} \%
30 }%}
31 \else\%
32 \renewcommand{\@karnaughmap@local@matrixtemplate}[0]{{\%}
33 \& 0 0 \& 1 \& \phantom{0} \%
34 \& 01 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \%
35 \& 01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \%
36 \& 01 \& |(000110)| \phantom{0} \& |(000111)| \phantom{0} \%
37 \& \phantom{0} \%
38 }%}
39 \fi
40 \fi
\end{verbatim}
\end{quote}
\end{quote}
\end{quote}
\end{quote}
Existing temp/l.Varates have the following dimensions: 2x2x1, 2x4x1, 4x2x1, 4x4x1, 4x4x2, and 4x4x4.

Can not find a temp/l.Varate fitting your specification (%\karnaughmap@var@mapsizex@ x \karnaughmap@var@mapsizey@ x \karnaughmap@var@mapsizez@)

% print error if no temp/l.Varate could be found
% \ifnum0=\karnaughmap@vara/l.Varoca/l.Var@matrixtemp/l.Varate@
% test if a matrix temp/l.Varate is found or not(aka "\karnaughmap@vara/l.Varoca/l.Var@matrixtemp/l.Varate@" equa/l.Vars to '0')
\renewcommand{%\karnaughmap@vara/l.Varoca/l.Var@matrixtemp/l.Varate@}{%
\begin{tikzpicture}
% grid % for all dimensions
\draw[color=black, ultra thin] (0,0) grid (\@karnaughmap@var@mapsizex@,\@karnaughmap@var@mapsizey@);
% when there are 2 sub maps
\ifnum\@karnaughmap@var@mapsizez@=2
\draw[color=black, ultra thin] (5,0) grid (9,4);
\fi
% when there are 4 sub maps
\ifnum\@karnaughmap@var@mapsizez@=4
\draw[color=black, ultra thin] (5,0) grid (9,4);
\draw[color=black, ultra thin] (0,-5) grid (4,-1);
\draw[color=black, ultra thin] (5,-5) grid (9,-1);
\fi
% labels % for all dimensions
\node[above] at (\@karnaughmap@var@mapsizex@*0.5,\@karnaughmap@var@mapsizey@+0.9) \small{#5};
\node[left] at (-0.9,\@karnaughmap@var@mapsizey@*0.5) \small{#6};
% when there are 2 sub maps
\ifnum\@karnaughmap@var@mapsizez@=2
\node[above] at (7,4.9) \small{#5};
\node[below] at (2,-0.1) \small{#7=0$};
\node[below] at (7,-0.1) \small{#7=1$};
\fi
% when there are 4 sub maps
\ifnum\@karnaughmap@var@mapsizez@=4
\node[above] at (7,4.9) \small{#5};
\node[left] at (-0.9,-3) \small{#6};
\node[below] at (2,-0.1) \small{#7=00$};
\node[below] at (7,-0.1) \small{#7=01$};
\node[below] at (2,-5.1) \small{#7=10$};
\node[below] at (7,-5.1) \small{#7=11$};
\fi
% data \matrix[
  matrix of nodes,
  ampersand replacement=\&,
  column sep={1cm,between origins},
  row sep={1cm,between origins},
] at (\@karnaughmap@var@mapsizex@*0.5+\@karnaughmap@local@maprealignmentsx@,\@karnaughmap@var@mapsizey@*0.5+\@karnaughmap@local@matrixtemplate@%}
\end(tikzpicture)
\endgroup
lwarp

File 186 lwarp-keyfloat.sty

§ 285 Package keyfloat

(Emulates or patches code by Brian Dunn.)

pkg keyfloat keyfloat is supported with a considerable amount of hacking. (It's a mashup of lwarp, keyfloat, and tocdata.)

⚠️ keywrap If placing a \keyfig[H] inside a keywrap, use an absolute width for \keyfig, instead of lw-proportional widths. (The [H] option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the lw option.)

for HTML output:

```
1 \LWR@ProvidesPackagePass{keyfloat}[2019/03/21]
2 3 \ifpackage{keyfloat}[2019/03/21]{}
4 \PackageError{lwarp-keyfloat}{}
5 {%
6 The keyfloat package is out of date.\MessageBreak
7 Update to keyfloat v2.00 2019/03/21 or later%
8 }
9 {%
10 Please update the keyfloat package. It's worth it!%
11 }
12 }

After keyfloat has loaded:

13 \AtBeginDocument{
14 \providecommand*{\KFLT@LWR@hook@boxouter}{}
15 \renewcommand*{\KFLT@LWR@hook@boxouter}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textheight}(9in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
16 }%
17 }
18 }
19 \let\KFLT@LWR@hook@boxouter@minipage\relax
20 \let\endKFLT@LWR@hook@boxouter@minipage\relax
21 \newenvironment*{KFLT@LWR@hook@boxouter@minipage}{}{}
22 \providecommand*{\KFLT@LWR@hook@subfloats}{}
23 \renewcommand*{\KFLT@LWR@hook@subfloats}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
24 }
25 \let\KFLT@LWR@hook@subfloats\relax
26 \let\endKFLT@LWR@hook@subfloats\relax
27 \newenvironment*{KFLT@LWR@hook@subfloats}{}{}
28 \providecommand*{\KFLT@LWR@hook@floats}{}
29 \renewcommand*{\KFLT@LWR@hook@floats}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
30 }
31 \let\KFLT@LWR@hook@floats\relax
32 \let\endKFLT@LWR@hook@floats\relax
33 \newenvironment*{KFLT@LWR@hook@floats}{}{}
34 \providecommand*{\KFLT@LWR@hook@floatdepth}{}
35 \renewcommand*{\KFLT@LWR@hook@floatdepth}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
36 }
37 \let\KFLT@LWR@hook@floatdepth\relax
38 \let\endKFLT@LWR@hook@floatdepth\relax
39 \newenvironment*{KFLT@LWR@hook@floatdepth}{}{}
40 \providecommand*{\KFLT@LWR@hook@floatname}{}
41 \renewcommand*{\KFLT@LWR@hook@floatname}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
42 }
43 }
44 \let\KFLT@LWR@hook@floatname\relax
45 \let\endKFLT@LWR@hook@floatname\relax
46 \newenvironment*{KFLT@LWR@hook@floatname}{}{}
47 \providecommand*{\KFLT@LWR@hook@floats}{}
48 \renewcommand*{\KFLT@LWR@hook@floats}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
49 }
50 }
51 \let\KFLT@LWR@hook@floats\relax
52 \let\endKFLT@LWR@hook@floats\relax
53 \newenvironment*{KFLT@LWR@hook@floats}{}{}
54 \providecommand*{\KFLT@LWR@hook@floatdepth}{}
55 \renewcommand*{\KFLT@LWR@hook@floatdepth}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
56 }
57 }
58 \let\KFLT@LWR@hook@floatdepth\relax
59 \let\endKFLT@LWR@hook@floatdepth\relax
60 \newenvironment*{KFLT@LWR@hook@floatdepth}{}{}
61 \providecommand*{\KFLT@LWR@hook@floatname}{}
62 \renewcommand*{\KFLT@LWR@hook@floatname}{%\ifbool{KFLT@keywrap}{}{\ifnumequal\value{KFLT@keyfloatdepth}(0){%\setlength{\linewidth}(6in)\setlength{\textwidth}(6in)\setlength{\textwidth}(6in)}{}
63 }
64 }
65 \let\KFLT@LWR@hook@floatname\relax
66 \let\endKFLT@LWR@hook@floatname\relax
67 \newenvironment*{KFLT@LWR@hook@floatname}{}{}

```
If are nested inside a keyfloats or a subfloat:

\ifboolexpr{\test {\ifnumgreater{\value{KFLT@keyf@depth}}{0}} or %
  \bool{KFLT@inkeysubfloats} %
  { % nested

Tracks row start and end:

\KFLT@maybeendfrow%

 Possibly fill space between columns:

\ifnumgreater{\value{KFLT@thiscol}}{1}%
  { %
    \hfill
  }%
  { % not nested


\RenewDocumentCommand{\KFLT@onefigureimage}{m}

\begin{lrbox}{\KFLT@envbox}
\ifthenelse{\NOT\equal{\KFLT@lw}{}}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}
}{
\ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}{
\ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s,width=\KFLT@imagewidth,height=\KFLT@h]{#1}}
}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}
}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s,height=\KFLT@h]{#1}}
}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s]{#1}}
}
}\ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s,height=\KFLT@h]{#1}}
}{
\KFLT@frame{\includegraphics[
    scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}
}
}
\end{lrbox}

\RenewDocumentEnvironment{\KFLT@boxinner}{}
Is there text to add?

\ifcsempty{KFLT@#1t}%
{}% no text
{% text to add
   % local

Add some space, then create a full-width minipage to contain the text:

\addvspace{\smallskipamount}%
\LWR@KFLT@settexta{#1}{}
\begin{BlockClass}[text-align:\LWR@KFLT@textalign][floatnotes]%

Set the alignment and some text parameters:

% \csuse{KFLT@#1textalign}%
% \footnotelanguage%
% \setlength{\parskip}{1.5ex}%
% \setlength{\parindent}{0em}%

Typeset the actual text:

\csuse{KFLT@#1t}%

Close it all out with a little more space:
Add space and create the name inside a full-width minipage:

Text alignment is #3, and depends on artist or author:

#1 is empty or 'subgrp'
#2 is empty for artist, 'u' for author:

% #3

\footnotesize{textsc{%
\KFLT@optionalname{\csuse{KFLT@#1a#2p}}%
\KFLT@optionalname{\csuse{KFLT@#1a#2f}}%
\csuse{KFLT@#1a#2l}%
\csuse{KFLT@#1a#2s}%
}%
% \end(minipage)%
% \end(BlockClass)
% \par\addvspace(2ex)%
\DeclareDocumentEnvironment{KFLT@marginfloat}{{\(-1.2\text{ex}\)}}{m}
\LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}{}
captionsetup{type=\textit{#2}}
\minipage{2in}{}
\endminipage{}
endLWR@BlockClassWP{}
\\DeclareDocumentEnvironment{marginfigure}{o}
\begin{KFLT@marginf}{}{figure}\end{KFLT@marginf}{}
\\DeclareDocumentEnvironment{margintab}{o}
\begin{KFLT@marginf}{}{tab/o}\end{KFLT@marginf}{}
\\DeclareDocumentEnvironment{keywrap}{m +m}
\LWR@ensuredoingapar%
\setlength{\linewidth}{6in}{}
\setlength{\LWR@templengthone}{#1}{}
\begin{LWR@B}{}
\setlength{\linewidth}{\LWR@print/\linewidth}{\LWR@temp/\linewidthone}{}
\LWR@true{KFLT@keywrap}{}{}
end\LWR@BlockClassWP{}
\}{}
\] AtBeginDocument

\texttt{lwp--layaureo.sty}

\texttt{\$ 286 Package layaureo}

\texttt{Pkg layaureo layaureo is ignored.}

\texttt{for HTML output: 1 \LWR@ProvidesPackageDrop[layaureo][2004/09/16]}
§ 287 Package layout

Pkg layout layout is ignored.

for HTML output: Discard all options for lwpars-layout:

1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]
2 \NewDocumentCommand{\layout}{s}{}

§ 288 Package layouts

Pkg layouts layouts is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{layouts}[2009/09/02]

2 \newif\ifoddpagelayout
3 \oddpagelayouttrue
4 \newif\iftwocolumnlayout
5 \twocolumnlayoutfalse
6 \newif\ifdrawmarginpars
7 \drawmarginparsfalse
8 \newif\ifdrawparameters
9 \drawparametersfalse
10 \newif\iflistasparsa
11 \listasparastruetrue
12 \newif\ifruninhead
13 \runinheadfalse
14 \newif\ifprintparameters
15 \printparametersfalse
16 \newif\ifdrawdimensions
17 \drawdimensionsfalse
18 \newif\ifprintheadings
19 \printheadingsfalse
20 \newcommand{\testdrawdimensions}{}
21 \newcommand{\testprintparameters}{}
22 \newcommand{\setlabelfont}[1]{}
23 \newcommand{\setparametertextfont}[1]{}
24 \newcommand{\setvaluestextsize}[1]{}
25 \newcommand{\setlayouts}[1]{}
26 \newcommand{\setuplayouts}{}
27 \newcommand{\printhunitsof}[1]{}
28 \newcommand{\printlen}[1]{}
29 \newcommand{\trypaperwidth}[1]{}
\newcommand{\trypaperheight}{\active}
\newcommand{\tryhoffset}{\active}
\newcommand{\tryvoffset}{\active}
\newcommand{\trytopmargin}{\active}
\newcommand{\tryheadheight}{\active}
\newcommand{\tryheadsep}{\active}
\newcommand{\trytextheight}{\active}
\newcommand{\tryfootskip}{\active}
\newcommand{\tryoddsidemargin}{\active}
\newcommand{\tryevensidemargin}{\active}
\newcommand{\trytextwidth}{\active}
\newcommand{\trymarginparsep}{\active}
\newcommand{\trymarginparwidth}{\active}
\newcommand{\trymarginparpush}{\active}
\newcommand{\trycolumnsep}{\active}
\newcommand{\trycolumnseprule}{\active}
\newcommand{\setfootbox}{\active}
\newcommand{\currentpage}{\active}
\newcommand{\drawpage}{(\draw page)}
\newcommand{\pagediagram}{(\page diagram)}
\newcommand{\pagedesign}{(\page design)}
\newcommand{\pagevalues}{(\page values)}
\newcommand{\trystockwidth}{\active}
\newcommand{\trystockheight}{\active}
\newcommand{\trytrimedge}{\active}
\newcommand{\trytrimtop}{\active}
\newcommand{\tryuppermargin}{\active}
\newcommand{\tryspinemargin}{\active}
\newcommand{\currentstock}{\active}
\newcommand{\drawstock}{(\draw stock)}
\newcommand{\stockdiagram}{(\stock diagram)}
\newcommand{\stockdesign}{(\stock design)}
\newcommand{\stockvalues}{(\stock values)}
\newcommand{\tryitemindent}{\active}
\newcommand{\tryleftmargin}{\active}
\newcommand{\tryrightmargin}{\active}
\newcommand{\trylistparindent}{\active}
\newcommand{\trytopsep}{\active}
\newcommand{\tryparskip}{\active}
\newcommand{\trypartopsep}{\active}
\newcommand{\tryitemsep}{\active}
\newcommand{\currentlist}{\active}
\newcommand{\drawlist}{(\draw list)}
\newcommand{\listdiagram}{(\list diagram)}
\newcommand{\listdesign}{(\list design)}
\newcommand{\listvalues}{(\list values)}
\newcommand{\tryfootins}{\active}
\newcommand{\tryfootnotesep}{\active}
\newcommand{\tryfootnotebase}{\active}
\newcommand{\tryfootru}{\active}
\newcommand{\tryfootrufrac}{\active}
\newcommand{\currentfootnote}{\active}
\newcommand{\drawfootnote}{(draw footnote)}
\newcommand{\footnotediagram}{(footnote diagram)}
\newcommand{\footnotedesign}{(footnote design)}
\newcommand{\footnotevalues}{(footnote values)}
\newcommand{\tryparindent}{[]}
\newcommand{\tryparlinenumber}{[1](} 
\newcommand{\tryparbaselineskip}{[1](}
\newcommand{\currentparagraph}{}
\newcommand{\drawparagraph}{(draw paragraph)}
\newcommand{\paragraphdiagram}{(paragraph diagram)}
\newcommand{\paragraphdesign}{(paragraph design)}
\newcommand{\paragraphvalues}{(paragraph values)}
\newcommand{\trybeforesep}{[]}
\newcommand{\tryaftersep}{[]}
\newcommand{\tryindent}{[]}
\newcommand{\currentheading}{}
\newcommand{\drawheading}{(draw heading)}
\newcommand{\headingdiagram}{(heading diagram)}
\newcommand{\headingdesign}{(heading design)}
\newcommand{\headingvalues}{(heading values)}
\newcommand{\trytextf}{[]}
\newcommand{\tryfloat}{[]}
\newcommand{\tryintextsep}{[]}
\newcommand{\trytopf}{[]}
\newcommand{\trybotf}{[]}
\newcommand{\currentf}{[]}
\newcommand{\drawf}{(draw f)}
\newcommand{\fdesign}{(f design)}
\newcommand{\fvalues}{(f values)}
\newcommand{\trytotalnumber}{[1](}
\newcommand{\trybottomnumber}{[1](}
\newcommand{\trytopfraction}{[1](}
\newcommand{\trybottomfraction}{[1](}
\newcommand{\currentfloatpage}{[]}
\newcommand{\drawfloatpage}{(draw float page)}
\newcommand{\floatdesign}{(float design)}
\newcommand{\floatvalues}{(float values)}
\newcommand{\trytocindent}{[]}
\newcommand{\trytocnumwidth}{[]}
\newcommand{\trytocwidth}{[]}
\newcommand{\trytocmarg}{[]}
\newcommand{\trytocpnumwidth}{[]}
\newcommand{\trytocdotsep}{[]}
\newcommand{\currenttoc}{[]}
\newcommand{\drawtoc}{(draw toc)}
\newcommand{\tocdesign}{(toc design)}
\newcommand{\tocvalues}{(toc values)}
\newcommand{\drawaspread}{(a spread)}
\newcommand{\drawfontframe}{(font frame)}
\newcommand{\drawfontframelabel}{[1](}
**lwarp**

---

**File 190**  
**lwp-reading.sty**

§ 289  
**Package**  
**leading**

Pkg  
**leading**  
**leading** is ignored.

_for HTML output:_

```
1 \@ProvidesPackageDrop{leading}[2008/12/11]
2 \newcommand\leading[1]{}
```

---

**File 191**  
**lwp-letterspace.sty**

§ 290  
**Package**  
**letterspace**

_(Emulates or patches code by R SCHLICHT.)_

Pkg  
**letterspace**

**letterspace** is a subset of microtype, which is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

_for HTML output:_

```
1 \@ProvidesPackageDrop{letterspace}[2018/01/14]
2 \newcommand*\letterspace{\letterspace}
3 \newcommand\text\letterspace[2][]{\letterspace}
4 \def\text\letterspace[#2]{\letterspace}
5 \newcommand*\lsig[1][#1]
```

---

**File 192**  
**lwp-lettrine.sty**

§ 291  
**Package**  
**lettrine**

_(Emulates or patches code by DANIEL FLIPO.)_

Pkg  
**lettrine**

Emulated.

_for HTML output:_

```
1 \@ProvidesPackageDrop{lettrine}[2018-08-28]

The initial letter is in a `<span>` of class `lettrine`, and the following text is in a `<span>` of class `lettrinetext`. `\lettrine[(keys)]{(letter)}{(additional text)}`

2 \DeclareDocumentCommand\lettrine{o m m}{%
3 \InlineClass[lettrine](#2)\InlineClass[lettrinetext](#3) % extra space
```
\\newcounter{DefaultLines}
\setcounter{DefaultLines}{2}
\\newcounter{DefaultDepth}
\\newcommand*{\DefaultOptionsFile}{\relax}
\\newcommand*{\DefaultLoversize}{0}
\\newcommand*{\DefaultLraise}{0}
\\newcommand*{\DefaultLhang}{0}
\\newdimen\DefaultFindent
\\setlength{\DefaultFindent}{\z@}
\\newdimen\DefaultNindent
\\setlength{\DefaultNindent}{0.5em}
\\newdimen\DefaultSlope
\\setlength{\DefaultSlope}{\z@}
\\newdimen\DiscardVskip
\\setlength{\DiscardVskip}{0.2\p@}
\\newif\IfLettrineImage
\\newif\IfLettrineOnGrid
\\newif\IfLettrineRealHeight
\\newcommand*{\LettrineTextFont}{\scshape}
\\newcommand*{\LettrineFontHook}{}
\\newcommand*{\LettrineFont}{\Intrass{\lettrine}{#1}}
\\newcommand*{\LettrineFontEPS}{\inrudegraphics[height=1.5ex]{#1}}

---

File 193  lwarp-lineno.sty

§ 292  Package  lineno

(Emulates or patches code by Stephan I. Böttcher.)

Pkg  lineno  lineno is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop[lineno][2005/11/02]

2 \newcommand*{\resetlinenumber}{1}[@ne]{}

3 4 \def\linenumber{}% 5 \@ifnextchar[{{\resetlinenumber}}% 6 \@ifstar{\resetlinenumber}{}}% 7 \}

8 9 \newcommand*{\nolinenumber}{% 10 11 \@namedef{linenumber}{\par\linenumber*} 12 \@namedef{runninglinenumber}{\par\runninglinenumber*} 13 14 \def\endlinenumber{\par} 15 \let\endrunninglinenumber\endlinenumber 16 \let\endpagewise\linenumber\endlinenumber 17 \expandafter\let\csname endlinenumber*\endcsname\endlinenumber 18 \expandafter\let\csname endrunninglinenumber*\endcsname\endlinenumber
\let\endlinenumber\linenumber
\def\pagewiselinenumber{\linenumber\setpagewiselinenumber}
\def\runninglinenumbers{\setrunning\linenumber\linenumber}
\def\setpagewiselinenumber{}
\def\setrunninglinenumbers{}
\def\linenomath{}
\@namedef{linenomath*}{}
\def\endlinenomath{}
\expandafter\csname endlinenomath\endcsname\endlinenomath
\@namedef{linenumbers*}{\linenumbers*}
\expandafter\csname endintnum\linenumbers\endcsname\endlinenomath
\newcommand\lolinename{\firstlinenumber{\linenumber}}
\newcommand\modulolinename{s o}{\chardef\lolinename=5}
\newcommand\modulolinenumbers[]{}
\newcommand\firstlinenumber[1]{}
\newcommand\internallinenumbers{}
\let\endinternallinenumbers\linenumbers
\@namedef{internallinenumbers*}{\internallinenumbers*}
\expandafter\let\csname endinternallinenumbers\endcsname\endlinenomath
\newcommand\linenomark[]%(line number reference for \detokenize\expandafter{#1})
\newcommand\linenomark[]%(\linewidth\.linenumbers{}\@ifnextchar[\linenumbers{\linenumbers*})
\newcommand\linenomark[]%(\linewidth\.linenumbers{}\@ifnextchar[\linenumbers{\linenumbers*})
\newcommand\linenomark[]%(\linewidth\.linenumbers{}\@ifnextchar[\linenumbers{\linenumbers*})
\texttt{lolinename}
\begin{quote}
{lolinename}
\end{quote}
\setlength{\linenumbersep}
\newdimen\linenumberwidth
\newdimen\quotelinenumbersep
\quotelinenumbersep=\linenumbersep
\let\quotelinenumberfont\linenumberfont
\def\linenumberfont{\norma\linenumberfont\tiny\sffamily}
\linenumberwidth=10pt
\linenumbersep=10pt
\def\thenumber{}
\def\LineNumber{}
\def\makeLineNumber{}
\def\makeLineNumberLeft{}
\def\makeLineNumberRight{}
\def\makeLineNumberOdd{}
\def\makeLineNumberEven{}
\def\makeLineNumberRunning{}
\newenvironment{numquote} {...}{...}
\newenvironment{numquotation} {...}{...}
\newenvironment{numquote*} {...}{...}
\newenvironment{numquotation*} {...}{...}
\newdimen\bframeru
\bframeru=\fboxru
\newdimen\bframesep
\bframesep=\fboxsep
\newenvironment{bframe} {
\LWR@forceminwidth{\bframeru}\
\B{\centering
border:\LWR@print\linenumberwidth{\LWR@at\linenumberwidth\atleastonept} so; \%
padding:\LWR@print\linenumbersep{\bframesep}%
}}{\endB{\centering}}

File 194 \larp-lips.sty

§ 293 Package \lips

(Emulates or patches code by Matt Swift.)

\% \LWR@ProvidesPackageDrop{\lips}
\PackageInfo{lwarp}{Using the lwarp version of package ‘lips’.}
\ProvidesPackage{lwarp-lips}[2001/08/31]
\NewDocumentCommand{\Lips}{}{\texte/l.Var/l.Varipsis}
\NewDocumentCommand{\BracketedLips}{}{[\texte/l.Var/l.Varipsis]}
\Dec/l.Varet\o/l.Varips\Lips
\Dec/l.Varet\o/l.Varips\BracketedLips
\ProcessOptions\re/l.Varax
\newcommand \LPNobreakList {}

\warp

\warp
\PackageInfo{lwarpMOlNvaristingsNsty}{File 195 listings}
\PackageInfo{lwarpMOlNvaristingsNsty}{listings}

\section*{listings}

\textit{(Emulates or patches code by Carsten Heinz, Brooks Moses, Jobst Hoffmann.)}

\textbf{listings} is supported with some limitations. Text formatting is not yet supported.

\begin{itemize}
  \item \textbf{for HTML output:}
  \begin{verbatim}
  \begin{warpHTML}
  \LWR@ProvidesPackagePass{listings}[2018/09/02]
  \end{warpHTML}
  \end{verbatim}
\end{itemize}

Force flexible columns. Fixed columns inserts spaces in the PDF output.

\begin{itemize}
  \item \textbf{listset}
  \begin{verbatim}
  \lstset {(options)}
  \end{verbatim}
  \begin{verbatim}
  \Use the listings literate option to replace HTML entities:
  \begin{verbatim}
  \def\lstset@#1{\endgroup%
  %   \ifx@empty#1%
  %     \empty%
  %   %\else%
  % \setkeys{lst}{%
  \end{verbatim}
\end{verbatim}
\end{itemize}
\lst@Init  \{\textit{backslash-processing}\} Done at the start of a listing.

\renewcommand{\lst@Init}[1]{
Perform the listings initialization:
\LWR@traceinfo{\lst@Init}\%
\renewcommand*{\@captype}{\varst/l.Varisting}\%

Avoids extra horizontal space:
\def{\lst@frame}{}\%
\LWR@traceinfo{finished \lst@Init}\%
\lst@ifdisp/acestyle\%

Creating a display.
Disable line numbers, produce the \texttt{<pre>}, then reenable line numbers.
\LWR@traceinfo{About to create verbatim.}\%
\let\lst@h@EveryPar\relax\%
\LWR@forcenewpage
\LWR@atbeginverbatim{2}{program/l.Varisting}\%

Inline, so open a \texttt{<span>}:
\ifbool{\LWR@verbtags}{\LWR@htmltag{span class="inlineprogramlisting"}}{}\%
\fi\%
}

\lst@DeInit  Done at the end of a listing.
\renewcommand*{\lst@DeInit}{\lst@ifdisp/acestyle\%}
Creating a display.
Disable line numbers, produce the </pre>, then reenable line numbers:

52 \let\lsthk@EveryPar\relax%
53 \LWR@afterendverbatim{0}%
54 \let\lsthk@EveryPar\LWR@orig\lsthkEveryPar%
55 \else%

Inline, so create the closing </span>:

56 \ifbool{\LWR@verbtags}{\noindent\LWR@htm/l.Vartag}{}%
57 \fi%

Final listings deinit:

58 \LWR@origlst@DeInit%
59 }

\lst@MakeCaption  {(t/b)}
This is called BOTH at the top and at the bottom of each listing.
Patched for \lwp.

60 \def\lst@MakeCaption#1{%
61 \LWR@traceinfo{MAKING CAPTION at #1}%
62 \lst@ifdisplaystyle
63 \LWR@traceinfo{making a listings display caption}%
64 \ife #1%
65 \ife\lst@caption\empty\expandafter\lst@HRefStepCounter \else
66 \expandafter\refstepcounter
67 \fi {\lst@listing}%
68 \LWR@traceinfo{About to assign label: !\lst@label!}%
69 \% \ife\lst@label\empty\else
70 \% \label{\lst@Label}\fi
71 \LWR@traceinfo{Finished assigning the label.}%
72 \let\lst@arg\lst@intname \lst@ReplaceIn\lst.arg\lst@filenamerpl
73 \global\let\lst@name\lst.arg \global\let\lst@title\lst@name
74 \lst@ifnoloop\else
75 \ife\lst@caption\empty
76 \ife\lst@caption\empty\else \def\lst@temp{ }%
77 \fi\else\lst@intname\empty \else \def\lst@temp{ }%
78 \fi\else\lst@intname\lst@temp \else

This code places a contents entry for a non-float. This would have to be modified for \lwp:

79 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
80 \% \addcontentsline{lof}{lstlisting}{\lst@name}
81 \fi\fi
82 \fi
83 \else

This would have to be modified for \lwp:

84 \LWR@traceinfo{addcontents lst@caption: -\lst@caption-}%
85 \% \addcontentsline{lof}{lstlisting}{\lst@caption}
86 {\protect\numberline{the}the\lstlisting}%
87 {\protect\ignorespaces \LWR@isolate(\lst@caption) \protect\relax}%
These space and box commands are not needed for HTML output:

New lwarp code to create a caption:

New lwarp code to create a title:

Not needed for lwarp:

line numbers  Patched to keep left line numbers outside of the left margin, and place right line
numbers in a field \VerbatimHTMLWidth wide.
For now, \texttt{lwarpl} places left line numbers inline. Ideally the entire line would be moved to the right, but conflicts with list indenting occurs.

\begin{verbatim}
% \LWR@orig/l.Var/l.Varap{
\LWR@orignormalfont
\lst@numberstyle{\the\lst@number}
kern\lst@numbersep
}%
right:
def\lst@PlaceNumber{\LWR@orig\LWR@orignormalfont
\kern 6in \kern\lst@numbersep
\lst@numberstyle{\the\lst@number}}%
}{\PackageError{Listings}{Numbers #1 unknown}@ehc}}%
\end{warpHTML}
\end{verbatim}

---

**File 196**  \texttt{lwarpl-listliketab.sty}

§ 295 Package \texttt{listliketab}

\texttt{listliketab} is emulated.

\begin{verbatim}
\ProvidesPackageDrop{listliketab}[2005/01/09]
\newcommand*{\storestyleof}{[]}
\newcommand*{\storeliststyle}{[]}
\newenvironment{listliketab}{}{}
\end{verbatim}

---

**File 197**  \texttt{lwarpl-ljtjext.sty}

§ 296 Package \texttt{ljtjext}

(Emulates or patches code by \texttt{The \LaTeX-ja Project Team}.)

\texttt{ljtjext} is patched for use by \texttt{lwarpl}.

\begin{verbatim}
\ProvidesPackagePass{ljtjext}[2018/10/07]
\protected\def\yoko{%
\directlua{latexja.direction.set_list_direction(4, 'yoko')}%
}\
\protected\def\tate\yoko
\protected\def\dtou\yoko
\protected\def\utod\yoko
9\define@key{ljtj}{japaram}{direction}{}
10
11\yoko
12
13\DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
\end{verbatim}
\DeclareDocumentCommand{\layoutfloat}{d() o m}{}
\DeclareDocumentCommand{\DeclareLayoutCaption}{m<> d() o}{}
\LetLtxMacro{\pcaption}{\caption}
\DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
\let\captiondir=\re\\captiondir
\RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{} O{t} m}{\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}{\endLWR@HTML@sub@minipage}
\RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{} O{t} m +m}{\LWR@traceinfo{parbox of width #4}\
\begin{minipage}{[#2][#3][#4][#5]}{#6}\
\end{minipage}\
}{\parbox{[#2][#4]}{}}
\RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{\g/l.Varoba/l.Var\boo/l.Vartrue{LWR@minipagefu/l.Var/l.Varwidth}\
\parbox{#2}{#4}\
}

---

File 198  \texttt{lwarplongtable.sty}

§ 297  Package  \texttt{longtable}

\textit{(Emulates or patches code by David Carlisle.)}

\texttt{Pkg longtable}  \texttt{longtable} is emulated.

\texttt{for HTML output:}  \texttt{1 \LWR@ProvidesPackageDrop{longtable}[2014/10/28]}

Use one of either \texttt{\endhead} or \texttt{\endfirsthead} for both print and HTML, and use a \texttt{lwarpprinton} macro to disable the other head phrase, and also the \texttt{\endfoot} and \texttt{\endfirstfoot} phrases. (See section 9.10.4 if using \texttt{threeparttablex}.)
Use the \warpprinton macro instead of the warpprint environment. Doing so helps avoid “Misplaced \noalign.” when using \begin{warpprint}.

\begin{longtable}{[column specifiers]}
[...]
\endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[...]
\endhead % or \endfirsthead
[...]
\endfoot
[<lastfoot macros>] \endlastfoot

\end{longtable}

⚠️ Misplaced \noalign Use the \warpprintonly macro instead of the warpprint environment. Doing so helps avoid “Misplaced \noalign.” when using \begin{warpprint}.

⚠️ \kill \kill is ignored, place a \kill line inside

\begin{warpprint} ... \end{warpprint}

or place it inside \warpprintonly.

⚠️ lateximage longtable is not supported inside a lateximage.

See:
http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable

Used to detect more than one of \endhead and \endfirsthead in use for HTML at the same time.

2 \newbool(LWR@longtable@havehead)
3 \boolfalse(LWR@longtable@havehead)

Env longtable * \[ ⟨horizalignment⟩ \] \{(colspec)\} Emulates the longtable environment.

Per the caption package, the starred version steps the counter per caption. The un-starred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are ignored.

4 \newenvironment{longtable*}[2][]{% 
5 \LWR@floatbegin{table}% 
6 \setcaptiontype{\LTcaptype}% 
7 \caption@setoptions{longtable}% 
8 \caption@setoptions@{longtable}% 
9 \caption@LT@setup% 
10 \booltrue(LWR@starredlongtable)% 
11 \boolfalse(LWR@longtable@havehead)% 
12 \let\captionlistentry\LWR@LTcaptionlistentry% 
13 \tabular[#2] 
14 ) 
15 \endtabular\LWR@floatend) 
16
\newenvironment{longtable}[2][]{% 
  \LWAR@floatbegin{table}% 
  \setcaptiontype{LTcotype}% 
  \caption@setoptions{longtable}% 
  \caption@setoptions[@longtable]% 
  \caption@LT@setup% 
  \refstepcounter{LTcaptype}% 
  \boolfalse{LWAR@longtable@havehead}% 
  \let\captionlistentry\LWAR@LTcaptionlistentry% 
  \tabular[#2]% 
  \endtabular\LWAR@floatend}

Provided for compatibility, but ignored:

\newcounter{LTchunksize}

Error for heads which should have been in \warpprinton:

\newcommand*{\LWAR@longtable@headererror}{% 
  \PackageError{L warp}{For longtable:\MessageBreak 
    1: Keep either one of an \protect\endhead\space or \protect\endfirsthead\space \MessageBreak 
    \space phrase as-is, to be used by both print and HTML. \MessageBreak 
    2: Place any other \protect\end... phrases inside a \MessageBreak 
    \space \protect\warpprintonly\space macro, \MessageBreak 
    to be ignored by HTML. \MessageBreak 
    3: Add a final footer for HTML at the end of the table \MessageBreak 
    \space inside a \protect\warpprinton\space macro. \MessageBreak 
    This can be \MessageBreak 
    \space a copy of an \protect\endfoot\space or \protect\endfirstfoot\space \MessageBreak 
    \space phrase, \MessageBreak 
    \space but without the actual \protect\endfoot\space \MessageBreak 
    or \protect\endfirstfoot\space \MessageBreak 
    \space macros. If using threeparttablex, add\MessageBreak 
    \space \protect\insertTableNotes\space here, \MessageBreak 
    optionally with \MessageBreak 
    \space \protect\useMinipageWidths\space in front. \MessageBreak 
    See the L warp documentation regarding longtables\MessageBreak 
    and threeparttablex.}%

{See the L warp documentation regarding longtables and threeparttablex.}

Error if more than one of \endhead or \endfirsthead is outside of \warpprintonly.

\newcommand*{\LWAR@longtable@maybeheadererror}{% 
  \iffalse (LWAR@longtable@havehead)% 
  \fi (LWAR@longtable@headererror)%
  {% 
    \booltrue{LWAR@longtable@havehead}% 
    \LWAR@tabularendofline% throws away options //dim] and //*/
  }%
Error if more than one of these is outside of \texttt{warpprint}.

62 \def\endhead{\LWR@longtable@maybeheaderror}
63 \def\endfirsthead{\LWR@longtable@maybeheaderror}

Error if ANY of these is outside of \texttt{warpprint}.

64 \def\endfoot{\LWR@longtable@headererror}
65 \def\endlastfoot{\LWR@longtable@headererror}
66 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularnewline}
67 \LWR@formatted{\tabularnewline}
68 \newcommand{\settlongtables}{% Obsolete command, does nothing.
69 \newlength{\Lleft}
70 \newlength{\Lright}
71 \newlength{\Lpre}
72 \newlength{\Lpost}
73 \newlength{\Lcapwidth}
74 \LetLtxMacro{\LORig\kill}{\kill}
75 \renewcommand*{\kill}{\LWR@tabularendofline}
76 \appto\LWR@restoreorigformatting{%
77 \LetLtxMacro{\kill}{\LORig\kill}%
78 }

\begin{file}{199}\texttt{lwarf-\textbackslash lscape.sty}\end{file}

\section*{\texttt{lscape}}

(Emulates or patches code by D. P. Carlisle.)

\texttt{lscape} is emulated.

\texttt{lscape} is emulated by \texttt{lwarf}. Discard all options for \texttt{lwarf-\textbackslash lscape}.

1 \LWR@ProvidesPackageDrop{\texttt{lscape}}[2000/10/22]
2 \newenvironment*{\texttt{landscape}}{}{}

\begin{file}{200}\texttt{lwarf-\textbackslash ltablex.sty}\end{file}

\section*{\texttt{ltablex}}

(Emulates or patches code by Anil K. Goel.)

\texttt{ltablex} is emulated by \texttt{lwarf}.
Relies on \texttt{tabularx}.

\begin{verbatim}
\RequirePackage{tabularx}
\LWR@ProvidesPackageDrop{/l.Vartab/l.Varex}[2014/08/13]
\DeclareDocumentEnvironment{tabularx}{m o m}{\longtable(#3)}{\endlongtable}
\DeclareDocumentEnvironment{tabularx*}{m o m}{\longtable(#3)}{\endlongtable}
\newcommand*{\keepXCo/l.Varsemns}{}
\newcommand*{\convertXCo/l.Varsemns}{}
\end{verbatim}

---

\texttt{lwp\textunderscore ltcaption.sty}

\section*{\texttt{ltcaption}}

(Emulates or patches code by AXEL SOMMERFELDT.)

\texttt{lwcaption} is emulated.

\texttt{ltcaption} is already defined by \texttt{lwp}.

\texttt{longtable*} is already defined by \texttt{lwp-longtable}.

\begin{verbatim}
\newlength{\LTcapskip}
\newlength{\LTcapleft}
\newlength{\LTcapright}
\newcommand*{\LTcapmarginsfa/l.Varse}{}
\end{verbatim}

---

\texttt{lwp\textunderscore ltxgrid.sty}

\section*{\texttt{ltxgrid}}

\texttt{ltxgrid} is ignored.

\begin{verbatim}
\newcommand*{\onecolumngrid}{}
\newcommand*{\twocolumngrid}{}
\newcommand*{\removestuff}{}
\newcommand*{\addstuff}[2]{}
\newcommand*{\replacestuff}[2]{}
\end{verbatim}
File 203  \texttt{lwarp-ltxtable.sty}

§ 302  \textbf{Package ltxtable}

\texttt{Pkg  ltxtable}  \texttt{ltxtable} is emulated.

\textbf{⚠️ table numbering}  The print version does not seem to honor \texttt{longtable*} from the \texttt{caption} package, while \texttt{lwarp} does.

\texttt{for HTML output:}  1 \texttt{\LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]}

\begin{verbatim}
\LTXtable \{(width)\} \{\langle file\rangle\}
\end{verbatim}

File 204  \texttt{lwarp-lua-check-hyphen.sty}

§ 303  \textbf{Package lua-check-hyphen}

\texttt{Pkg  lua-check-hyphen}  \texttt{lua-check-hyphen} is ignored.

\texttt{for HTML output:}  1 \texttt{\LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19]}

\begin{verbatim}
\newcommand*{\LuaCheckHyphen}[]{}
\end{verbatim}

File 205  \texttt{lwarp-lua-visual-debug.sty}

§ 304  \textbf{Package lua-visual-debug}

\texttt{Pkg  lua-visual-debug}  \texttt{lua-visual-debug} is ignored.

\texttt{for HTML output:}  1 \texttt{\LWR@ProvidesPackageDrop{lua-visual-debug}[2016/05/30]}

File 206  \texttt{lwarp-luacolor.sty}

§ 305  \textbf{Package luacolor}

\texttt{Pkg  luacolor}  \texttt{luacolor} is ignored.

\texttt{for HTML output:}  1 \texttt{\LWR@ProvidesPackageDrop{luacolor}[2016/05/16]}

\newcommand{\luacolorProcessBox}[1]{

\item[\textcolor{\luatodonotes@currentbordercolor}{\textcolor{\luatodonotes@currentbackgroundcolor}{\arabic{\numberoftodonotes}}}]\marginpar{\@todonotes@drawMarginNote}
}

\renewcommand{\luatodonotes@drawMarginNoteWithLine}{\fcolorbox{\luatodonotes@currentbordercolor}{\luatodonotes@currentbackgroundcolor}{\arabic{\numberoftodonotes}}}

\renewcommand{\@todonotes@drawInlineNote}{%
{\@todonotes@currentbordercolor}%
{\@todonotes@currentbackgroundcolor}%
{%}%
%}
\fcolorboxBlock%
}

\renewcommand{\@todonotes@drawInlineNoteWithLine}{%
{\@todonotes@currentbordercolor}%
{\@todonotes@currentbackgroundcolor}%
{%}%
%}
\fcolorboxBlock%
}

\renewcommand{\@todonotes@drawInLineNote}{%
%}
\fcolorboxBlock%
}

\renewcommand{\@todonotes@drawInLineNoteWithLine}{%
%}
\fcolorboxBlock%
}

\let\LWR@ProvidesPackagePass\@todonotes@additiona/l.Varedfagridfa/l.Varse
\if@todonotes@disabled
\else
\newcommand{\ext@todo}{tdo}
\renewcommand{\@todo}[2]{\hypertocf{\todo}{#1}{\todo}{#2}}
\renewcommand{\LWRTODONOTES@orig@todototoc}{%
\phantomsection%
\LWRTODONOTES@orig@todototoc%
}
\renewcommand{\@todonotes@drawMarginNoteWithLine}{\fcolorbox{\@todonotes@currentbordercolor}{\@todonotes@currentbackgroundcolor}{\arabic{\@todonotes@numberoftodonotes}}}
\newcommand{\todonotes@drawMarginNote}{% 
  \if@todonotes@authorgiven% \@todonotes@author\par% \fi% \arabic{@todonotes@numberoftodonotes}: % \fcolorbox% \{@todonotes@currentbordercolor% \{@todonotes@currentbackgroundcolor% \% \@todonotes@sizecommand% \@todonotes@text % \}%\}%% \renewcommand{\missingfigure}[2][]% \setkeys{todonotes}{#1}% \addcontentsline{todo}{todo}{\@todonotes@MissingFigureText: #2}% \fcolorboxBlock% \{@todonotes@currentbordercolor% \}@todonotes@currentfigcolor% \% \setlength{\fboxrule}{4pt}% \fcolorbox{red}{white}{Missing figure} \quad #2% \}% \LetLtxMacro{\LWRTODONOTES@orig@todocommon}{\@todocommon} \RenewDocumentCommand{\@todocommon}{m m}{% \begingroup% \renewcommand*{\phantomsection}{}% \LWRTODONOTES@orig@todocommon{#1}{#2}% \endgroup% \renewcommand{\@todoarea}[3][]{% \@todonotes@areaselectedtrue% \@todocommon[#1][#2]% \@todonotes@textmark@highlight[#3]% \zref@/ @todonotes@arabic{@todonotes@numberoftodonotes}@end}% \DeclareDocumentCommand{\@todonotes@textmark@highlight}{m}{% \InlineClass[background:\LWR@origpunkt{B3FFB3}][highlight][#1]% }% \fi% \if@todonotes@disabled
§ 307 Package \texttt{magaz}

\texttt{magaz} \textit{is emulated}.

\texttt{Pkg magaz} \texttt{magaz} \textit{is emulated.}

\texttt{for \textit{HTML output:}}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{magaz}[2011/11/24]
2 \newcommand\FirstLine[1]{%
3 \begingroup%
4 \FirstLineFont{%
5 \LWR@textcurrentcolor{%
6 \LWR@textcurrentfont{%
7 \textshape{#1}%
8 }%
9 }%
10 }%
11 \endgroup%
12 }
13 \providecommand\FirstLineFont{\scshape}
\end{verbatim}

§ 308 Package \texttt{makeidx}

\texttt{(Emulates or patches code by \LaTeX\ Project Team.)}

\texttt{Pkg makeidx} \texttt{makeidx} \textit{is patched for use by \texttt{lwp}.}

\texttt{for \textit{HTML output:}}

\begin{verbatim}
1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]
\AtBeginDocument
\@wrindex is redefined \AtBeginDocument by the \texttt{lwp} core.

\printindex
\end{verbatim}
lwarp

File 210  \texttt{lwp-\texttt{manyfoot}.sty}

§ 309  Package \texttt{manyfoot}

\texttt{Pkg} \texttt{manyfoot}  \texttt{manyfoot} is emulated.

\texttt{bigfoot, manyfoot}  Verbatim footnotes are not yet supported.

If using the \texttt{bigfoot} package, and possibly also \texttt{manyfoot}, problems may occur with counter allocation because \texttt{lwp} uses many counters, and there is a difference in how counters numbered 256 and up are handled in pdfl\TeX. With bigfoot this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining \texttt{bigfoot} or \texttt{manyfoot} footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use X\LaTeX{} or Lua\LaTeX{} instead of pdfl\TeX{}.

\texttt{lwp}’s emulation of \texttt{bigfoot} uses \texttt{manyfoot}, so some of the \texttt{bigfoot} enhancements are included here.

The \texttt{bigfoot} “default” footnote is ignored, using the \texttt{lwp} version instead.

\texttt{for HTML output:}

\begin{verbatim}
\texttt{1 }\texttt{\LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]}
\texttt{2 }\texttt{\RequirePackage{nccfoots}}
\texttt{3 }\texttt{\newcommand{\extrafootnoterule}{}}
\texttt{4 }\texttt{\let\defaultfootnoterule\footnoterule}
\texttt{5 }\texttt{\newcommand*{\SelectFootnoteRule}[2][0]{}}
\texttt{6 }\texttt{\newcommand{\footnoterulepriority}{1}}
\texttt{7 }\texttt{\newcommand{\SetFootnoteHook}{}}
\texttt{8 }\texttt{\@on{\preamb}{\SetFootnoteHook}}
\texttt{9 }\texttt{\newcommand{\SplitNote}{}}
\texttt{10 }\texttt{\newcommand*{\ExtraParaSkip}[1]{}}
\texttt{11 }\texttt{\newcommand*{\newfootnote}[2][p]{}}
\texttt{12 }\texttt{\ifstrequa{#2}{defau}{}{%} not “default”}
\texttt{13 }\texttt{\expandafter{\newbox\csname LWR@footnote#2box\endcsname}}
\texttt{14 }\texttt{\appto{\LWR@printpendingfootnotes}{%}
\texttt{15 }\texttt{\LWR@@printpendingfootnotes{footnote#2}{}%}
\texttt{16 }\texttt{\long\csdef{Footnotetext#2}##1##2{%}
\texttt{17 }\texttt{\NCC@makefnmark{##1}%}
\texttt{18 }\texttt{\endcsname}}
\end{verbatim}
For bigfoot, the footnote commands may be appended with one or two plusses or one or two minuses, which are ignored in HTML.

\newcommand*{\DeclareNewFootnote}[2][plain]{%
  \@ifnextchar[{
    \LWR@manyfoot@dec{#1}{#2}}%
  \LWR@manyfoot@dec{#1}{#2}[arabic]}%
\def\LWR@manyfoot@dec#1#2[#3]{%
  \ifstreq{#2}{default}{% not "default"
    \newfootnote[#1]{#2}%
    \newcounter{footnote#2}%
    \setcounter{footnote#2Reset}{0}%
    \csdef{thefootnote#2}{%}
    \expandafter\NewDocumentCommand\csname footnote#2\endcsname{t{+}t{+}t{-}t{-}}{%
      \stepcounter{footnote#2}%
      \protected@edef{\thefnmark}{\csname thefootnote#2\endcsname}%
      \@footnotemark%
      \csuse{Footnotetext#2}{\@thefnmark}% absorbs the footnote contents%
    }%
    \csdef{footnotemark#2}{%}
    \csdef{footnotetext#2}{%}
    \csdef{Footnotemark#2}{%}
    \csdef{Footnote#2}{%}
  }% not "default"
\}
\@onlypreamble\DeclareNewFootnote
lwpmargin.sty

§ 310 Package marginal

Pkg marginal marginal is emulated.

for HTML output:

\LWR@ProvidesPackageDrop{marginal}
\newcommand*{\show/marginal}{ }
\newcommand*{\en/marginal}{ }
\newcommand*{\onestem/marginal}{ }

lwpmarginfit.sty

§ 311 Package marginfit

Pkg marginfit marginfit is ignored.

for HTML output: Discard all options for lwp-marginfit:

\LWR@ProvidesPackageDrop{marginfit}[2018/06/08]

lwpmarginfix.sty

§ 312 Package marginfix

(Emulates or patches code by Stephen Hicks.)

Pkg marginfix Emulated.

for HTML output: Discard all options for lwp-marginfix:

\LWR@ProvidesPackageDrop{marginfix}[2013/09/08]
\newcommand*{\marginskip}{ }
\newcommand*{\c/margin}{ }
\newcommand*{\softc/margin}{ }
\newcommand*{\extendmargin}{ }
\newcommand*{\mparshift}{ }
\newdimen\marginheightadjustment
\newdimen\marginposadjustment
\newcommand*{\b/margin}{ }
\newcommand*{\unb/margin}{ }
\newcommand*{\marginphantom}{ }
lwarp

File 214  lwarp-marginnote.sty

§ 313  Package  marginnote

(Emulates or patches code by Markus Kohl.)

Pkg  marginnote  Emulated.

for HTML output:  Discard all options for lwarp-marginnote:

1 \ProvidesPackageDrop{marginnote}[2018/08/09]

2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}}

3 \newcommand{\marginnoteleftadjust}{}
4 \newcommand{\marginnoterightadjust}{}
5 \newcommand{\marginnotetextwidth}{
6 \let\marginnotetextwidth\textwidth
7 \newcommand{\marginnotevadjust}{}
8 \newcommand{\marginfont}{}
9 \newcommand{\raggedleftmarginnote}{}
10 \newcommand{\raggedrightmarginnote}{}

File 215  lwarp-marvosym.sty

§ 314  Package  marvosym

(Emulates or patches code by Thomas Henlich, Mojca Miklavc.)

Pkg  marvosym  marvosym is patched for use by lwarp.

for HTML output:  Discard all options for lwarp-marvosym:

1 \ProvidesPackagePass{marvosym}[2011/07/20]

2 \renewcommand{\mvchr}[1]{%
3 \begin{lateximage}*[\symbol{#1}][marvosym #1]%
4 \mv\char#1%
5 \end{lateximage}%
6 %}
7 %
8 \renewcommand{\textmvs}[1]{%
9 \begin{lateximage}%
10 \mvs #1%
11 \end{lateximage}%
12 %}
§ 315 Package \texttt{mathtools}

(Emulates or patches code by Morten Hogholm, Lars Madsen.)

\texttt{mathtools} is patched for use by lwarp.

\textbf{⚠️ numbering, italics} showonlyrefs and mathic are disabled.

\textbf{for HTML output:}

\begin{verbatim}
\LWR@ProvidesPackagePass{mathtools}[2018/01/08]
2 \RequirePackage{graphicx}
3 \MHInterna/l.VarSyntaxOn
\end{verbatim}

Forces showonlyrefs off because lwarp uses cleveref, which is not compatible with showonlyrefs.

\begin{verbatim}
4 \renewcommand*{\MT_showon/l.Varyrefs_true:}{\MT_showon/l.Varyrefs_fa/l.Varse:}
5 \mathtoolsset{showonlyrefs=false}
\end{verbatim}

Forces math italic correction off. Not patched for lwarp.

\begin{verbatim}
6 \renewcommand*{\MT_mathic_true:}{\MT_mathic_fa/l.Varse:}
7 \mathtoolsset{mathic=false}
8 \MHInterna/SyntaxOff
\end{verbatim}

§ 316 Package \texttt{mcaption}

(Emulates or patches code by Stephan Hennig.)

\texttt{mcaption} is nullified.

\textbf{for HTML output:}

Discard all options for lwarp-mcaption:

\begin{verbatim}
\LWR@ProvidesPackageDrop{mcaption}[2009/03/13]
2 \newenvironment{margincap}{}{}
3 \newcommand*{\margincapa/l.Varign}{}
4 \newlength{\margincapsep}
\end{verbatim}
File 218  lwarp-mdframed.sty

§ 317  Package mdframed

(Emulates or patches code by Marco Daniel, Elke Schubert.)

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

§ 317.1  Limitations

support Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for mdframed environments and frame titles.

⚠️ loading When used, lwarp loads mdframed in HTML with framemethod=none.

font For title font, use

\frametitlefont=\textbf,

instead of

\frametitlefont=\bfseries,

where \textbf must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the mdframed source). Since lwarp does not support \bfseries and friends, only one font selection may be made at a time.

\thetitlefont \thetitlefont is not supported, since the following text is not in braces in the mdframed source.

ignored options userdefinedwidth and align are currently ignored.

css classes Environments created or encapsulated by mdframed are enclosed in a <div> of class mdframed, and also class md<environmentname> for new environments.

Frame titles are placed in a <div> of class [mdframedtitle]. Subtitles are in a <div> of class [mdframedsubtitle], and likewise for subtitles.

Pre-existing hooks are used to patch extra functions before and after the frames.
§ 317.2  **Package loading**

_for HTML output:_

1 \RequirePackage{xcolor}% for \convertcolorspec
2 3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]

Do not require Tikz or pstricks:

4 \LWR@origRequirePackage[framemethod=none]{mdframed}

§ 317.3  **Patches**

Patch to remove PDF formatting and add HTML tags:

5 \AtBeginDocument{
6 \def\mdf@triv#1{%  
7 \edef\mdf@temp{%  
8 \% \topsep=\the\topsep\relax%  
9 \% \partopsep=\the\partopsep\relax%  
10 \% \parsep=\the\parsep\relax%  
11 \}%  
12 \% \setlength{\topsep}{#1}\%  
13 \% \topskip\z@%  
14 \% \partopsep\z@%  
15 \% \parsep\z@%  
16 \% @nmbrlistfalse%  
17 \% @trivlist%  
18 \% \labelwidth\z@%  
19 \% \leftmargin\z@%  
20 \% \itemindent\z@%  
21 \let@itemlabel\empty%  
22 \def\makelabel#1{##1}%  
23 \% \item\relax\mdf@temp\relax%  
24 )  
25 
26 \renewcommand*{\endmdf@trivlist}{%  
27 \LWR@traceinfo{endmdf@trivlist}%  
28 \% \endtrivlist%  
29 \LWR@listend%  
30 }  
31 )% AtBeginDocument

§ 317.4  **Initial setup**

To handle css and paragraphs, patch code at start and end of environment and contents. \LWR@print@raggedright helps avoid hyphenation.

32 \mdfsetup{
33 startcode={\LWR@mdframedstart\LWR@print@raggedright},
34 endcode={\LWR@mdframedend},
35 startinnercode={\LWR@startpars\LWR@print@raggedright},
36 endinnercode={\LWR@stoppars},
37 }
§ 317.5 Color and length HTML conversion
\LWR@mdfprintcolor

\{\mdfcolorkey\}

Given the mdframed key, print the color.

\newcommand*{\LWR@mdfprintcolor}[1][]{%
\convertcolor{\@nameuse{mdf@#1}}{HTML}{\LWR@tempcolor}
\LWR@origpound{\LWR@tempcolor}
}%

\LWR@mdfprintlength

\{\mdflengthkey\}

Given the mdframed key, print the length.

\newcommand*{\LWR@mdfprintlength}[1][]{%
\LWR@ forceminwidth{\@nameuse{mdf@#1@/l.Varength}}%
\LWR@print/l.Varength{\LWR@at/l.Vareastonept}
}%

§ 317.6 Environment encapsulation
\LWR@mdframedstart

Actions before an mdframe starts.

Encapsulate a frame inside a <div> of the desired class.

\newcommand*{\LWR@mdframedstart}[]{%
\LWR@traceinfo{LWR@mdframedstart start}%
\LWR@stoppars%
}

Open a <div> and with custom class and custom style. A BlockClass environment is not used because this <div> is created by the mdframed startcode and endcode settings, which do not properly nest the <div> inside the mdframed environment.

\LWR@htm/l.Vartagc{div class="mdframed%}
\ifdefstring{\LWR@mdthisenv}{mdframed}{
" \LWR@orignewline
style=" \LWR@orignewline
%
Convert and print the background color:
\LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline

Convert and print the border color and width:
\LWR@mdfprintlength{linewidth} solid
\LWR@mdfprintcolor{linecolor} ; \LWR@orignewline

Convert and print the border radius:
\LWR@mdfprintlength{roundcorner} ; \LWR@orignewline

Convert and print the shadow:
\ifdefbool{mdf@shadow}{%
box-shadow:
\LWR@mdfprintlength{shadowsize}
\LWR@mdfprintlength{shadowsize}
\LWR@mdfprintlength{shadowsize}
%}
\LWR@mdframedend \LWR@traceinfo{LWR@mdframedend done}\

\LWR@mdframedend Actions after an mdframe ends.

After closing the <div>, globally restore to the default environment type:

\LWR@traceinfo{LWR@mdframedend start}\

\LWR@htm/l.Vardivc/l.Varassend{\LWR@mdthisenv}

\newcommand*{\LWR@mdframedend}{\
\LWR@traceinfo{LWR@mdframedend done}\
}

Mdframed environment

§ 317.7

\renewenvironment{mdframed}[1][]{% 
\color@begingroup% 
\mdfsetup{userdefinedwidth=\linewidth,#1}% 
\mdf@startcode% 
\mdf@preamovemargin% 
\if@empty{\mdf@firstframen}{}% 
\mdfframedtitle{\mdf@frametitle}{}% 
\mdf@@frametitle@use% 
\mdf@trivlist{\mdf@skipabove\length}% 
\mdf@settings% 
% \mdf@box\mdf@sp\mdf@box@one% 
% \mdf@startinnercode%
§ 317.8 **Titles and subtitles**

Place the title inside a `<div>` of class `mdframedtitleenv`:

```latex
\newlength{\LWR@titleroundcorner}
\renewrobustcmd\mdframedtitleenv[1]{%
\begin{BlockClass}[
Convert and print the title background color:
\LWR@mdfprintcolor{frametitlebackgroundcolor}
; \LWR@orignewline
```

Convert and print the title rule:
\ifbool{mdf@frametiterule}{%
  border-bottom:
  \LWR@mdfprintlength{frametiterulewidth}
  solid
  \LWR@mdfprintcolor{frametiterulecolor}
  ; \LWR@orignewline
}{%}

Finish the custom style and the opening \texttt{<div>} tag:

\mdf@frametiterule%

Print the title inside the \texttt{<div>}:

\mdf@frametitlefont{\LWR@textcurrentfont(#1)}%

Close the \texttt{<div>}:

\end{BlockClass}%
\LWR@traceinfo{LWR@mdframedtitleenv end}%

\LWR@mdfsubtitlecommon  \{(sub -or- subsub) \} \{(options) \} \{(title) \}

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubsubtitle.
Encapsulate the subtitle inside a \texttt{<div>} of class mdframedsubtitle:

\NewDocumentCommand\LWR@mdfsubtitlecommon{m o m}{% the following empty line is required
  \LWR@traceinfo{LWR@mdframedsubtitlecommon start}%
  \begin{BlockClass}[]%}

Convert and print the background color:

background:
\LWR@mdfprintcolor{#1titlebackgroundcolor}
; \LWR@orignewline

Convert and print the above line:

\ifbool{mdf@#1titleavove}{%
  border-top:
  \LWR@mdfprintlength(#1titleavovelinewidth)
  solid
  \LWR@mdfprintcolor(#1titleavovecolor)
  ; \LWR@orignewline
}{%}

Convert and print the below line:

\ifbool{mdf@#1titlebelow}{%
  border-bottom:
  \LWR@mdfprintlength(#1titlebelowlinewidth)
  solid
  \LWR@mdfprintcolor(#1titlebelowlinecolor)
  ; \LWR@orignewline
}{%}
Finish the custom style and the opening <div> tag:

\begin{mdframed}[title={⟨options⟩},⟨title⟩]

Perform the original subtitle action:

\begin{mdframed}[title={⟨options⟩},⟨title⟩]

Close the <div>:

\end{mdframed}

\begin{mdframed}[title={⟨options⟩},⟨title⟩]

$\S$ 317.9 New environments

Stores the environment of the frame about to be created:

\begin{mdframed}[env-name={mdframed}]

Modified from the original to remember the environment.

\begin{mdframed}[env-name={mdframed}]

Modified from the original to remember the environment.

\begin{mdframed}[env-name={mdframed}]

\end{mdframed}
Modified from the original to remember the environment.

```latex
\mdtheorem[(mdframed-options)]{(enname)}{(numberedlike)}{(caption)}{(within)}
```

\DeclareDocumentCommand{\mdtheorem}{O{} m o m o}{%}
\Ifcsdef{#2}{%\PackageWarning{Environment #2 already exits}{\MessageBreak}}{%}%
\IfNoValueTF {#3}{%#3 not given -- number relationship
\IfNoValueTF {#5}{%#5 not given
\definecounter{#2}
\expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}
\newenvironment{#2}[1][]{%##1}{%
\refstepcounter{#2}
\ifstrempty{##1}{\@emptit\relax}{%#1 given -- reset counter
\definecounter{#2}\newctr{#2}[##1]
\expandafter\xdef\csname the#2\endcsname{\@thmcountersep%\@thmcounter{#2}}
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit}]
\newenvironment{#2*}[1][]{%#1 given -- reset counter
\definecounter{#2}\newctr{#2}[##1]
\expandafter\xdef\csname the#2\endcsname{\@thmcountersep%\@thmcounter{#2}}
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit}]
\begin{mdframed}[#1,frametitle={\strut##1\@emptit}]
\end{mdframed}%
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit]}
\end{mdframed}%
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit]}
\end{mdframed}%
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit]}
\end{mdframed}%
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit]}
\end{mdframed}%
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit]}
\end{mdframed}%
\newenvironment{#2}[1][]{%##1}{%
\begin{mdframed}[#1,frametitle={\strut##1\@emptit]}
\end{mdframed}%
```

\newmdtheoremenv

\begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]
\end{mdframed}

\newenvironment{#2}{\refstepcounter{#3}}{% #3 given -- number relationship
\global\namedef{the#2}{\@nameuse{the#3}}
\newenvironment{#2}{\renewcommand*{\LWR@mdthisenv}{md#2}}% /l.Varwarp
\newenvironment{#2*}{\renewcommand*{\LWR@mdthisenv}{md#2}}% /l.Varwarp
}

\BeforeBeginEnvironment{#2}{\renewcommand*{\LWR@mdthisenv}{md#2}}% /l.Varwarp
\BeforeBeginEnvironment{#2*}{\renewcommand*{\LWR@mdthisenv}{md#2}}% /l.Varwarp

Modified from the original to remember the environment.
lwarp

§ 318 Package *memhfixc*

*memhfixc* is ignored.

for HTML output: \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

---

§ 319 Package *metalogo*

*metalogo* is used in print mode, and emulated in HTML.

for HTML output: \LWR@ProvidesPackagePass{metalogo}[2010/05/29]

\begin{verbatim}
2 \newcommand*{\LWR@HTML@set/l.Varogokern}[2]{}
3 \newcommand*{\LWR@HTML@set/l.Varogodrop}[2][XeTeX]{}
4 \newcommand*{\LWR@HTML@setLaTeXa}{}
5 \newcommand*{\LWR@HTML@setLaTeXee}{}
6 \newcommand*{\LWR@HTML@setevery/l.Varogo}{}
7 \newcommand*{\LWR@HTML@every/l.Varogo}{}
\end{verbatim}

---

§ 320 Package *metalogox*

*metalogox* is patched for use by lwarp.

for HTML output: \LWR@ProvidesPackagePass{metalogox}[2019/01/20]

\begin{verbatim}
\AtBeginDocument, adjust the logo setting according to the font which is active at that moment.
\end{verbatim}
\texttt{lwpark}$\times$\texttt{mhchem.sty}

\section*{\texttt{mhchem}}

\begin{itemize}
\item \textit{Emulates or patches code by} Martin Hensel.
\end{itemize}

\texttt{mhchem} is patched for use by \texttt{lwpark}.

\begin{itemize}
\item \textbf{without \texttt{MATHJAX}} Without \texttt{MATHJAX}, \texttt{mhchem} expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any \texttt{mhchem} options are global.
\item \textbf{MATHJAX with \texttt{mhchem} extension} For \texttt{MATHJAX}, the \texttt{mhchem} extension is used if the \texttt{mhchem} expression is used inside a math expression:
\begin{equation}
$\texttt{C6H5-CHO}$
\end{equation}
\item \textbf{not inside math} If not used inside a math expression, \texttt{lwpark} converts standalone \texttt{mhchem} expressions into svg math images.
\item \textbf{MATHJAX without \texttt{mhchem} extension} If the \texttt{MATHJAX} \texttt{mhchem} extension is not used, expressions inside math must be placed between \texttt{\displaymathother} and \texttt{\displaymathnormal}:
\begin{verbatim}
\[ \texttt{\ce{\ldots}} \ldots \texttt{\ce{\ldots}} \\
\texttt{\displaymathnormal}
\end{verbatim}
\item \textbf{\texttt{\textgreater\textless} \texttt{nested math}} When producing \texttt{HTML} output without the \texttt{MATHJAX} \texttt{mhchem} extension, \texttt{lwpark} does not support the use of nested dollar signs in \texttt{mhchem} expressions.
\end{itemize}

\begin{itemize}
\item For some examples from the \texttt{mhchem} manual, change as follows:
\end{itemize}

\begin{verbatim}
$\texttt{\ce{NaOH(aq,\infty)}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\ce{NaOH(aq,\infty)}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\ce{Fe(CN)_{\frac{6}{2}}}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\ce{Fe(CN)_{\frac{6}{2}}}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\ce{NO_\text{x}}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\ce{NO_{\text{x}}}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\ce{\textit{cis}{\ldots}[PtCl2(NH3)2]}}$
\end{verbatim}
\begin{verbatim}
$\texttt{\textit{cis}{\ldots}[PtCl2(NH3)2]}$
\end{verbatim}
The original definition of \ce:
\LetLtxMacro{\LWR@mhchem@origce}{\ce}

The new definition, called from the new \ce after math shift is set. The starred \textbackslash lateximage uses a hashed filename for the \texttt{svg} image. The alt tag is set to the \texttt{mhchem} expression.
\newcommand{\LWR@mhchem@HTML@ce}{\l.Varateximage*{\textbackslash ce{\LWR@HTMLsanitize{#1}}}\LWR@mhchem@origce{#1}\end{\l.Varateximage}\addtocounter{LWR@mhchem@cedepth}{-1}}

Only set math shift if outer depth:
\newcounter{LWR@mhchem@cedepth}
\setcounter{LWR@mhchem@cedepth}{0}

The new \ce. Sets math shift then continues.
\renewcommand{\ce}{\begingroup\ifnum\value{LWR@mhchem@cedepth}=0\catcode\$=3\addtocounter{LWR@mhchem@cedepth}{1}\LWR@mhchem@HTML@ce\endgroup}

The original definition of \cesplit:
\LetLtxMacro{\LWR@mhchem@origcesplit}{\cesplit}

The new definition, called from the new \cesplit after math shift is set. The starred \textbackslash lateximage uses a hashed filename for the \texttt{svg} image. The alt tag is set to the \texttt{mhchem} expression.
\newcommand*{\LWR@mhchem@HTML@cesplit}{\l.Varateximage*{\textbackslash cesplit{\LWR@HTMLsanitize{#2}}}\LWR@mhchem@origcesplit{#1}{#2}\end{\l.Varateximage}}

Only set math shift if outer depth:
\newcounter{LWR@mhchem@cesplitdepth}
\setcounter{LWR@mhchem@cesplitdepth}{0}
The new \cesp. Sets math shift then continues.

\begin{verbatim}
30 \renewcommand{\cesp}{% 
31 \begingroup% 
32 \ifnumequal{\value{LWR@mhchem@cespdepth}}{0}{% 
33 \catcode\$=3% math shift 
34 }{% 
35 \addtocounter{LWR@mhchem@cespdepth}{1}% 
36 \LWR@mhchem@HTML@cesp% 
37 }
Resore originals inside a lateximage:

38 \appto\LWR@restoreorigformatting{% 
39 \LetLtxMacro{\ce}{\LWR@mhchem@origce}% 
40 \LetLtxMacro{\cesp}{\LWR@mhchem@origcesp}% 
41 }
\end{verbatim}

File 223 \texttt{lwarp-microtype.sty}

§ 322 Package \texttt{microtype}

(Emulates or patches code by R Schlicht.)

\texttt{microtype} is pre-loaded by lwarp. All user options and macros are ignored and disabled.

for HTML output:

Discard all options for lwarp-microtype:

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{microtype}[2018/01/14]
2 \DeclareDocumentCommand{\DeclareMicrotypeSet}{o m m}{}
3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}
4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}
5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}
6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}
7 \DeclareDocumentCommand{\SetTracking}{o m m}{}
8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}
9 \DeclareDocumentCommand{\SetExtraSpacing}{o m m}{}
10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}
11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}
12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m[#2]}{}
19 \@ifpackageloaded{letterspace}{\let\MT@textlsrelax}{% 
20 \DeclareDocumentCommand{\lsstil}{}{} 
21 \DeclareDocumentCommand{\textls}{o +m}{}
22 \DeclareDocumentCommand{\slig}{m[#1]}{}
23 }
\end{verbatim}
\begin{verbatim}
\def\DeclareMicrotypeSet#1{\@gobbletwo}
\def\DeclareMicrotypeVariants#1{\@gobble}
\onlypreamble\DeclareMicrotypeSet
\onlypreamble\UseMicrotypeSet
\onlypreamble\DeclareMicrotypeSetDefault
\onlypreamble\DisableLigatures
\onlypreamble\DeclareMicrotypeVariants
\onlypreamble\DeclareMicrotypeBabelHook
\end{verbatim}

File 224 \textbf{lwp-midfloat.sty}

§ 323 Package \textbf{midfloat}

(Emulates or patches code by Sigita Toliūnas.)

Pkg \textbf{midfloat} \textbf{midfloat} is emulated.

for HTML output:
1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]
2 \newenvironment{strip}[1][1][1]{\LWR@print@mbox{margin-top:6ex}}{\LWR@print@mbox{margin-bottom:6ex}}
3 \newskip\stripsep

File 225 \textbf{lwp-midpage.sty}

§ 324 Package \textbf{midpage}

Pkg \textbf{midpage} \textbf{midpage} is ignored.

for HTML output:
1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]
2 \newenvironment{midpage}{\begin{BlockClass}\LWR@print@mbox{margin-top:6ex}}{\LWR@print@mbox{margin-bottom:6ex}}
3 \begin{blockclass}{midpage}
4 \LWR@print@mbox{margin-top:6ex} \LWR@print@mbox{margin-bottom:6ex}
5 \end{blockclass}
6 \end{blockclass}

File 226 \textbf{lwp-minitoc.sty}

§ 325 Package \textbf{minitoc}

Pkg \textbf{minitoc} \textbf{minitoc} is ignored.

for HTML output:
1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]
2 \usepackage{mtcoff}

mtcoff disables \textbf{minitoc}.
§ 326 Package **morefloats**
morefloats is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

§ 327 Package **moreverb**

(Emulates or patches code by Robin Fairbairns.)

moreverb is supported with some patches.

for HTML output: 1 \begin{warpHTML}
2 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]
3 \BeforeBeginEnvironment{verbatimtab}%
4 \LWR@forcenewpage
5 \LWR@atbeginverbatim{3}{Verbatim}%
6 }%
7 \AfterEndEnvironment{verbatimtab}{}
8 \LWR@afterendverbatim{1}%
9 }
10
11
12 \LetLtxMacro{\LWRMV@orig@verbatimtabinput}{\verbatimtabinput}
13 14 \renewcommand{\verbatimtabinput}[2][2][]{%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatimtabinput[#1][#2]%
18 \LWR@afterendverbatim{1}%
19 }
20
21 \BeforeBeginEnvironment{listing}{}
22 \LWR@forcenewpage
23 \LWR@atbeginverbatim{3}{programlisting}%
24 }
25
26 \AfterEndEnvironment{listing}{}
27 \LWR@afterendverbatim{1}%
28 }
29
30 \BeforeBeginEnvironment{listingcont}{%
\LWR@forcenewpage
\LWR@atbeginverbatim{3}{program/l.Varisting}\
\LWRMV@@/l.Varistinginput[3][3][3]
\LWR@afterendverbatim{1}
\LetLtxMacro\LWRMV@@/l.Varistinginput\@/l.Varistinginput
\renewcommand{\@/l.Varistinginput}[3][3][3]
\LWR@forcenewpage
\LWR@atbeginverbatim{3}{program/l.Varisting}\
\verbatim%
\LWRMV@@/l.Varistinginput[#1][#2][#3]
\LWR@afterendverbatim{1}
\renewenvironment*{boxedverbatim}
{\LWR@forcenewpage
\LWR@atbeginverbatim{3}{boxedverbatim}\
\verbatim%
}
{\verbatim%
\LWR@afterendverbatim{1}}
\end{warpHTML}

File 229 lwpmparhack.sty

§ 328 Package mparhack

Pkg mparhack Ignored.

for HTML output: Discard all options for lwpmparhack:
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]

File 230 lwpmulticap.sty

§ 329 Package multicap

Pkg multicap multicap is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicap}[2002/05/04]
multicol

(Emulates or patches code by Frank Mittelbach.)

multicol is emulated.

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a \begin{div}\end{div} of class multicolheading.

The content is placed inside a \begin{div}\end{div} of class multicol.

\begin{warpHTML}
\begin{verbatim}
*{(\texttt{\textbackslash numcols})}\texttt{\{\texttt{\textbackslash heading}\}}
\end{verbatim}
\end{warpHTML}

Emulated null functions which are not used in HTML:

\begin{verbatim}
\newcommand*{\columnbreak}{}
\newcommand*{\RLmulticolcolumns}{}
\end{verbatim}
l warp

14 \newcommand*{\LRmulti
colcolumns}{ }
15
16 \newlength{\premult
col}
17 \newlength{\postmulti
col}
18 \newlength{\multicolsep}
19 \newlength{\multi
colbaselineskip}
20 \newlength{\multi
coltolerance}
21 \newlength{\multi
colpretolerance}
22 \newcommand*{\column
seprulecolor}{\normal
color}
23 \newcounter{columnbad
ness}
24 \newcounter{final
colmbadness}
25 \newcounter{collect
more}
26 \newcounter{unbalan
cce}
27 \newlength{\multi
colovershoot}
28 \newlength{\multi
colundershoot}

29 \NewDocumentCommand{\doc
colaction}{s o m m m}{%
30 \IfValueTF{#2}{#2}{#3}%
31 }

32 \end{warpHTML}

File 232 l warp-m
colrule.sty

§ 331 Package m
colrule

multicolrule is ignored.

for HTML output: 1 \RequirePackage{multicol}
2 \LWR@Provides
PackageDrop{multi
colrule}[2019/01/01]
4 \newcommand*{\SetM
CRule}[1]{ }
5 \NewDoc
umentCommand{\De
clarMCRulePatt
ern}{m m}{ }

File 233 l warp-
multirow.sty

§ 332 Package m
ultirow

(Emulates or patches code by Piet van Oostrum, Oystein Bache, Jerry Le
chter.)

multirow is emulated during HTML output, and used as-is while inside a la
teximage.

Pkg multirow

vposn

multirow cells

• Note that recent versions of multirow include a new optional vposn argu
ment.

• For multirow, insert \mrowcell into any empty multi-row cells. This will be
a null function for the print output, and is a placeholder for parsing the table
for HTML output. An error is generated if this is missed.
• The \texttt{\multirow} documentation regarding colored cells recommends using a negative number of rows. This will not work with \texttt{l\warp}, so \texttt{\warpprinton} and \texttt{\warpHTMLon} must be used to make versions for print and HTML.

\begin{itemize}
\item\texttt{\warp} does not support directly combining \texttt{\multicolumn} and \texttt{\multirow}. Use \texttt{\multicolumn} instead. To create a 2 column, 3 row cell:

\begin{verbatim}
\multicolumn{2}{c}{[c][3][0]{1in}[0pt]{Text}}
\end{verbatim}

The two arguments for \texttt{\multicolumn} come first, followed by the five arguments for \texttt{\multirow}, many of which are optional, followed by the contents.

\item \texttt{\multirow} documentation with \texttt{\multicolumn}

\item \texttt{\multirow} skipped cells

As per \texttt{\multirow}, skipped cells to the right of the \texttt{\multicolumn} statement are not included in the source code on the same line. On the following lines, \texttt{\mcolrowcell} must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

\begin{verbatim}
\multicolumn{2}{c}{[c][3][0]{1in}[0pt]{Text}} & \ldots
\end{verbatim}

\item \texttt{\multirow} empty cells

\begin{verbatim}
\multicolumn{2}{c}{[c][3][0]{1in}[0pt]{Text}} & \ldots
\end{verbatim}

\end{itemize}

In a \LaTeX{} image, \texttt{\LWR@restoreorigformatting} restores the original print-mode versions.

\textbf{for HTML output:}

Remove the placeholder macro which was used if \texttt{\multirow} was not loaded:

\begin{verbatim}
1\LetLtxMacro\multirow\relax
2\LWR@ProvidesPackagePass{\multirow}[2018/08/03]
3\newcommand{\LWR@\multirowborder}{}
\end{verbatim}

\textbf{Set to left or right to create a thick border for the cell, for use by \texttt{\bigdelim}:}

\begin{verbatim}
4\NewDocumentCommand{\LWR@HTML@\multirow}{O{c} m o m o +m}{%
5\LWR@traceinfo{*** LWR@HTML@\multirow #1 #2 #4}%
6\booltrue{\LWR@used\multirow}%
7\newcommand{\LWR@\multirowborder}{}
8\LWR@maybenew\tablerow%
9\LWR@tabularle\texttt{\leftedge}%
\end{verbatim}

\section{\texttt{\Multirow}}

\begin{verbatim}
\multirow \langle\texttt{\vpos}\rangle \langle\texttt{\numrows}\rangle \langle\texttt{\bigstruts}\rangle \langle\texttt{\width}\rangle \langle\texttt{\fixup}\rangle \langle\texttt{\text}\rangle
\end{verbatim}

\begin{verbatim}
4\NewDocumentCommand{\LWR@HTML@\multirow}{O{c} m o m o +m}{%
5\LWR@traceinfo{*** LWR@HTML@\multirow #1 #2 #4}%
6\booltrue{\LWR@used\multirow}%
7\newcommand{\LWR@\multirowborder}{}
8\LWR@maybenew\tablerow%
9\LWR@tabularle\texttt{\leftedge}%
\end{verbatim}
Print the start of a new table data cell:

10. \lwr\htmltag{td rowspan="2" %

The vertical alignment, if given:

11. \lfv\{#1\}{}
12. \lfs\{#1\}{b}{style="\lwr@print@mbox(\text{vertical-align:bottom})" {}%
13. \lfs\{#1\}{t}{style="\lwr@print@mbox(\text{vertical-align:top})" {}%
14. %

The left/right border, if given:

15. \ldef\{\lwr@\text{multirowborder}\}{}
16. style="\lwr@\text{printmbox(\text{border-\lwr@\text{\text{-multirowborder}:}) 2px dotted black ; %
17. \lwr@\text{printmbox(padding-\lwr@\text{-multirowborder>:}) 2px %
18. %}

A class adds the column spec and the rule:

19. class="td%

Append this column’s spec:

20. \lwr@\text{getexparray}(\lwr@\text{tablecolspec})\{\text{arabic}(\lwr@\text{tableLaTeXcolindex})%}{

If this column has a cmidrule, add “rule” to the end of the HTML class tag. Also add the vertical bar class.

21. \lwr@addcmidruletrim%
22. \lwr@addleftmostbartag%
23. \lwr@\text{printbartag}\{\text{arabic}(\lwr@\text{tableLaTeXcolindex})%
24. %
25. \lwr@\text{tdstartstyles}%
26. \lwr@addcmidrulewidth%
27. \lwr@addcilinear%
28. \lwr@addtabularrulecolors%
29. \lwr@\text{tdendstyles}%
30. %)

The column’s < spec:

31. \lwr@\text{getexparray}(\lwr@\text{colbeforespec})\{\text{arabic}(\lwr@\text{tableLaTeXcolindex})%}

While printing the text, redefine \ to generate a new line

32. \begingroup\LetLtxMacro{\}{\lwr@endof}#6\endgroup%
33. \lwr@\text{stoppars}%
34. \global\boolfalse(\lwr@\text{intabularmetadata})%
35. \renewcommand(\lwr@\text{multirowborder}){}
36. \lwr@\text{traceinfo}(*** \lwr@\text{HTML\text{-multirow done})%
37. %}
Combined multicolumn and multirow

\multicolumnrow{{\{1:cols\}}}{\{2:halign\}}{\{3:vpos\}}{\{4:numrows\}}{\{5:bigstruts\}}{\{6:width\}}{\{7:fixup\}}{\{8:text\}}

@ifpackage{multirow} determines if v2.0 or later of \texttt{multirow} was used, which included the \texttt{ProvidesPackage} macro.

The \texttt{HTML} version follows.

\AtBeginDocument because the print version had to see if \texttt{multirow} was loaded before determining how to define \texttt{\LWR@print@multicolumnrow}.

40 \AtBeginDocument{
41 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%
42 \boo{LWR@usedmultirow}%

Figure out how many extra \texttt{HTML} columns to add for @ and ! columns:

44 \LWR@tabularhtmlcolumns{\arabic{LWR@tabularLaTeXcolindex}}[#1]

Create the multicolumn/multirow tag:

45 \begingroup%
46 \LetLtxMacro{\&}{\LWR@endofline}%
47 \LWR@domulticolumn[#3][#4][#1]{\arabic{LWR@tableLaTeXcoltotal}}[#2][#8]%
48 \endgroup%

Move to the next \LaTeX column:

49 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
50 \addtocounter{LWR@tableLaTeXcolindex}{-1}%

Skip any trailing @ or ! columns for this cell:

51 \global\boo{LWR@skipatbang}%
52 }%
53 \LWR@expandableformatted{\multicolumnrow}
§ 333 Package **multitoc**

*Pkg* multitoc  
*multitoc* is ignored.

*for HTML output:*

```latex
\LWR@ProvidesPackageDrop{multitoc}[1999/06/08]
\newcommand{\multicolontoc}{2}
\newcommand{\multicolontlot}{2}
\newcommand{\multicolontlof}{2}
\newcommand*{\immediateaddtocontents}{2}{
```

§ 334 Package **musicography**

*(Emulates or patches code by ANDREW A. CASHNER.)*

*Pkg* musicography  
*musicography* is patched for use by *lwarp*.

Images are used for the meter symbols, since the *HTML* fonts tend not to be the correct size. The *HTML* `alt` tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.

⚠️ Note that browser support for musical symbols may be buggy. Copy/paste into a text editor works well.

*for HTML output:*

```latex
\LWR@ProvidesPackagePass{musicography}[2018/05/21]
\RenewDocumentCommand{\musSymbol}{ O{\musFont} m m m m }{%
\begin{lateximage}\
#1\kern#2\raisebox{#3}{#5}\kern#4\end{lateximage}\
}
\RenewDocumentCommand{\musStemmedNote}{ m }{%
\begin{lateximage}\
\musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}\
\end{lateximage}\
}
\RenewDocumentCommand{\musFlaggedNote}{ m m }{%
\begin{lateximage}\
\musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}\
\end{lateximage}\
```
\RenewDocumentCommand{\musDottedNote}{ m }{%
\begin{lateximage}\#1\musDot%
\end{lateximage}%
}

\RenewDocumentCommand{\musMeter}{ m m }{%
\begin{lateximage}*[#1/#2][#1#2]%
\musStack{#1}{#2}\kern0.05em%
\end{lateximage}%
}

\RenewDocumentCommand{\meterCplus}{ m }{%
\begin{lateximage}*[C#1]%
\meterC{}\kern-0.7pt#1%
\end{lateximage}%
}

\RenewDocumentCommand{\meterC}{%}
\begin{lateximage}*[C]%
\musSymbolMeter{\symbol{83}}%
\end{lateximage}%

\RenewDocumentCommand{\meterCutC}{}{
\begin{lateximage}*[C|]%
\musSymbolMeter{\symbol{82}}%
\end{lateximage}%
}

\RenewDocumentCommand{\meterCThreeTwo}{}{
\begin{lateximage}*[C3/2]%
\meterCplus{\musStack{3}{2}}%
\end{lateximage}%
}

\RenewDocumentCommand{\musF}{}{HTMLunicode{266D}}
\RenewDocumentCommand{\musDoub}{}{HTMLunicode{1D12B}}
\RenewDocumentCommand{\musSharp}{}{HTMLunicode{266F}}
\RenewDocumentCommand{\musDoubSharp}{}{HTMLunicode{1D12A}}
\RenewDocumentCommand{\musNatura}{}{HTMLunicode{266E}}
\RenewDocumentCommand{\musWho}{}{HTMLunicode{1D15D}}
\RenewDocumentCommand{\musHa}{}{HTMLunicode{1D15E}}
\RenewDocumentCommand{\musQuarter}{}{HTMLunicode{1D15F}}
\RenewDocumentCommand{\musEighth}{}{HTMLunicode{1D160}}
\RenewDocumentCommand{\musSixteenth}{}{HTMLunicode{1D161}}
\RenewDocumentCommand{\musWhoDotted}{}{HTMLunicode{1D15D} HTMLunicode{1D16D}}
\RenewDocumentCommand{\musHaDotted}{}{HTMLunicode{1D15E} HTMLunicode{1D16D}}
\RenewDocumentCommand{\musQuarterDotted}{}{HTMLunicode{1D15F} HTMLunicode{1D16D}}
\RenewDocumentCommand{\musEighthDotted}{}{HTMLunicode{1D160} HTMLunicode{1D16D}}
\RenewDocumentCommand{\musSixteenthDotted}{}{HTMLunicode{1D161} HTMLunicode{1D16D}}
lwarp

File 236 lwarp-nameauth.sty

§ 335 Package nameauth

(Emulates or patches code by Charles P. Schaum.)

Pkg nameauth nameauth is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{nameauth}[2017/03/22]

lwarp formatting is inserted in the following.

2 \renewcommand*\@nameauth@Hook[1]
3 (%
4 \if@nameauth@Lock
5 \@nameauth@InHooktrue%
6 \protected@edef\test{#1}%
7 \expandafter\@nameauth@TestDot\expandafter{\test}%
8 \if@nameauth@InAKA
9 \if@nameauth@AlwaysFormat
10 \@nameauth@FirstFormattrue%
11 \else
12 \unless\if@nameauth@AKAFormat
13 \@nameauth@FirstFormatfalse\fi
14 \fi
15 \if@nameauth@MainFormat
16 \if@nameauth@FirstFormat
17 \bgroupp\NamesFormat{%
18 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
19 }\egroup%
20 \else
21 \bgroupp\MainNameHook{%
22 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
23 }\egroup%
24 \fi
25 \else
26 \if@nameauth@FirstFormat
27 \bgroupp\FrontNamesFormat{%
28 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
29 }\egroup%
30 \else
31 \bgroupp\FrontNameHook{%
32 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
33 }\egroup%
34 \fi
35 \fi
36 \else
37 \if@nameauth@AlwaysFormat
38 \@nameauth@FirstFormattrue%
39 \fi
40 \if@nameauth@MainFormat
lwarp

\if@nameauth@FirstFormat
  \bgroup\NamesFormat{%
    \LWR@textcurrentcolor{\LWR@textcurrentfont(#1)}% lwap
  }\egroup%
\else
  \bgroup\MainNameHook{%
    \LWR@textcurrentcolor{\LWR@textcurrentfont(#1)}% lwap
  }\egroup%
\fi
\else
  \if@nameauth@FirstFormat
    \bgroup\FrontNamesFormat{%
      \LWR@textcurrentcolor{\LWR@textcurrentfont(#1)}% lwap
    }\egroup%
  \else
    \bgroup\FrontNameHook{%
      \LWR@textcurrentcolor{\LWR@textcurrentfont(#1)}% lwap
    }\egroup%
  \fi
\fi
\fi
\@nameauth@FirstFormatfalse%
\@nameauth@InHookfalse%
\fi
\fi

File 237 lwarp-nameref.sty

§ 336 Package nameref

Pkg nameref nameref is emulated by lwarp.

for HTML output: Discard all options for lwarp-nameref:

  \typeout{Using the lwarp html version of package 'nameref', discarding options.}
  \typeout{ Are not using ProvidesPackage, so that other packages}
  \typeout{ do not attempt to patch lwarp's version of 'nameref'.}
  \DeclareOption*{}
  \ProcessOptions\relax

File 238 lwarp-natbib.sty

§ 337 Package natbib

(Emulates or patches code by Patrick W. Daly.)

Pkg natbib natbib is patched for use by lwarp.

for HTML output: \LWR@ProvidesPackagePass{natbib}[2010/09/13]

Replace math < and > with \textless and \textgreater:
A macro to compare:

\newcommand{\LWRNB@NAT@open}{$<$}

To patch \NAT@open and \NAT@close

\newcommand{\LWRNB@patchnatbibopenc/l.Varose}{
  \ifdefstrequa/l.Var{\NAT@open}{\LWRNB@NAT@open}
  {
    \renewcommand{\NAT@open}{\text/l.Varess}
    \renewcommand{\NAT@c/l.Varose}{\textgreater}
  }
}

Do it now in case angle was selected as an option:

\LWRNB@patchnatbibopenc/l.Varose

Also patch \setcitestyle to patch after settings are made:

\let\LWRNB@origsetcitestyle\setcitestyle
\renewcommand{\setcitestyle[1][%\LWRNB@origsetcitestyle[#1]%\LWRNB@patchnatbibopenclose%

\begin{verbatim}

File 239  l warp-nccfancyhdr.sty

§ 338  Package  nccfancyhdr

(Emulates or patches code by Alexander I. Rozhenko.)

Pkg  nccfancyhdr  nccfancyhdr is ignored.

for HTML output:  \LWR@ProvidesPackageDrop{nccfancyhdr}[2004/12/07]

\newcommand{\headrulewidth}{}
\newcommand{\footrulewidth}{}
\newcommand{\headstrutheight}{}
\newcommand{\footstrutheight}{}
\newcommand{\headrule}{}
\newcommand{\footrule}{}
\newdimen\headwidth
\newcommand{\extendedheaders}{}
\newcommand{\normalheaders}{}
\newcommand{\fancyhead}[2][]{}
\newcommand{\fancyfoot}[2][]{}
\newcommand{\fancyhf}[2][]{}
\newcommand{\fancypagestyle}[2][]{}
File 240  lwarp-needspace.sty

§ 339  Package  needspace

(Emulates or patches code by Peter Wilson.)

for HTML output:  Discard all options for lwarp-needspace:

1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
2 \DeclareDocumentCommand{\needspace}{m}{}
3 \DeclareDocumentCommand{\Needspace}{s m}{}

File 241  lwarp-nextpage.sty

§ 340  Package  nextpage

(Emulates or patches code by Peter Wilson.)

for HTML output:  Discard all options for lwarp-nextpage:

1 \LWR@ProvidesPackageDrop{nextpage}[2009/09/03]
2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
3 \DeclareDocumentCommand{\movecheckouttoevenpage}{o}{}
4 \DeclareDocumentCommand{\cleartooevenpage}{o}{}
5 \DeclareDocumentCommand{\movetooddpage}{o}{}
File 242 lwp-nicefrac.sty

§ 341 Package nicefrac

(Emulates or patches code by Axel Reichert.)

Pkg nicefrac nicefrac is patched for use by lwp.

for HTML output:

\LWR@ProvidesPackagePass{nicefrac}[1998/08/04]

\DeclareRobustCommand*{\LWR@HTML@@UnitsNiceFrac}{%}
  \textcurrentfont{#1}{\InlineClass{numerator}{#2}{%}
    \InlineClass{denominator}{#3}{%}
  }{%}
\LWR@formatted{@UnitsNiceFrac}

\DeclareRobustCommand*{\LWR@HTML@@UnitsGlyFrac}{%}
  \textcurrentfont{#2/#3}{%}
\LWR@formatted{@UnitsGlyFrac}

For Mathjax:

\CustomizeMathJax{\newcommand{\nicefrac}[3]{#2/#3}}

File 243 lwp-niceframe.sty

§ 342 Package niceframe

Pkg niceframe niceframe is emulated.

for HTML output:

\LWR@ProvidesPackageDrop{niceframe}% the original date is in yyyy/dd/mm format

\newcommand{\LWR@niceframe}[3]{%}
  \sbox{\LWR@temp}{#1}{%}
  \begin{BlockClass}[max-width: \LWR@printlength{\LWR@templengthone}]{#3}{%}
    #2
  }{
\newcommand{\niceframe}[2]{\LWR@niceframe{#1}{#2}{niceframe}}
\newcommand{\curvarielframe}[2]{\LWR@niceframe{#1}{#2}{curvarielframe}}
\newcommand{\artdecoframe}[2]{\LWR@niceframe{#1}{#2}{artdecoframe}}
\newcommand{\generaframe}[9]{\LWR@niceframe{\textwidth}{#9}{generaframe}}

\LWR@ProvidesPackagePass{nomenc}[2005/09/22]
\def\@@@nomencature[#1]#2#3{\def\@tempa{#2}\def\@tempb{#3}\
\protected@write\@nomencaturefi{\string
nomencatureentry{#1\nom@verb\@tempa @[\nom@verb\@tempa]\
\begingroup\nom@verb\@tempb\protect\nomeqref{theequation}|
\endgroup\
\nompageref{\theLWR@previousautopagelabel}}\ lwpwart}}
\renewcommand{\pagedeclaration}[1]{, \nameref{autopage-#1}}

\LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]
\LetLtxMacro\topcaption{\caption}
\newcommand{\figcaption}{\def\@captype{figure}\topcaption}
\newcommand{\tabcaption}{\def\@captype{tabulate}\topcaption}
\newenvironment{narrow}[2]{\begingroup}{}
§ 346 Package \texttt{nopageno}

\begin{verbatim}
\newcommand*{\LWR@notes@onenote}[2]{%
  \newenvironment{#1}
  {
    \BlockClass{notes#1}
    \begin{BlockClass}{notesicon}\textcircled{~#2~}\end{BlockClass}
    \BlockClass{notescontents}
  }{
    \endBlockClass\endBlockClass
  }
}
\LWR@notes@onenote{importantnote}{!}
\LWR@notes@onenote{warningnote}{--}
\LWR@notes@onenote{informationnote}{i}
\end{verbatim}
§ 348 Package **notespases**

This package is ignored.

For HTML output:

```latex
\LWR@ProvidesPackageDrop{notespases}[2016/08/21]
\newcommand*{\npnotesname}{\}
\newcommand*{\npnotestext}{\}
\newcommand*{\remainingtextheight}{\}
\newif\ifremainingtextheight\fi
\newcommand*{\notestit}{\}
\newcommand*{\notesareatext}{\}
\newcommand*{\npnpinfo}{\}
\newcommand*{\tracingnpmarks}{\}
\newcommand*{\notespage}{\}
\newcommand*{\notespages}{\}
```

§ 349 Package **nowidow**

(Emulates or patches code by Raphaël Pinson.)

This package is not used during HTML conversion.

Discard all options for lwarp-nowidow:

For HTML output:

```latex
\LWR@ProvidesPackageDrop{nowidow}[2011/09/20]
\newcommand*{\nowidow}{\}
\newcommand*{\setnowidow}{\}
\newcommand*{\nocidow}{\}
\newcommand*{\setnocidow}{\}
```

lwarp

4 \newcommand*{\noclub}[1][]{}
5 \newcommand*{\setnoclub}[1][]{}  

File 251 \texttt{lwarp-ntheorem.sty}

§ 350 Package \texttt{ntheorem}

(\emph{Emulates or patches code by Wolfgang May, Andreas Schedler}.)

\texttt{lwarp} is patched for use by \texttt{lwarp}.

Table 15: Ntheorem package — css styling of theorems and proofs

\textbf{Theorem:} \texttt{<div> of class theorembody<theoremmstyle>}

\textbf{Theorem Header:} \texttt{<span> of class theoremheader<theoremmstyle>}

where \texttt{<theoremmstyle>} is plain, break, etc.

§ 350.1 \textbf{Limitations}

\textbf{Font control} This conversion is not total. Font control is via css, and the custom \LaTeX\ font settings are ignored.

\textbf{Equation numbering} \texttt{ntheorem} has a bug with equation numbering in \texttt{AMS} environments when the option \texttt{thref} is used. \texttt{lwarp} does not share this bug, so equations with \texttt{\split}, etc., are numbered correctly with \texttt{lwarp}'s \texttt{html} output, but not with the print output. It is recommended to use \texttt{cleveref} instead of \texttt{ntheorem}'s \texttt{thref} option.

§ 350.2 \textbf{Options}

Options \texttt{amsthm} or \texttt{standard} choose which set of theorems and proofs to initialize.

\textbf{Disabled options} The options \texttt{thmmarks} and \texttt{amsmath} are disabled, since they heavily modify the underlying math code. Theorem marks are emulated. The AMS-math modifications are not done.

Option \texttt{thref} is disabled because \texttt{cleveref} functions are used instead. \texttt{\thref} is emulated.

Option \texttt{hyperref} is disabled because \texttt{lwarp} emulated \texttt{hyperref}.

\textbf{for HTML output:} Some disabled options:

1 \DeclaoreOption{thref}{}
2
3
4 \DeclareOption{LWR@ntheoremmarks}{}
5 \boolfalse{LWR@ntheoremmarks}
6
7 \DeclareOption{thmmarks}{}
8 \booltrue{LWR@ntheoremmarks}
§350.3 Remembering the theorem style

Storage for the style being used for new theorems.

23 \newcommand{\LWR@newtheoremstyle}{plain}

24 \AtBeginDocument{
25 \@ifpackageloaded{cleveref}{
26 \gdef\thm@1#2#3{%
27 \if@thmmarks
28 \stepcounter{end\InTheoType ctr}%
29 \fi
30 \renewcommand{\InTheoType}{#1}%
31 \if@thmmarks
32 \stepcounter{curr#1ctr}%
33 \setcounter{end#1ctr}{0}%
34 \fi
35 \refstepcounter[#1]{#2}% <<< cleveref modification
36 \theorem@prework
37 \LWR@forcenewpage lwp
38 \BlockClass{\theorembody#1}\LWR@thisthmstyle lwp
39 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
40 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
41 \ifthm@inframe
42 \thm@topsep\theoreminframepreskipamount
43 \thm@topsep\theoreminframepostskipamount
44 \else
45 \thm@topsep\theorem preskipamount
46 \thm@topsep\theorempostskipamount
47 \fi
48 \else% oldframeskips
49 \thm@topsep\theorem preskipamount
50 \thm@topsep\theorempostskipamount
51 \ifvmode\advance\thm@topsep\partopsep\fi
52 \fi
53 \@topsep\thm@topsep
54 \@topsep\thm@topsep
55 \advance\linewidth -\theorem@indent
56 \advance\linewidth -\theorem@rightindent
57 \advance\totalleftmargin \theorem@indent
Patched to remember the style being used for new theorems:

\gdef\theoremstyle#1{%
  \@ifundefined{th@#1}{\@warning{Unknown theoremstyle '#1'. Using 'plain'}%\theorem@style{plain}
  \renewcommand{\LWR@newtheoremstyle}{plain}\LWR@warp
  }{
  \theorem@style{#1}
  \renewcommand{\LWR@newtheoremstyle}{#1}\LWR@warp
  }
}% AtBeginDocument
Patched to remember the style for this theorem type, and set it later when the environment is started.

\gdef\xnthm\#2[\#3]{% 
  \ifthenelse{\isundefined{c@\#1}}{% 
    \@definecounter{\#1}{}% 
    \newctr{\#1}[\#3]% 
    \expandafter\gdef\csname the\#1\endcsname{% 
      \noexpand\csname\the\theoremnumbering\#1\endcsname}% 
    \expandafter\gdef\csname mkheader@\#1\endcsname{% 
      \csname setparms@\#1\endcsname 
      \@thm{\#1}{\#1}{\#2} 
    }% 
    \g/l.Varoba/l.Var\@namedef{end\#1}{\@endtheorem} 
  }{% 
    \expandafter\gdef\csname the\#1\endcsname{% 
      \noexpand\csname\the\#3\endcsname \@thmcountersep 
    }% 
    \expandafter\gdef\csname mkheader@\#1\endcsname{% 
      \csname setparms@\#1\endcsname 
      \@thm{\#1}{\#1}[\#2] 
    }% 
    \g/l.Varoba/l.Var\@namedef{end\#1}{\@endtheorem} 
  }% 
}\gdef\ynthm\#2{% 
  \ifthenelse{\isundefined{c@\#1}}{% 
    \@definecounter{\#1}{}% 
    \newctr{\#1}[\#3] 
    \expandafter\protected@xdef\csname num@addtheorem/l.Varine\#1\endcsname{% 
      \noexpand\@num@addtheorem/l.Varine{\#1}{\#3}}% 
    \expandafter\protected@xdef\csname nonum@addtheorem/l.Varine\#1\endcsname{% 
      \noexpand\@nonum@addtheorem/l.Varine{\#1}{\#3}}% 
    \theoremkeyword{\#3} 
    \expandafter\protected@xdef\csname #1Keyword\endcsname{% 
      \the\theoremkeyword} 
    \expandafter\gdef\csname mkheader@\#1\endcsname{% 
      \csname setparms@\#1\endcsname 
      \@thm{\#1}{\#1}{\#3} 
    }% 
    \g/l.Varoba/l.Var\@namedef{end\#1}{\@endtheorem} 
  }{% 
    \expandafter\protected@xdef\csname num@addtheorem/l.Varine\#1\endcsname{% 
      \noexpand\@num@addtheorem/l.Varine{\#1}{\#3}}% 
    \expandafter\protected@xdef\csname nonum@addtheorem/l.Varine\#1\endcsname{% 
      \noexpand\@nonum@addtheorem/l.Varine{\#1}{\#3}}% 
    \theoremkeyword{\#3} 
    \expandafter\protected@xdef\csname #1Keyword\endcsname{% 
      \the\theoremkeyword} 
    \expandafter\gdef\csname mkheader@\#1\endcsname{% 
      \csname setparms@\#1\endcsname 
      \@thm{\#1}{\#1}[\#3] 
    }% 
    \g/l.Varoba/l.Var\@namedef{end\#1}{\@endtheorem} 
}\gdef\othm\#2[\#3]{% 
  \ifthenelse{\isundefined{c@\#2}}{% 
    \@nocounterr{\#2}{}% 
    \@ifthenelse{\isundefined{c@\#1}}{% 
      \@definecounter{\#1}{}% 
      \newctr{\#1}[\#3] 
      \expandafter\protected@xdef\csname num@addtheorem/l.Varine\#1\endcsname{% 
        \noexpand\@num@addtheorem/l.Varine{\#1}{\#3}}% 
      \expandafter\protected@xdef\csname nonum@addtheorem/l.Varine\#1\endcsname{% 
        \noexpand\@nonum@addtheorem/l.Varine{\#1}{\#3}}% 
      \theoremkeyword{\#3} 
      \expandafter\protected@xdef\csname #1Keyword\endcsname{% 
        \the\theoremkeyword} 
      \expandafter\gdef\csname mkheader@\#1\endcsname{% 
        \csname setparms@\#1\endcsname 
        \@thm{\#1}{\#1}[\#3] 
      }% 
      \g/l.Varoba/l.Var\@namedef{end\#1}{\@endtheorem} 
    }{% 
      \expandafter\protected@xdef\csname num@addtheorem/l.Varine\#1\endcsname{% 
        \noexpand\@num@addtheorem/l.Varine{\#1}{\#3}}% 
      \expandafter\protected@xdef\csname nonum@addtheorem/l.Varine\#1\endcsname{% 
        \noexpand\@nonum@addtheorem/l.Varine{\#1}{\#3}}% 
      \theoremkeyword{\#3} 
      \expandafter\protected@xdef\csname #1Keyword\endcsname{% 
        \the\theoremkeyword} 
      \expandafter\gdef\csname mkheader@\#1\endcsname{% 
        \csname setparms@\#1\endcsname 
        \@thm{\#1}{\#1}[\#3] 
      }% 
      \g/l.Varoba/l.Var\@namedef{end\#1}{\@endtheorem} 
    }% 
  }% 
\global\namedef{end\#1}{\@endtheorem} 
\AtBeginEnvironment{\#1}{\edef\LWR@thisthmsty{l.Varwarp}{\@nameuse{LWR@thmsty{l.Varwarp\#1}}}}% lwar
§ 350.4 **HTML cross-referencing**

Mimics a float by incrementing the float counter and generating an HTML anchor. These are used for list-of-theorem cross-references.

\newcommand{\LWR@includetheorem}{% 
\addtocounter{LWR@thisautoid}{1} 
\LWR@stoppars
\LWR@htm/l.Vartag{a id=/quotedbl.Var/LWR@print@mbox{autoid-arabic{LWR@thisautoid}}/quotedbl.Var}
\LWR@htm/l.Vartag{/a}
\LWR@startpars
}

§ 350.5 **newtheoremstyle**

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<sty/l.Vare>.

Each header is encased in an InlineClass of class theoremheader<sty/l.Vare>.

§ 350.6 **Standard styles**

\renewtheoremstyle{plain}%
{\item[\InlineClass{theoremheaderplain}(##1 \ #2\theorem@separator)]}%
\renewtheoremstyle{break}%
{\item[\InlineClass{theoremheaderbreak}(##1 \ #2\theorem@separator)\newline]}%
\renewtheoremstyle{change} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheaderchange}{##2 \ #1 \ \text{theorem@separator}}
\end{item}

\renewtheoremstyle{changebreak} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheaderchangebreak}{##2 \ #1 \ \text{theorem@separator}}
\end{item}

\renewtheoremstyle{margin} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheadermargin}{##2 \quad ##1 \ \text{theorem@separator}}
\end{item}

\renewtheoremstyle{marginbreak} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheadermarginbreak}{##2 \quad ##1 \quad \text{theorem@separator}}
\end{item}

\renewtheoremstyle{nonumberplain} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheaderplain}{##1 \ \text{theorem@separator}}
\end{item}

\renewtheoremstyle{nonumberbreak} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheaderbreak}{##1 \ \text{theorem@separator}}
\end{item}

\renewtheoremstyle{empty} 
\begin{item}
\text{In}/\text{VarineC}/\text{Varass}{theoremheaderplain}{##3}
\end{item}
Additional objects

The following manually adjust the CSS for the standard configuration objects which are not a purely plain style:

Upright text via CSS:

Upright text and small caps header via CSS:

Renewed standard configuration

The following standard configuration is renewed using the new CSS:
§ 350.9 \textbf{amsthm option}

Only if the \texttt{amsthm} option was given:

\begin{verbatim}
\ifbool{LWR@ntheoremamsthm}{
  \gdef\th@plain{%
    \def\theoremheaderfont{\normalfont\bfseries}\itshape%
    \def\beginintheorem##1##2{%
      \LWR@inctheorem% \
      \item[\InlineClass{theoremheaderplain}{##1 \ ##2.}]
    }%\end{verbatim}

\gdef\th@nonumberplain{%
  \def\theoremheaderfont{\normalfont\bfseries}\itshape%
  \def\beginintheorem##1##2{%
    \LWR@inctheorem% \
    \item[\InlineClass{\texttt{theoremheaderplain}}{##1\ ##2\ (#3).}]
  }%}
\end{verbatim}
\item
\InlineClass{theoremheaderplain}({\#1.})
\]
\item
\def\@opargbegintheorem##1##2##3{%
  \LWR@inctheorem warp
  \item[
  \InlineClass{theoremheaderplain}({\#1\ (#3).})
  ]}
\item
\gdef\th@definition{%
  \def\theorem@headerfont{\norma\bfseries}\norma\font%
  \def\@begintheorem##1##2{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderdefinition}({\#1 \ #2.})
    ]}
  \def\@opargbegintheorem##1##2##3{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderdefinition}({\#1 \ #2\ (#3).})
    ]}
}\gdef\th@nonumberdefinition{%
  \def\theorem@headerfont{\norma\bfseries}\norma\font%
  \def\@begintheorem##1##2{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderdefinition}({\#1.})
    ]}
  \def\@opargbegintheorem##1##2##3{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderdefinition}({\#1 \ (#3).})
    ]}
}\gdef\th@remark{%
  \def\theorem@headerfont{\itshape}\norma\font%
  \def\@begintheorem##1##2{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderremark}({\#1 \ #2.})
    ]}
  \def\@opargbegintheorem##1##2##3{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderremark}({\#1 \ #2\ (#3).})
    ]}
}\gdef\th@nonumberremark{%
  \def\theorem@headerfont{\itshape}\norma\font%
  \def\@begintheorem##1##2{%
    \LWR@inctheorem warp
    \item[
    \InlineClass{theoremheaderremark}({\#1.})
    ]}
\def@opargbegintheorem##1##2##3{% 
   \LWR@inctheorem \l.Varwarp 
   \item \[ \In/l.VarineC/l.Varass{theoremheaderremark}{##1\ (##3).} \]]
   \}}
\gdef\th@proof{% 
    \def\theorem@headerfont{\norma/l.Varfont \bfseries} \itshape% 
    \def@begintheorem##1##2{% 
       \LWR@inctheorem \l.Varwarp 
       \item \[ \In/l.VarineC/l.Varass{theoremheaderproof}{##1.} \]}}% 
\def@opargbegintheorem##1##2##3{% 
   \LWR@inctheorem \l.Varwarp 
   \item \[ \In/l.VarineC/l.Varass{theoremheaderproof}{##1\ (##3).} \]}}
\newcounter{proof}% 
\if@thmmarks 
   \newcounter{currproofctr}% 
   \newcounter{endproofctr}% 
\fi 
\gdef\proofSymbol{\openbox} 
\newcommand{\proofname}{Proof} 
\newenvironment{proof}[1][\proofname]{
   \th@proof 
   \def@theorem@headerfont{\itshape}% 
   \norma\newcommand{\thm[proof]{#1}}% 
   \def@thmend{proof}{#1}\] % 
   \@endtrivlist\endproof % amsthm option
§ 350.10 Ending a theorem

Patched for css:
\let\LWR@origendtheorem@endtheorem 
\renewcommand{\@endtheorem}{% 
   \ifbool{\LWR@theoremmarks}{% 
   \ifsetendmark% 
   \In/l.VarineC/l.Varass{theoremendmark}{\csname\InTheoType Symbo/l.Var\endcsname}% 
   \setendmarkfa/l.Varse% 
   \fi% 
   \LWR@origendtheorem% a/l.Varso does \@endtrivlist
§ 350.11 \texttt{\textbackslash NoEndMark}

\gdef\NoEndMark{\global\setendmarkfalse}

§ 350.12 \textbf{List-of}

Redefined to reuse the float mechanism to add list-of-theorem links:

\begin{itemize}
\item \texttt{\textbackslash thm@thmline{(1: printed type)}{(2: #)}{(3: optional)}{(4: page)}}
\item \texttt{\textbackslash renewcommand{\textbackslash thm@thmline@noname}[4][%}
\item \texttt{\textbackslash hypertocfloat{1}{\textbackslash theorem}{\textbackslash thm}{\textbackslash #2 \textbackslash #3}{%}
\item \texttt{\textbackslash renewcommand{\textbackslash thm@thmline@name}[4][%}
\item \texttt{\textbackslash hypertocfloat{1}{\textbackslash theorem}{\textbackslash thm}{\textbackslash #1 \textbackslash #2 \textbackslash #3}{%}
\end{itemize}

This was redefined by \texttt{ntheorem} when loaded, so it is now redefined for \texttt{lwparkin}:

\def\thm@@thmline{\thm@@thmline@name}

Patch for \texttt{css}:

\def\listtheorems#1{
\LWR@htmlelementclass(nav){lothm}\begin{group}
\c@tocdepth=-2%
\def\thm@list{#1}\thm@processlist
\endgroup
\LWR@htmlelementclassend(nav){lothm}
}

§ 350.13 \textbf{Symbols}

Proof QED symbol:

\newcommand{\textbackslash qed}{\textbackslash quad\textbackslash the\textbackslash qedsymbol}
\AtBeginDocument{
@ifundefined{LWR@orig@openbox}{
\LetLtxMacro{LWR@orig@openbox}{openbox}
\LetLtxMacro{LWR@orig@ blacksquare}{blacksquare}
\LetLtxMacro{LWR@orig@ Box}{Box}
\def\openbox{\text{\HTMLunicode{25A1}}}% UTF-8 white box
\def\blacksquare{\text{\HTMLunicode{220E}}}% UTF-8 end-of-proof
\def\Box{\text{\HTMLunicode{25A1}}}% UTF-8 white box
\appto\LWR@restoreorigformatting{\quad\textbackslash the\textbackslash qedsymbol}
§ 350.14 Cross-referencing
\thref{⟨label⟩}

\newcommand*{\thref}[1]{\cref{#1}}% appto
\AtBeginDocument

\section*{lwarp - octave.sty}

\section*{File 252 lwarp-octave.sty}

\section*{§ 351 Package octave}
\textit{(Emulates or patches code by Andrew A. Cashner.)}

\textbf{Pkg} octave \texttt{octave} is patched for use by lwarp.

\textbf{for HTML output:} \LWR@ProvidesPackagePass{octave}[2017/10/31]

Remove the leading 1pt kern:
\begin{verbatim}
\RenewDocumentCommand{\@PrintTicks}{ m }{% \kern-1pt
\@TickNum = #1
\loop
\@Tick{% \advance\@TickNum by -1
\ifnum\@TickNum > 0
\repeat
}
\end{verbatim}

Use unicode for the prime character:
\begin{verbatim}
\RenewDocumentCommand{\@Tick}{(){\HTMLunicode{2032}}
\end{verbatim}

Catch the inline font:
\begin{verbatim}
\RenewDocumentCommand{\pitch}{ m o m }{% \if@OctaveNumber
\pitchfont{% \LWR@textcurrentfont{% lwarp
\MakeUppercase{%\IfValueTF{#1}%\textsubscript{#2}{#2}{textsubscript(#3)}%
}}%
\end{verbatim}

\newcommand*{\pitchfont}[1]{% lwarp
\MakeUppercase{#1}%\textsubscript{#2}{#2}{textsubscript(#3)}%
The original was hard to adapt to \texttt{lwp}r\texttt{ap}'s handling of \\

\begin{verbatim}
\StartDefiningTabu\Var{ars}
\renewcommand{\octavetab}{\Var{ars}}{
\begin{tabular}{ll}
\text{octaveprimes} \text{\pitch{C}}{0} & \text{octavenumbers} \text{\pitch{C}}{0} \\
\text{octaveprimes} \text{\pitch{C}}{1} & \text{octavenumbers} \text{\pitch{C}}{1} \\
\text{octaveprimes} \text{\pitch{C}}{2} & \text{octavenumbers} \text{\pitch{C}}{2} \\
\text{octaveprimes} \text{\pitch{C}}{3} & \text{octavenumbers} \text{\pitch{C}}{3} \\
\text{octaveprimes} \text{\pitch{C}}{4} & \text{octavenumbers} \text{\pitch{C}}{4} \\
\text{octaveprimes} \text{\pitch{C}}{5} & \text{octavenumbers} \text{\pitch{C}}{5} \\
\text{octaveprimes} \text{\pitch{C}}{6} & \text{octavenumbers} \text{\pitch{C}}{6} \\
\text{octaveprimes} \text{\pitch{C}}{7} & \text{octavenumbers} \text{\pitch{C}}{7} \\
\end{tabular}
}
\StopDefiningTabu\Var{ars}
\end{verbatim}

overpic is patched for use by \texttt{lwp}r\texttt{ap}.

\textbf{scaling} The macros \texttt{overpic\fontsize} and \texttt{overpic\fontskip} are used during HTML generation. These are sent to \texttt{\fontsize} to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the overpic and Overpic environments.

See section \texttt{85.2} for the print-mode version of \texttt{overpic\fontsize} and \texttt{overpic\fontskip}.

for HTML output:

\begin{verbatim}
\BeforeBeginEnvironment{overpic}{% 
\begin{lateximage}
\fontsize{\overpic\fontsize}{\overpic\fontskip}
\selectfont%
%}
\end{verbatim}
\AfterEndEnvironment{overpic}{\end{lateximage}}
\BeforeBeginEnvironment{Overpic}{%
\begin{lateximage}
\fontsize{\overpicfontsize}{\overpicfontskip}
\selectfont%
}
\AfterEndEnvironment{Overpic}{\end{lateximage}}

---

File 254  lwpaper-pagegrid.sty

§ 353  Package pagegrid

Pkg  pagegrid  pagegrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

2 \newcommand*\pagegridsetup{}{}

---

File 255  lwpaper-pagernote.sty

§ 354  Package pagernote

Pkg  pagernote  pagernote works as-is, but the page option is disabled.

for HTML output: 1 \DeclareOption{page}{}

2 \LWR@ProvidesPackagePass{pagernote}[2009/09/03]

---

File 256  lwpaper-pagesel.sty

§ 355  Package pagesel

Pkg  pagesel  pagesel is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

---

File 257  lwpaper-paralist.sty

§ 356  Package paralist

(Emulates or patches code by Bernd Schandl.)
The compact environments are identical to the regular ones:

\begin{itemize}
\item \texttt{\LetLtxMacro\compactitem\itemize}
\item \texttt{\LetLtxMacro\compactenum\enumerate}
\item \texttt{\LetLtxMacro\compactdesc\description}
\item \texttt{\endcompactitem\enditemize}
\item \texttt{\endcompactenum\endenumerate}
\item \texttt{\endcompactdesc\enddescription}
\end{itemize}

For the inline environments, revert \texttt{\item} to its original print-mode version:

\begin{itemize}
\item \texttt{\AtBeginEnvironment{inparaitem}{\LetLtxMacro\item\LWR@origitem}}
\item \texttt{\AtBeginEnvironment{inparaenum}{\LetLtxMacro\item\LWR@origitem}}
\item \texttt{\AtBeginEnvironment{inparadesc}{\LetLtxMacro\item\LWR@origitem}}
\end{itemize}

Manual formatting of the description labels:

\begin{itemize}
\item \texttt{\def\paradescription{l.Varabe/l.Var#1{{\norma/l.Varfont\textbf{#1}}}}}
\end{itemize}
\def\PN@parnotes@real{% 
  % We call \par later, so this avoids recursion with \PN@parnotes@auto 
  \PN@inparnotestru e 
  \unless\ifvmode\par\fi 
  % Avoid page breaks between a paragraph and its parnotes 
  \nopagebreak\addvspace{parnotevskip}\l warp 
  \begin{BlockClass}{footnotes}\l warp 
  \parnotefmt{\PN@text}\par\l warp 
  \end{BlockClass}\l warp 
  \global\def\PN@text{}\l warp 
  \addvspace{parnotevskip}\l warp 

  % 
  % These can be enabled or disabled by package options 
  %  
  \PN@disable@indent 
  \PN@reset@optional 
  \PN@inparnotesfalse 
  
} 

\AtBeginDocument{
  \crefname{parnotemark}{paragraph note}{paragraph notes} 
  \Crefname{parnotemark}{Paragraph note}{Paragraph notes} 
}

---

File 259  **lwarp-parskip.sty**

§ 358  **Package**  **parskip**

**Pkg** parskip  **parskip** is ignored.

**for HTML output:**  Discard all options for lwarp-parskip.

1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]

---

File 260  **lwarp-pbox.sty**

§ 359  **Package**  **pbox**

(Emulates or patches code by Simon Law.)

**Pkg** pbox  **pbox** is emulated.

**for HTML output:**

1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]

2 \NewDocumentCommand{\pbox}{O{t} O{} O{t} m +m}{
3 \parbox[#1][#2][#3][#4][#5]}
4 \parbox[#1][#2][#3][#4][#5]
\begin{verbatim}
lnewcommand{\settominwidth}[3]{\settowidth{#2}{#3}}
\newcommand{\widthofpbox}[1]{\widthof{#1}}
\end{verbatim}

\textbf{File 261} \textit{lwp-pdflscape.sty}

\textbf{§ 361 Package \texttt{pdflscape}}

\textbf{Pkg \texttt{pdflscape}} \texttt{pdflscape} is ignored.

\textbf{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{pdflscape}[2016/05/14]
\end{verbatim}

\textbf{File 263} \textit{lwp-pdfmarginpar.sty}

\textbf{§ 362 Package \texttt{pdfmarginpar}}

\textbf{Pkg \texttt{pdfmarginpar}} \texttt{pdfmarginpar} is ignored.
lwarp

for HTML output:
1 \LWR@ProvidesPackageDrop{pdfmarginpar}[2011/08/05]

2 \newcommand{\pdfmarginpar}[2][]{}
3 \newcommand{\pdfmarginparset}[1][]{}

File 264 lwarp-pdfpages.sty

§ 363 Package pdfpages

(Emulates or patches code by Andreas Matthias.)

Pkg pdfpages pdfpages is patched for use by lwarp.

Option link and linkname work:

\hyper\l.Varink{<filename>.pdf.<pagenumber}}{some text}
\hyper\l.Varink{</l.Varinkname>.<pagenumber}}{some text}

Options which make no sense in HTML are disabled.

for HTML output:
1 \LWR@ProvidesPackagePass{pdfpages}[2017-10-31]

Disable option which have no meaning for HTML output:

2 \define@key{pdfpages}{fitpaper}[false]{}
3 \define@key{pdfpages}{landscape}[false]{}
4 \define@key{pdfpages}{openright}[false]{}
5 \define@key{pdfpages}{signature}{}
6 \define@key{pdfpages}{signature*}{}
7 \define@key{pdfpages}{booklet}[false]{}
8 \define@key{pdfpages}{rotateoversize}[false]{}
9 \define@key{pdfpages}{doublepages}[false]{}
10 \define@key{pdfpages}{doublepagewistodd}[false]{}
11 \define@key{pdfpages}{doublepagewistodd*}[false]{}
12 \define@key{pdfpages}{doubleduplicatepages}[false]{}
13 \define@key{pdfpages}{thread}[false]{}
14 \define@key{pdfpages}{threadname}{}
15 \define@key{pdfpages}{linkfit}{}
16 \define@key{pdfpages}{linktdoc}[false]{}
17 \define@key{pdfpages}{linktdocfit}{}
18 \define@key{pdfpages}{linkfilename}{}
19 \define@key{pdfpages}{survey}[false]{}
20 \define@key{pdfpages}{survey-nolink}[false]{}
21 \define@key{pdfpages}{newwindow}[false]{}

Use print mode while measuring the page numbers:

24 \xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}
Emulate a bit of eso-pic:

\newif\ifESO@texcoord
\newcommand{\ESO@HookIIBG}{}
\renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
\renewcommand{\ClearShipoutPicture}{}

\LWR@esopic@newpage At each \newpage.
\newcommand*{\LWR@esopic@newpage}{% Is there something to draw?
  \ifdefvoid{\ESO@HookIIBG}{}% If the link option was specified, add a hyper taraget:
  \ifAM@/l.Varink% \hypertarget{\AM@/l.Varinkname.\AM@page}{}% Draw inside a picture environment of the size of a virtual page:
  \begingroup% \set/l.Varength{\unit/l.Varength}{1in}% \begin{picture}(8,10.5)% \ESO@HookIIBG% \end{picture}% \endgroup% \g/l.Varoba/l.Var//l.Varet\ESO@HookIIBG\@empty%}

\AM@output Patched to use \LWR@esopic@newpage.
\xpatchcmd{\AM@output}{{\newpage}{{\LWR@esopic@newpage}{}{{\LWR@patcherror{pdfpages}{AM@output-1}}}}}
\xpatchcmd{\AM@output}{{\newpage}{{\LWR@esopic@newpage}{}{{\LWR@patcherror{pdfpages}{AM@output-2}}}}}
\xpatchcmd{\AM@output}{{\newpage}{{\LWR@esopic@newpage}{}{{\LWR@patcherror{pdfpages}{AM@output-3}}}}}
\includepdf Patched to set a reasonable paper size.
\pretocmd{\includepdf}{\begingroup\setlenght{\paperwidth}{8in}\setlenght{\paperheight}{10.5in}\endgroup}{\xapptocmd{\includepdf}{\endgroup}{}}

\includepdfmerge Patched to set a reasonable paper size.
\pretocmd{\includepdfmerge}{\begingroup\setlenght{\paperwidth}{8in}\setlenght{\paperheight}{10.5in}\endgroup}{\xapptocmd{\includepdfmerge}{\endgroup}{}}

\AM@hyper@begin@i Hyper links are created by \LWR@esopic@newpage, so don't create them here:
renewcommand{\AM@hyper@begin@i}{}

---

File 265 lwpdfprivacy.sty

§ 364 Package pdfprivacy

Pkg pdfprivacy pdfprivacy is ignored.

for HTML output: \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

---

File 266 lwpdfrender.sty

§ 365 Package pdfrender

Pkg pdfrender pdfrender is ignored.

for HTML output: \LWR@ProvidesPackageDrop{pdfrender}[2016/05/17]
newcommand*{\pdfrender}[1]{ }
newcommand{\textpdfrender}[2]{\string#2}
§ 366 Package \texttt{pdfsync}

(Emulates or patches code by J. Laurens.)

 Emulated.

\texttt{pdfsync} for HTML output:

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]
2 \newcommand*{\pdfsync}{}
3 \newcommand*{\pdfsyncstart}{}
4 \newcommand*{\pdfsyncstop}{}
\end{verbatim}

§ 367 Package \texttt{pdftricks}

(Emulates or patches code by C. V. Radhakrishnan, C. V. Rajagopal, Antoine Chambert-Loir.)

\texttt{pdftricks} is patched for use by \texttt{lwparp}.

\textbf{convert image files} The \texttt{pdftricks} image files \texttt{<jobname>-fig*.pdf} must be converted to \texttt{.svg}, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ \texttt{lwparsmk pdftosvg <jobname>-fig*.pdf}

for HTML output:

\begin{verbatim}
1 \LWR@ProvidesPackagePass{pdftricks}[2003/08/10]
\end{verbatim}

Reuse the print-mode images:

\begin{verbatim}
2 \def\PDFfigname{\BaseJobname-fig\thepsfig}
\end{verbatim}

If the \texttt{.pdf} images have not yet been converted to \texttt{.svg} then an error about a missing file will occur. Warn the user to convert the images.

\begin{verbatim}
3 \PackageWarning{lwpars-pdfttricks}{
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using '),lwparsmk pdftosvg *-fig.pdf',
6 }
7 \AfterEndDocument{\typeout{***}}
8 \AfterEndDocument{\typeout{*** Note: If pdftricks images are not found, new, or updated,}}
9 \AfterEndDocument{\typeout{*** space use ',lwparsmk pdftosvg \BaseJobname-fig*.pdf'}}
10 \AfterEndDocument{\typeout{***}}
11 \AfterEndDocument{\typeout{***}}
\end{verbatim}
§ 368 Package \texttt{pdfx}

\texttt{pdfx} is ignored.

\texttt{for HTML output:} \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

§ 369 Package \texttt{perpage}

\texttt{perpage} is mostly ignored, but support is added for footnote counters.

There is no page number in HTML, so most counters are not reset. If the document redefines \texttt{\the<counternamex>}, to include \texttt{\perpage}, it is necessary to place that redefinition inside a \texttt{warpprint} environment to avoid modifying the HTML definitions.

\texttt{AddAbsoluteCounter} must not be inside \texttt{warpprint}, as the counter must be added for HTML also, although it is not incremented.

\textbf{footnote numbering} To have footnote numbers reset each time footnotes are printed:

\texttt{\setcounter{footnoteReset}{1}}

For \texttt{bigfoot}, \texttt{manyfoot}, or \texttt{perpage}:

\texttt{\MakePerPage{footnoteX}}

\texttt{— or —}

\texttt{\MakeSortedPerPage{footnoteX}}

The footnotes are reset when they are printed, according to section level as set by \texttt{FootnoteDepth}, which is not necessarily by \texttt{HTML} page. This is recommended for \texttt{\Alph}, \texttt{\Alph}, or \texttt{\fnsymbol} footnotes, due to the limited number of symbols which are available.

\texttt{for HTML output:} \LWR@ProvidesPackageDrop{perpage}[2014/10/25]

\begin{verbatim}
2 \newcommand{AddAbsoluteCounter}[1]{
3 {\
4 \@ifundefined{c@abs#1}{%
5 \expandafter{newcount\csname c@abs#1\endcsname
6 \global{value\abs#1}@ne
7 % \global\expandafter{let\csname cl@abs#1\endcsname@empty
8 \expandafter{\def\csname theabs#1\endcsname@empty%
9 % \noexpand\number \csname c@abs#1\endcsname
\end{verbatim}
lwarp

\% \global\namedef{c@pabs@#1}{\pp@c/l.Var@begin
\stepcounter{abs#1}\%
\pp@cl@end}\%
\@addtoreset{pabs@#1}{#1}
}

\AddAbso/l.VaruteCounter{page}
\def\theabspage{1}
\newcommand*{\MakePerPage}[2][1]{\if/l.Vartxcounter{#2Reset}{\setcounter{#2Reset}{#1}}{}\else\fi}
\newcommand*{\MakeSortedPerPage}[2][1]{\if/l.Vartxcounter{#2Reset}{\setcounter{#2Reset}{#1}}{}\else\fi
\newcommand*{\theperpage}{1}

OlNvarwarpMpfnoteNsty

File 271 lwarp-pfnote.sty

§ 370 Package pfnote

Pkg pfnote pfnote is emulated.

pfnote While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. lwarp therefore uses continuous footnote numbering even for pfnote.

for HTML output: \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

File 272 lwarp-phfqit.sty

§ 371 Package phfqit

(Emulates or patches code by PHILIPPE FAIST.)

Pkg phfqit phfqit is patched for use by lwarp.
\begin{verbatim}
for HTML output: 1 \ LW@ProvidesPackagePass(phfqit)[2017/08/16]

2 \ LW@ProvidesPackagePass(pifont)[2005/04/12]

3 \ renewcommand{\Pisymbol}[2]{%
4 \ begin{lateximage}*(\Pisymbol)[\pisymbol\#1\#2]%
5 \ \Pifont{\#1}\char\#2%
6 \ end{lateximage}%
7 }%
8 \ newcommand{\LWR@HTML@Pifi\#1\#2}{%
9 \ \Pifi\#1\#2 \Pifi\#1\#2 \Pifi\#1\#2%
10 }%
11 \LWR@formatted{Pifi\#1\#2}
12 \ newcommand{\LWR@HTML@Piline}[2]{%
13 \ \Pifill\#1\#2 \Pifill\#1\#2 \Pifill\#1\#2%
14 \ \Pifill\#1\#2 \Pifill\#1\#2 \Pifill\#1\#2%
15 }%
16 \LWR@formatted{Piline}

\end{verbatim}

File 273 \textbf{lwp-ar-pfont.sty}

\section{Package \texttt{pifont}}

(\textit{Emulates or patches code by Walter Schmidt.})

\textbf{Pkg pifont} \texttt{pifont} is patched for use by \texttt{lwp}.

Hashed inline images are used, as there may not be Unicode support for all icons.

File 274 \textbf{lwp-aiplaceins.sty}

\section{Package \texttt{placeins}}

(\textit{Emulates or patches code by Donald Arseneau.})
placeins is not used during HTML conversion.

Discard all options for lwarp-placeins:

for HTML output:
1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18]
2 \newcommand*{\FloatBarrier}{}

File 275  \texttt{lwp-plarydshln.sty}

§ 374  Package  \texttt{plarydshln}

plarydshln is emulated by lwarp-arydshln.

for HTML output:
1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}

File 276  \texttt{lwp-plext.sty}

§ 375  Package  \texttt{plext}

plext is preloaded by jarticle and related classes.

for HTML output:
1 \LWR@loadBefore{plext}
2 \LWR@ProvidesPackagePass{plext}[2017/07/21]
4 \let\tate\relax
6 \DeclareExpandableDocumentCommand{\rensui}{s o m}{#3}
8 \layoutfloat{width, height}[pos]{#4}
9 \DeclareDocumentCommand{\layoutfloat}{d() o m}{#5}
11 \DeclareLayoutCaption[type \dir](width)[pos1pos2]
12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d< \dir d() o}{#6}
14 \LetLtxMacro{\pcaption}{\caption}
15 \let\captiondir\relax
17 \DeclareDocumentCommand{\layoutcaption}{d< \dir d() o}{#7}
19 \let\captiondir\relax

Add the optional \texttt{<t/y>} direction:

20 \RenewDocumentEnvironment{\LWR@HTML@minipage}{d< O(t) O() O(t) m}
21 \LWR@HTML@sub@minipage[#2][#3][#4][#5]
picture, as modified by pext, is encapsulated by the lwpark core.

File 277  lwpark-plextarydshln.sty

§ 376  Package  plexarydshln

Pkg  plexarydshln  plexarydshln is emulated by lwpark-arydshln.

for HTML output:
1 \LWR@ProvidesPackageDrop{plexarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwpark-arydshln}

File 278  lwpark-plextcolortbl.sty

§ 377  Package  plexcolortbl

Pkg  plexcolortbl  plexcolortbl is emulated by lwpark-colortbl.

for HTML output:
1 \LWR@ProvidesPackageDrop{plexcolortbl}[2018/09/19]
2 \LWR@origRequirePackage{lwpark-colortbl}

File 279  lwpark-prelim2e.sty

§ 378  Package  prelim2e

(Emulates or patches code by MARTIN SCHRODER.)

Pkg  prelim2e  Emulated.

for HTML output:
Discard all options for lwarp-prelim2e:

1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]

2 \texttt{\newcommand{\PrelimText}{}\}
3 \texttt{\newcommand{\PrelimTextStyle}{}\}
4 \texttt{\newcommand{\PrelimWords}{}\}

---

**File 280 lwarp.prettyref.sty**

§ 379 Package **prettyref**

*Emulates or patches code by Kevin S. Ruland.*

**Pkg** prettyref *prettyref* is patched for use by lwarp.

**for HTML output:**

1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]

2 \texttt{\newrefformat{fig}{Figure \ref{#1}}}  
3 \texttt{\newrefformat{tab}{Table \ref{#1}}}  

---

**File 281 lwarp.preview.sty**

§ 380 Package **preview**

**Pkg** preview *preview* is ignored.

**for HTML output:**

1 \LWR@ProvidesPackageDrop{preview}[2017/04/24]

2 \texttt{\newenvironment{preview}{}}{}  
3 \texttt{\newenvironment{nopreview}{}}{}  
4 \texttt{\newcommand{\PreviewMacro}[2][o][m]{}}{}  
5 \texttt{\NewDocumentCommand{\PreviewEnvironment}{s o o +m}{}}{}  
6 \texttt{\newcommand{\PreviewSnarfEnvironment}[2][]{}\}
7 \texttt{\NewDocumentCommand{\PreviewOpen}{s o}{}\}
8 \texttt{\NewDocumentCommand{\PreviewClose}{s o}{}\}
9 \texttt{\let\ifPreview\iffalse\fi for syntax highlighting}

---

**File 282 lwarp-psfrag.sty**

§ 381 Package **psfrag**

*Emulates or patches code by Michael C. Grant, David Carlisle.*

**Pkg** psfrag *psfrag* is patched for use by lwarp.

⚠️ use psfrags The psfrags environment is modified to use \texttt{\LaTeXimage} to encapsulate the image.
Always use a `psfrags` environment to contain any local \psfrag macros and the associated \includegraphics or \epsfig calls. Outside of a `psfrags` environment, `psfrags` adjustments will not be seen by l\warp.

⚠️ Tip: Use a mono-spaced font for the tags in the eps file.

```latex
\setcounter{enumi}{1}
\begin{quote}
\textbf{for HTML output:}
\begin{verbatim}
\LWR@ProvidesPackagePass{psfrag}[1998/04/11]

\texttt{A \LaTeXimage captures the modified image from the document.}

\BeforeBeginEnvironment{psfrags}{
\begin{/l.Varateximage}[(-psfrags-~\packagediagramname)]
\mbox{\pfx@overpix{#1}{#2}}
\end{/l.Varateximage}
\def\@@@overpix[#1]<#2>[#3]#4{
\begin{/l.Varateximage}[(-psfragx-~\packagediagramname)]
\pfx@overpix(#1,ovpfgd={#2},ovpbgd={#3})#4
\end{/l.Varateximage}
\def\endoverpix{\endpfx@overpix}\end{verbatim}
\end{quote}

File 283 l\warp-psfragx.sty

§ 382 Package \textbf{psfragx}

\textit{(Emulates or patches code by Pascal Kockaert.)}

Pkg psfragx \textsl{psfragx} is patched for use by l\warp.

\textbf{for HTML output:}
\begin{verbatim}
\LWR@ProvidesPackagePass{psfragx}[2012/05/02]

\texttt{A \LaTeXimage captures the modified image from the document.}

\BeforeBeginEnvironment{psfragx}{
\begin{/l.Varateximage}[(-psfragx-~\packagediagramname)]
\beginpfx@overpix{#1}{#2}
\endpfx@overpix
\begin{/l.Varateximage}[(-psfragx-~\packagediagramname)]
\@@@overpix[#1][#2][#3]{#4}
\end{/l.Varateximage}
\end{verbatim}
\end{quote}

File 284 l\warp-pst-eps.sty

§ 383 Package \textbf{pst-eps}

\textit{(Emulates or patches code by Herbert Voss.)}
pst-eps is patched for use by lwarp.

\begin{verbatim}
\LWR@ProvidesPackagePass{pst-eps}[2005/05/20]
\end{verbatim}

\renewenvironment{TeXtoEPS}{}{}
\renewcommand\PSTtoEPS[3][]{\{}

OlNvarwarpMpstooOlNvarNsty
File 285 \texttt{lwpark-pstool.sty}

\textbf{§ 384 Package \texttt{pстool}}

\textit{(Emulates or patches code by ZebB Prime, Will Robertson.)}

\texttt{pстool} is patched for use by \texttt{lwpark}.

The filename must not have a file extension.

\textbf{path and filename}

Use

\begin{verbatim}
Enter ⇒ lwarp\texttt{mk html}
\end{verbatim}

followed by

\begin{verbatim}
Enter ⇒ lwarp\texttt{mk images}
\end{verbatim}

Each image is placed inside a \texttt{lateximage} to capture the results of \texttt{psfrag}.

\begin{verbatim}
\LWR@ProvidesPackagePass{pстool}[2018/01/20]
\renewcommand\pстool@alwaysprocess[3][]{%
  \begin{lateximage}[(-pстool--\packagediagramname)]%
  \includegraphics[#2.pdf]%
  \end{lateximage}%
  }
\let\pстool@neverprocess\pстool@alwaysprocess
\let\pстool@maybeprocess\pстool@alwaysprocess
\renewcommand\pстool@psfragfig[4][]{%
  \begin{lateximage}[(-pстool--\packagediagramname)]%
  \includegraphics[#2.pdf]%
  \end{lateximage}%
}
\end{verbatim}
§ 385 Package \texttt{pstricks}

\textit{(Emulates or patches code by Timothy Van Zandt.)}

\texttt{pstricks} is patched for use by \texttt{lwpdr}.  

\begin{itemize}
  \item \texttt{pstricks} content should be contained inside a \texttt{pspicture} environment.
\end{itemize}

\texttt{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackagePass{pstricks}[2018/01/06]
2 \BeforeBeginEnvironment{pspicture}{\begin{/l.Varateximage}\[(pspicture)\]}
3 \AfterEndEnvironment{pspicture}{\end{/l.Varateximage}}
\end{verbatim}

§ 386 Package \texttt{pxatbegshi}

\texttt{pxatbegshi} is ignored.

\texttt{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]
2 \LWR@origRequirePackage{lwp-ar@begshi}
\end{verbatim}

§ 387 Package \texttt{pxeveryshi}

\texttt{pxeveryshi} is ignored.

\texttt{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]
2 \LWR@origRequirePackage{lwp-everyshi}
\end{verbatim}

§ 388 Package \texttt{pxftnright}

\texttt{pxftnright} is ignored.

\texttt{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]
\end{verbatim}
**lwarp**

2 \LWR@origRequirePackage{lwar-ftnright}

---

**File 290**  
**lwarp-pxjahyper.sty**

§ 389  
Package  
**pxjahyper**

Pkg  
pxjahyper  
**pxjahyper** is ignored.

for HTML output:  
1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

---

**File 291**  
**lwarp-quotchap.sty**

§ 390  
Package  
**quotchap**

(Emulates or patches code by Karsten Tinnefeld, Jan Klever.)

Pkg  
quotchap  
**quotchap** is emulated.

for HTML output:  
1 \LWR@ProvidesPackageDrop{quotchap}[2012/10/20]

2 \newcommand{\@quotchap}{}
3 \newlength{\LWR@quotchapwidth}
4 \let@printcites\relax
5 \newcommand*{\@iprintcites}{% 
6 Place the quotes inside a `<div>` of class quotchap, of the maximum selected width:
7 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
8 \begin{minipage}{\LWR@quotchapwidth}
9 \@quotchap
10 \end{minipage}
11 \end{BlockClass}

Deactivate the quote printing:

12 \global\let@printcites\relax
13 )
14 
15 \NewEnviron{savequote}[1][\linewidth]{%
16 \setlength{\LWR@quotchapwidth}{#1*2}%
17 \global\LWR@quotchapwidth=\LWR@quotchapwidth%

Remember the width, adjusted for HTML, and make the length assignment global, per:  
Remember the body, and activate the quote printing:

\newcommand{\qauthor}[1]{\begin{b}{qauthor}{#1}\end{b}}
\qsetcnfont is ignored:

\newcommand{\qsetcnfont}[1]{}

---

File 292  **lwarp-quoting.sty**

§ 391  Package  **quoting**

(Emulates or patches code by THOMAS TITZ.)

**Pkg**  quoting  quoting is patched for use by lwarp.

**for HTML output:**

1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]

2 \xpatchcmd{\quoting}{\quo@begintext}
3 {\begin{LWR@b\quo@begintext}
4 {}\end{LWR@b\quo@begintext}
5 {\LWR@patcherror{quoting}{quoting}}
6
7 \xpatchcmd{\endquoting}{\quo@endtext}
8 {\quo@endtext\end{LWR@b\quo@begintext}}
9 {}\end{LWR@b\quo@begintext}
10 {\LWR@patcherror{imakeidx}{endquoting}}

---

File 293  **lwarp-ragged2e.sty**

§ 392  Package  **ragged2e**

(Emulates or patches code by MARTIN SCHÖDER.)

**Pkg**  ragged2e  ragged2e is not used during HTML conversion.

Discard all options for lwarp-ragged2e:

**for HTML output:**

1 \LWR@ProvidesPackageDrop{ragged2e}[2009/05/21]

2 \LetLtxMacro\Centering\centering
3 \LetLtxMacro\RaggedLeft\raggedleft
4 \LetLtxMacro\RaggedRight\raggedright
§ 393 Package \texttt{realscripts} (Emulates or patches code by Will Robertson.)

\texttt{realscripts} is emulated. See \texttt{lwp.realscripts.css} for the \texttt{<span>} of class supsubscript.

\texttt{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{realscripts}[2016/02/13]
2 \let\real superscript\textsuperscript
3 \let\real subscript\textsubscript
4 5 \let\fak e superscript\textsuperscript
6 \let\faken subscript\textsubscript
7 8 \new length\(\sub supersep\)
9
10 \newcommand*{\LWR@realscriptsalign}{
11 12 \new command*{\LWR@setrealscriptsalign}[][][%
13 \renew command*{\LWR@realscriptsalign}[]%
14 \ifthenelse{\equal{[#1]}{c}}{%
15 \re new command{\LWR@realscriptsalign}[]%
16 \LWR@print@box{\text align:center} ; %
17 }%
18 }%
19 \ifthenelse{\equal{[#1]}{r}}{%
20 \renew command{\LWR@realscriptsalign}[]%
21 \LWR@print@box{\text align:right} ; %
22 }%
23 }%
24 }
\end{verbatim}
\DeclareDocumentCommand \textsubsuperscript \s O{(#1, #2)} {%
    \LWR@setrealscriptsalign(#2)%
    \InlineClass[\LWR@realscriptsalign]{supscript}{%'
        \textsuperscript{#1}\textsubscript{#2}%
    }%
}%
\DeclareDocumentCommand \textsuperscript \s O{(#1, #2)} {%
    \LWR@setrealscriptsalign(#2)%
    \InlineClass[\LWR@realscriptsalign]{supscript}{%'
        \textsuperscript{#2}\textsubscript{#1}%
    }%
}%

\LWR@ProvidesPackageDrop{refcheck}[2013/02/14]
\def\showrefnames{}
\def\norefnames{}
\def\nocrinames{}
\def\necrinames{}
\def\setonmsgs{}
\def\setoffmsgs{}
\def\checkunb{}\def\ignoreunb{}
\newcommand*{\refcheckxrdoc}[2][{}]

\LWR@ProvidesPackagePass{register}[2019/01/01]
\xpatchcmd{\register}{\centering}{}
\begin{center}\begin{lateximage}[-register--\packagediagramname}\end{lateximage}\end{center}\LWR@patcherror{register}{register}
lwarp

File 297  lwarp-relsize.sty

§ 396  Package  relsize

(Emulates or patches code by Donald Arseneau, Bernie Cosell, Matt Swift.)

Pkg  relsize  relsize is patched for use by lwarp.

For HTML, only the inline macros are supported: \textlarger, \textsmaller, and \textscale. Each becomes an inline span of a modified font-size.

\relsize, \larger, \smaller, and \reyscale are ignored.

While creating svg math for HTML, the original definitions are temporarily restored, and so should work as expected.

⚠  not small  The HTML browser’s setting for minimum font size may limit how small the output will be displayed.

for HTML output:

1 \LWR@ProvidesPackagePass{relsize}[2013/03/29]

2 \let\LWR@origrelsize\relsize
3 \LetLtxMacro\LWR@origlarger\larger
4 \LetLtxMacro\LWR@origsmaller\smaller
5 \let\LWR@relsca\reyscale
6 \LetLtxMacro\LWR@origtextlarger\textlarger
7 \LetLtxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
lwarp

\appto\LWR@restoreorigformatting{% \\
\let\rlsize\LWR@origrlsize% \\
\LetLtxMacro\rl@larger\LWR@origlarger% \\
\LetLtxMacro\rl@smaller\LWR@origsmaller% \\
\let\rlsca\LWR@origrlscale% \\
\LetLtxMacro\rltextlarger\LWR@origrltextlarger% \\
\LetLtxMacro\rltextsmaller\LWR@origrltextsmaller% \\
\let\rltxtscale\LWR@origrltxtscale% }

\newcounter{\LWR@rlscale\txttemp}
\renewcommand*{\rl@rlsize}[1]{}
\renewcommand*{\rl@larger}[1][{}]{% 
\renewcommand*{\rl@smaller}[1][{}]{% 
\renewcommand*{\rl@rlscale}[1][{}]{% 
\renewcommand*{\rltextlarger}[2][1][{}]{% 
\setcounter{\LWR@rlscale\txttemp}{100+(#1*20)}%
\In\rl@rltxtass{font-size:\arabic{\LWR@rlscale\txttemp}\%}{text/l.\rltextlarger}{#2}%
\rltextsmaller}[2][1][{}]{% 
\setcounter{\LWR@rlscale\txttemp}{100-(#1*20)}%
\In\rl@rltxtass{font-size:\arabic{\LWR@rlscale\txttemp}\%}{text/l.\rltextsmaller}{#2}%
\rltxtscale}[2][{}]{% 
\setcounter{\LWR@rlscale\txttemp}{100*\real{#1}}%
\In\rl@rltxtass{font-size:\arabic{\LWR@rlscale\txttemp}\%}{text/l.\rltxtscale}{#2}%
\rltext\rltext}

---

lwarp-repeatindex.sty

§ 397 Package repeatindex

repeatindex is emulated for lwarp.

△ style file lwarp must be used with a special style file:

\usepackage[makeindex,makeindexStyle={lwarp_repeatindex}]{lwarp}

where lwarp_repeatindex.ist may be copied from the following modified version of lwarp.ist:

\begin{verbatim}
preamble
"\end{theindex}
\providecommand*{\lettergroupDefault}[1]{}
\providecommand*{\lettergroup}[1][{}]
\par\textbf{#1}\par
\nopagebreak
\end{verbatim}
The modifications are the `delim_0` and `item_0` entries.

For HTML output:

```latex
1 \LWR@ProvidesPackageDrop{repeatindex}[2001/10/13]
```

In the `lwarp` core, `\indexitem` is modified to accept the optional `\item` argument.

```latex
2 \RequirePackage{makeidx}
3 \def\entryprefix{\textit{}}
4 \def\entrypostfix{\ldots}
```

---

**File 299**

`lwarp-resizegather.sty`

§ 398 **Package**

`resizegather`

**Pkg** `resizegather` is ignored.

For HTML output:

```latex
1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]
```

```latex
2 \newcommand*{\resizegathersetup}[1]{}
```

---

**File 300**

`lwarp-rmpage.sty`

§ 399 **Package**

`rmpage`

**Pkg** `rmpage` is ignored.

For HTML output:

```latex
1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]
```
lwarp

File 301  
\texttt{lwarp-romanbar.sty}

§ 400  Package \texttt{romanbar}

\textit{(Emulates or patches code by H.-Martin M"unch.)}

\texttt{Pkg romanbar}  \texttt{romanbar} is patched for use by \texttt{lwarf}.

An inline class with an overline and underline is used.

\texttt{for HTML output:}
1 \LWR@ProvidesPackagePass{romanbar}[2012/01/01]
2 \texttt\LaTeX{}\texttt\@DeclareRobustCommand{\Roman@bar}[1]{% #1 is in Roman, i.e. MMXII
3 \texttt\@InlineClass{%
4 text-decoration: overline underline ;
5 \{romanbar\}(#1)%
6 }%

File 302  \texttt{lwarp-romanbarpagenumber.sty}

§ 401  Package \texttt{romanbarpagenumber}

\texttt{Pkg romanbarpagenumber}  \texttt{romanbarpagenumber} is ignored.

\texttt{for HTML output:}
1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]

File 303  \texttt{lwarp-rotating.sty}

§ 402  Package \texttt{rotating}

\textit{(Emulates or patches code by Robin Fairbairns, Sebastian Rahtz, Leonor Barroca.)}

\texttt{Pkg rotating}  \texttt{rotating} is emulated.

All rotations are ignored in HTML output.

\texttt{for HTML output:}
1 \LWR@ProvidesPackageDrop{rotating}[2016/08/11]
2 \texttt\@RequirePackage{graphicx}
3 \texttt\@LetLtxMacro\sidewastable\table
4 \texttt\@let\endsidewastable\endtable
5 \texttt\@LetLtxMacro\sidewaysfigure\figure
6 \texttt\@let\endsidewaysfigure\endfigure
7 \texttt\@let\endsidewaysfigure\endfigure
8


\begin{newenvironment*}{sideways}{}{}
\begin{newenvironment*}{turn}[1]{}{}
\begin{newenvironment*}{rotate}[1]{}{}
\begin{NewDocumentCommand}{\turnbox}{m +m}{#2}
\end{NewDocumentCommand}
\let\rotcaption\caption
\let\@makertocaption\@makecaption

\begin{file}{304}{lwrarwarp.sty}
\section*{\texttt{lwp-rotfloat.sty}}
\section*{\texttt{rotfloat}}

\subsection*{\texttt{rotfloat}}
(Emulates or patches code by Axel Sommerfeldt.)

\texttt{rotfloat} is emulated.

\texttt{lwr@ProvidesPackageDrop}{rotfloat}[2004/01/04]
\texttt{lwr@RequirePackage}{float}

\texttt{lwr@newf}{\langle1: type\rangle}{\langle2: placement\rangle}{\langle3: ext\rangle}{\langle4: within\rangle]

Emulates the \texttt{\newf} command from the \texttt{float} package. Sideways floats are \texttt{\let} to the same as regular floats.

"placement" is ignored.

\texttt{lwr@RenewDocumentCommand}{\newf}{m m o}
\texttt{lwr@ifValeTF}{#4}
\texttt{lwr@Dec/l.VareF/l.VarareF{lVararext}=#3,within=#4}{lVararext=#3}
\texttt{lwr@cs/l.Varetcs}{sideways#1}{#1}
\texttt{lwr@cs/l.Varetcs}{endsideways#1}{end#1}

Remember the float style:
\texttt{lwr@csedef}{LWR@floatstyle@#1}{LWR@floatstyle}
\texttt{lwr@csedef}{LWR@floatstyle@sideways#1}{LWR@floatstyle}

\texttt{\newf} package automatically creates the \texttt{\listof} command for new floats, but \texttt{float} does not, so remove \texttt{\listof} here in case it is manually created later:

\texttt{lwr@cslet}{\listof#1s}{relax}
\texttt{lwr@cslet}{\listof#1es}{relax}
\texttt{lwr@cslet}{\listofsideways#1s}{relax}
\texttt{lwr@cslet}{\listofsideways#1es}{relax}
\texttt{)}
§ 404 Package rviewport

*rviewport* is honored inside a `lateximage`, and otherwise ignored for HTML output.

If *rviewport* is important for an image, enclose the image inside a `lateximage` environment.

*for HTML output:*

```
1 \LWR@ProvidesPackagePass{rviewport}[2011/08/27]
2 \define@key{igraph}{rviewport}{}
```

§ 405 Package savetrees

*savetrees* is emulated.

*for HTML output:*

Discard all options for *lwarp-savetrees*:

```
1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]
```

§ 406 Package scalefnt

(*Emulates or patches code by D. Carlisle.*)

*scalefnt* is ignored.

*for HTML output:*

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scalefont[1]{}
```

§ 407 Package schemata

(*Emulates or patches code by Charles P. Schaum.*)

*schemata* is patched for use by *lwarp*.

*for HTML output:*

```
1 \LWR@ProvidesPackagePass{schemata}[2016/01/25]
```
\texttt{lwrap}\texttt{-scrextend.sty}

\textbf{§ 408 Package \texttt{scrextend}}

\texttt{Pkg} \texttt{scrextend} \texttt{scrextend} is emulated.

This package may be loaded standalone, but is also loaded automatically if \texttt{koma-script} classes are in use. \texttt{\DeclareDocumentCommand} is used to overwrite the \texttt{koma-script} definitions.

\textbf{for HTML output:}

\begin{verbatim}
\LWR@ProvidesPackageDrop{scrextend}[2018/03/30]
\end{verbatim}
\DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
\DeclareDocumentCommand{\titlepagemode}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{#1}
\DeclareDocumentCommand{\cleardoubleemptypage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubleplainpage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoublestandardpage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubleduppage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubleduppageusingstyle}{m}{#1}
\DeclareDocumentCommand{\cleardoubledupemptypage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubledupplainpage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubledupstandardpage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubleduppageusingstyle}{m}{#1}
\DeclareDocumentCommand{\cleardoubledupemptypage}{\unexpanded}{#1}
\DeclareDocumentCommand{\cleardoubleduppage}{\unexpanded}{#1}
\DeclareDocumentCommand{\multiplefootnoteseparator}{\unexpanded}{#1}
\begin{group}
\let\thefootnotemark\multfootsep\@makefnmark\endgroup
\begin{group}
\unprotected@xdef\@thefnmark{\ref{#1}}\endgroup
\@footnotemark
\deffootnote{o m m m}{#1}
\deffootnotemark{m}{#1}
\setfootnoterule{0 m m}{#1}
\raggedfootnote{#1}
\dictum{o m}{#1}
\begin{LWR@BlockClass}{\LWR@print@mbox{text-align:right}}{dictum}
\\IfValueT{#1}{
\begin{BlockClass}{\LWR@print@mbox{border-top: 1px solid gray}{dictumauthor}}
\begin{BlockClass}{dictumauthor}
\dictumauthorformat(#1)
\end{BlockClass}
\end{BlockClass}
\end{LWR@BlockClass}
\end{LWR@BlockClass}
\dictumwidth{}
\dictumauthorformat{#1}
\dictumrule{#1}
\DeclareDocumentCommand{\raggeddictum}{()}
\DeclareDocumentCommand{\raggeddictumtext}{()}
\DeclareDocumentCommand{\raggeddictumauthor}{()}
\DeclareDocumentEnvironment{labeling}{o m}
{%
def\sc@septext##1%
\let\makelabel\labelinglabel%
}%
{\end{labeling}}
\Dec/l.VarareDocumentEnvironment{/l.Varabe/l.Varing}{o m}
{%
def\sc@septext##1%
\set\makelabel\labelinglabel%
}%
{\end{l.Varist}}
\Dec/l.VarareDocumentCommand{\labelinglabel}{m}{% #1 \quad \sc@septext%
\cs/l.Varet\addmargin\re/l.Varax}
\cs/l.Varet{addmargin*}{\re/l.Varax}
\cs/l.Varet{endaddmargin*}{\re/l.Varax}
\NewDocumentEnvironment{addmargin}{s O{} m}
{%
\set\makelabel\labelinglabel{m}{#3}
\ifblank{#2}{
\begin{BlockClass}[\LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
\LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}]
\endaddmargin}
}{
\begin{BlockClass}[\LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ;
\LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}]
\endaddmargin}
\end{BlockClass}}

Ref to create a starred environment: https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment

\ExplSyntaxOn
\cs_new:cN { addmargin* } \addmargin*
\ExplSyntaxOff

\DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}
lwarp

File 310  lwarp-scrhack.sty

§ 409  Package  scrhack

Pkg  scrhack  scrhack is ignored.

for HTML output:  \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

File 311  lwarp-scrlayer.sty

§ 410  Package  scrlayer

(Emulates or patches code by Markus Kohm.)

Pkg  scrlayer  scrlayer is emulated.

⚠️ Not fully tested!  Please send bug reports!

for HTML output:  \LWR@ProvidesPackageDrop{scrlayer}[2018/03/30]

\newcommand*{\DeclareSectionNumberDepth}[2]{}
\newcommand*{\DeclareLayer}[2]{()
\newcommand*{\DeclareNewLayer}[2]{}
\newcommand*{\ProvideLayer}[2]{}
\newcommand*{\RedeclareLayer}[2]{}
\newcommand*{\ModifyLayer}[2]{}
\newcommand*{\setlayerhaalign}{}
\newcommand*{\setlayervalign}{}
\newcommand*{\setlayerxoffset}{}
\newcommand*{\setlayeryoffset}{}
\newcommand*{\setlayerwidth}{}
\newcommand*{\setlayerheight}{}
\providecommand*{\LMToUnit}[1]{\strip@pt\dimexpr#1\times1pt/\unitlength}
\newcommand*{\putUL}{(}
\newcommand*{\putUR}{(}
\newcommand*{\putLL}{(}
\newcommand*{\putLR}{(}
\newcommand*{\putC}{(}
\newcommand*{\GetLayerContents}{[]}
\newcommand*{\currentpagesty}{[]}
\newcommand*{\currentpagestyle}{[]}
\newcommand*{\BeforeSelectAnyPageStyle}[1]{[]}
\newcommand*{\AfterSelectAnyPageStyle}[1]{[]}
\newcommand*{\DeclarePageStyleAlias}[2]{[]}
\newcommand*{\DesclareNewPageStyleAlias}[2]{[]}
\newcommand*{\ProvidePageStyleAlias}[2]{[]}
\newcommand*{\Delayercontentsmeasure}{[]}
\newcommand*{\RedeclarePageStyleAlias}[2][]
\newcommand*{\DestroyPageStyleAlias}[1][]
\newcommand*{\GetRealPageStyle}[1][]
\newcommand*{\DeclarePageStyleByLayers}[3][]{}
\newcommand*{\DeclareNewPageStyleByLayers}[3][]{}
\newcommand*{\ProvidePageStyleByLayers}[3][]{}
\newcommand*{\RedeclarePageStyleByLayers}[3][]{}
\newcommand*{\ForEachLayerOfPageStyle}[3][s m m]{}
\newcommand*{\AddLayersToPageStyle}[2][]{}
\newcommand*{\AddLayersAtBeginOfPageStyle}[2][]{}
\newcommand*{\AddLayersAtEndOfPageStyle}[2][]{}
\newcommand*{\RemoveLayersFromPageStyle}[2][]{}
\newcommand*{\AddLayersToPageStyleBeforeLayer}[3][]{}
\newcommand*{\AddLayersToPageStyleAfterLayer}[3][]{}
\newcommand*{\UnifyLayersAtPageStyle}[1][]{}
\newcommand*{\ModifyLayerPageStyle}[2][{}]
\newcommand*{\AddToLayerPageStyle}[2][{}]
\newcommand*{\IfLayerPageStyleExists}[3][{}]
\newcommand*{\IfReaLayerPageStyleExists}[3][{}]
\newcommand*{\IfLayerAtPageStyle}[4][{}]
\newcommand*{\IfSomeLayerAtPageStyle}[4][{}]
\newcommand*{\IfLayersAtPageStyle}[4][{}]
\newcommand*{\DestroyReaLayerPageStyle}[1][{}]
\newcommand*{\Ifundefined}[3][{}]
\Dec*{\automark}{s o m}{}
\Dec*{\manualmark}{}{}
\Dec*{\MakeMarkcase}{m}{#1}
\Dec*{\partmarkformat}{}{}
\Dec*{\chaptermarkformat}{}{}
\Dec*{\sectionmarkformat}{}{}
\Dec*{\GenericMarkFormat}{m}{#1}
\Dec*{\@mk}{1}{#1}
\Dec*{\@mkright}{}{}
\Dec*{\@mkdoub}{}{}
\Dec*{\@mkboth}{}{}
\Dec*{\scrayerInitInterface}{}{}
\Dec*{\scrayerAddToInterface}{}{}
\Dec*{\scrayerAddCsToInterface}{}{}
\Dec*{\scrayerOnAutoRemoveInterface}{}{}

\if@chapter
\Dec*{\partmarkformat}{}{}
\Dec*{\chaptermarkformat}{}{}
\Dec*{\sectionmarkformat}{}{}
\Dec*{\GenericMarkFormat}{m}{#1}
\Dec*{\@mk}{1}{#1}
\Dec*{\@mkright}{}{}
\Dec*{\@mkdoub}{}{}
\Dec*{\@mkboth}{}{}
\Dec*{\scrayerInitInterface}{}{}
\Dec*{\scrayerAddToInterface}{}{}
\Dec*{\scrayerAddCsToInterface}{}{}
\Dec*{\scrayerOnAutoRemoveInterface}{}{}

File 312 lwarp-scrlayer-notecolumn.sty

§ 411 Package scrlayer-notecolumn
(Emulates or patches code by Markus Kohm.)

Pkg scrlayer-notecolumn scrlayer-notecolumn is emulated.
Please send bug reports!

Not fully tested!

for HTML output:

1 \LWR@ProvidesPackageDrop{scrlayer-notecolumn}[2018/02/02]

2 newcommand*{\DeclareNoteColumn}[2][]{}
3 newcommand*{\DeclareNewNoteColumn}[2][]{}
4 newcommand*{\ProvideNoteColumn}[2][]{}
5 newcommand*{\RedeclareNoteColumn}[2][]{}
6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}
7 newcommand*{\syncwithnotecolumns}[1][]{}
8 newcommand*{\syncwithnotecolumns}[1][]{}
9 newcommand*{\clearnotecolumn}[1][]{}
10 newcommand*{\clearnotecolumns}[1][]{}

---

File 313 lwp-scrlayer-scrpage.sty

§ 412 Package scrlayer-scrpage

(Emulates or patches code by Markus Kohl.)

Pkg scrlayer-scrpage scrlayer-scrpage is emulated.

⚠️ Not fully tested! Please send bug reports!

for HTML output:

1 \LWR@ProvidesPackageDrop{scrlayer-scrpage}[2018/03/30]

2 \ifnum\undefined{footheight}{\newlength{footheight}}{}
3 \NewDocumentCommand{\lehead}{s o m}{}
4 \NewDocumentCommand{\chehead}{s o m}{}
5 \NewDocumentCommand{\rehead}{s o m}{}
6 \NewDocumentCommand{\cehead}{s o m}{}
7 \NewDocumentCommand{\rehead}{s o m}{}
8 \NewDocumentCommand{\lefoot}{s o m}{}
9 \NewDocumentCommand{\cefoot}{s o m}{}
10 \NewDocumentCommand{\refoot}{s o m}{}
11 \NewDocumentCommand{\cofoot}{s o m}{}
12 \NewDocumentCommand{\rofoot}{s o m}{}
13 \NewDocumentCommand{\inhead}{s o m}{}
14 \NewDocumentCommand{\inhead}{s o m}{}
15 \NewDocumentCommand{\cfoot}{s o m}{}
16 \NewDocumentCommand{\cfoot}{s o m}{}
17 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
18 \newcommand*{\defpairofpagestyles}[3][]{}
19 \newcommand*{\newpairofpagestyles}[3][]{}
20 \newcommand*{\renewpairofpagestyles}[3][]{}
21 \newcommand*{\providepairofpagestyles}[3][]{}
22 \newcommand*{\clearmainofpairofpagestyles}{}
\newcommand*{\clearplainofpairofpagestyles}{}
\newcommand*{\clearpairofpagestyles}{}
\newcommand*{\clearscrheadings}{}
\newcommand*{\clearscrheadfoot}{}
\newcommand*{\clearscrpplain}{}

\NewDocumentCommand{\deftrip}{s m m m}{...}
\NewDocumentCommand{\newtrip}{s m m m}{...}
\NewDocumentCommand{\renewtrip}{s m m m}{...}
\NewDocumentCommand{\providetrip}{s m m m}{...}
\newcommand*{\defpagesty}{...}
\newcommand*{\newpagesty}{...}
\newcommand*{\providepagesty}{...}
\newcommand*{\renewpagesty}{...}

\begin{filecontents*}{lwp-\texttt{scrpage2}.sty}
\LWP@ProvidesPackageDrop{scrpage2}[2018/03/30]
\ifundefined{footheight}{\newlength{footheight}}{}
\NewDocumentCommand{\ihead}{o m}{...}
\NewDocumentCommand{\chead}{o m}{...}
\NewDocumentCommand{\ohead}{o m}{...}
\NewDocumentCommand{\lohead}{o m}{...}
\NewDocumentCommand{\cohead}{o m}{...}
\NewDocumentCommand{\rohead}{o m}{...}
\NewDocumentCommand{\cehead}{o m}{...}
\NewDocumentCommand{\rehead}{o m}{...}
\NewDocumentCommand{\ofoot}{o m}{...}
\NewDocumentCommand{\cfoot}{o m}{...}
\NewDocumentCommand{\ifoot}{o m}{...}
\NewDocumentCommand{\lofoot}{o m}{...}
\NewDocumentCommand{\cofoot}{o m}{...}
\NewDocumentCommand{\rofoot}{o m}{...}
\NewDocumentCommand{\lohead}{o m}{...}
\NewDocumentCommand{\cohead}{o m}{...}
\NewDocumentCommand{\ihead}{o m}{...}
\NewDocumentCommand{\ohead}{o m}{...}
\NewDocumentCommand{\rohead}{o m}{...}
\NewDocumentCommand{\cehead}{o m}{...}
\NewDocumentCommand{\rehead}{o m}{...}
\NewDocumentCommand{\ofoot}{o m}{...}
\NewDocumentCommand{\cfoot}{o m}{...}
\NewDocumentCommand{\ifoot}{o m}{...}
\DeclareDocumentCommand{\automark}{o m}{...}
\DeclareDocumentCommand{\manualmark}{}{}
\DeclareDocumentCommand{\MakeMarkcase}{m}{...}
\NewDocumentCommand{\deftripstyle}{s m m m m m m m}{...}
\NewDocumentCommand{\defpagestyle}{s m m m m m m}{...}
\NewDocumentCommand{\newpagestyle}{s m m m m m m}{...}
\NewDocumentCommand{\renewpagestyle}{s m m m m m m}{...}
\end{filecontents*}
\NewDocumentCommand{\renewpagestyle}{s m m m}{}
\NewDocumentCommand{\providepagestyle}{s m m m}{}
\newcommand{\partmarkformat}{}
\if@chapter
\newcommand{\chaptermarkformat}{}
\fi
\newcommand{\sectionmarkformat}{}
\newcommand{\subsectionmarkformat}{}
\newcommand{\subsubsectionmarkformat}{}
\newcommand{\paragraphmarkformat}{}
\newcommand{\subparagraphmarkformat}{}
\newcommand*{\c}{l.Varearscrheadings}
\newcommand*{\c}{l.Varearscrheadfoot}
\newcommand*{\c}{l.Varearscrp/l.Varain}
\LWR@ProvidesPackageDrop{section}
\ifx\chapter\undefined
\def\chsize{\Large}\def\hdsize{\huge}\el"e
\def\chsize{\huge}\def\hdsize{\Huge}
\fi
\ttsize\LARGE
\ausize\large
\dasize\large
\secsize\Large
\subsize\large
\hdpos\raggedright
\newcounter{hddepth}
\fpind\re\Varax
\def\ttfnt{}
\def\hdftnt{}
\def\eftftnt{}
\def\thfnt{}
\def\pgfnt{}
\def\hmkfnt{}
\mkcse\uppercase
\hddot{}
\cpdot{:}
\nmdot{}
\ifx\secindent\undefined
\newdimen\secindent
\newskip\secpreskp
\newskip\secpstskp
\newdimen\subindent
\File 315  \lwp - section.sty

§ 414  Package  \section

\textit{section} is ignored.

(\textit{Emulates or patches code by Oliver Pretzel.})

\textbf{for HTML output:}  \footnotesize 1 \LWR@ProvidesPackageDrop{section}

2 \ifx\chapter\undefined
3 \def\chsize{\Large}\def\hdsize{\huge}\el"e
4 \def\chsize{\huge}\def\hdsize{\Huge}
5 \fi
6 \let\ttsize\LARGE
7 \let\ausize\large
8 \let\dasize\large
9 \let\secsize\large
10 \let\subsize\large
11 \let\hdpos\raggedright
12 \newcounter{hddepth}
13 \let\fpind\relax
14 \def\ttfnt{}
15 \def\hdftnt{}
16 \def\eftftnt{}
17 \def\thfnt{}
18 \def\pgfnt{}
19 \def\hmkfnt{}
20 \let\mkcse\uppercase
21 \def\hddot{}
22 \def\cpdot{:}
23 \def\nmdot{}
24 \ifx\secindent\undefined
25 \newdimen\secindent
26 \newskip\secpreskp
27 \newskip\secpstskp
28 \newdimen\subindent
lwarp

\newskip\subpreskp
\newskip\subpstskp
\newskip\parpstskp
\newcount\c@hddepth
\fi

File 316 lwarp-sectionbreak.sty

§ 415 Package sectionbreak

(Emulates or patches code by Michal Hoftich.)

Pkg sectionbreak sectionbreak is patched for use by lwarp.

for HTML output:
1 \LWR@ProvidesPackagePass{sectionbreak}[2018-01-03]
2 \renewcommand\asterism{\HTMLunicode{2042}}
3
4 \renewcommand\pre@sectionbreak{}
5 \renewcommand\post@sectionbreak{}
6
7 \renewcommand\print@sectionbreak[1]{%#1}
8 \begin{center}
9 \end{center}
10 }
11 }
12 }

File 317 lwarp-sectsty.sty

§ 416 Package sectsty

(Emulates or patches code by Rowland McDonnell.)

Pkg sectsty sectsty is emulated.

for HTML output:
1 \LWR@ProvidesPackageDrop{sectsty}[2002/02/25]
2 \newcommand*{\partfont} \[1 \{} 
3 \newcommand*{\partnumberfont} \[1 \{} 
4 \newcommand*{\parttitlefont} \[1 \{} 
5 \newcommand*{\chapterfont} \[1 \{} 
6 \newcommand*{\chaptitlfont} \[1 \{} 
7 \newcommand*{\sectionfont} \[1 \{} 
8 \newcommand*{\subsectionfont} \[1 \{} 
9 \newcommand*{\subsubsectionfont} \[1 \{} 
10 \newcommand*{\minisecfont} \[1 \{} 
11 \newcommand*{\paragraphfont} \[1 \{} 
12 \newcommand*{\subparagraphfont} \[1 \{} 
13 \newcommand*{\minisecfont} \[1 \{}
\newcommand*{\allsectionsfont}{1} {}  
\newcommand*{\nohang}{}  

\sectionrule is only to be used in *font commands, thus it is ignored.

\newcommand*{\sectionru}{5} {}  

\def\remheading#1#2{}  

\RequirePackage{musicography}

The \texttt{\musfig} is placed inside a hashed image, with a simple alt tag.
The \meter is taken from musicography, and becomes a hashed image with a simple alt tag.

\RenewDocumentCommand{\meter}{ m m }{%  
\musMeter{#1(#2)}%  
}

---

\textbf{File 319 \texttt{larp-setspace.sty}}

\section*{\textbf{setspace}}

(Emulates or patches code by Robin Fairbairns.)

\textbf{Pkg \texttt{setspace}}

\texttt{setspace} is not used during HTML conversion.

Discard all options for \texttt{larp-setspace}:

\begin{verbatim}
\ProvidesPackageDrop{setspace}[2011/12/19]
\newcommand*{\setstretch}[1]{}
\newcommand*{\SetSing/l.Varespace}[1]{}
\newcommand*{\sing/l.Varespacing}{}
\newcommand*{\oneha/l.Varfspacing}{}
\newcommand*{\doub/l.Varespacing}{}
\newenvironment*{sing/l.Varespace}{\LWR@forcenewpage}{\B/l.VarockC/l.Varass{sing/l.Varespace}}}
\newenvironment*{sing/l.Varespace*}{\LWR@forcenewpage}{\B/l.VarockC/l.Varass{sing/l.Varespace}}}
\newenvironment*{spacing}[1]{\LWR@forcenewpage}{\B/l.VarockC/l.Varass{oneha/l.Varfspace}}}
\end{verbatim}
\newenvironment*{doub}{\LWR@forcenewpage}{\endB\VarockC\Varass{doub}}

\newdimen\sboxsep
\newdimen\sboxrule
\newdimen\sdim
\newcommand{\shabox}{\In{shabox}{#1}}

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\newenvironment*{showbox}{\LWR@forcenewpage}{\endB\VarockC\Varass{showbox}}

\newcommand{\showbox}{\In{showbox}{#1}}

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\newenvironment*{showkeys}{\LWR@forcenewpage}{\endB\VarockC\Varass{showkeys}}

\newcommand{\shokeys}{\In{shokeys}{#1}}

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\newenvironment*{showkeys}{\LWR@forcenewpage}{\endB\VarockC\Varass{showkeys}}

\newcommand{\shokeys}{\In{shokeys}{#1}}

\@wrindex is redefined \AtBeginDocument by the lwarp core.
for HTML output: Discard all options for lwarp-showkeys:

1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]

2 \NewDocumentCommand{\showkeys}{s}{}

File 323 \texttt{lwarp-showtags.sty}

§ 422 Package \texttt{showtags}

Pkg showtags showtags is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{showtags} % no version is given

2 \newcommand{\thecitetag}{[]}

File 324 \texttt{lwarp-sidecap.sty}

§ 423 Package \texttt{sidecap}

(Emulates or patches code by Rolf Niepraschk, Hubert Gässlein.)

Pkg sidecap sidecap is emulated.

for HTML output: Discard all options for lwarp-sidecap.

1 \LWR@ProvidesPackageDrop{sidecap}[2003/06/06]

See: \url{http://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment}

regarding the creation of starred environments with \texttt{xparse}.

2 \NewDocumentEnvironment{SCtable}{soo}{\IfValueTF{#3}{\table[#3]}{\table}}{\endtable}

5 \ExplSyntaxOn

6 \cs_new:cpn {SCtable*} {SCtable*}

7 \cs_new_eq:cN {endSCtable*} \endSCtable

9 \ExplSyntaxOff

10

12 \NewDocumentEnvironment{SCfigure}{soo}{\IfValueTF{#3}{\figure[#3]}{\figure}}{\endfigure}

14 \ExplSyntaxOn

16 \cs_new:cpn {SCfigure*} {SCfigure*}

17 \ExplSyntaxOff
\cs_new_eq:cN {endSCfigure*} \endSCfigure
ExplSyntaxOff
\newenvironment*{wide}{}{}

File 325  lwarp-sidenotes.sty

§ 424  Package  sidenotes

(Emulates or patches code by Andy Thomas, Oliver Schuham.)

\textbf{Pkg} sidenotes  Patched for lwarp.

\textbf{for HTML output:}  Load the original package:

\begin{Verbatim}
1 \LWR@ProvidesPackagePass{sidenotes}
\end{Verbatim}

The following patch sidenotes for use with lwarp:

\begin{Verbatim}
\sidecaption  * \langle\textbf{entry}\rangle  \langle\textbf{offset}\rangle  \langle\textbf{text}\rangle
\end{Verbatim}

\begin{Verbatim}
2 \RenewDocumentCommand \sidecaption {s o o +m}
3 { 
4 \LWR@stoppars
5 \begingroup
6 \captionsetup{sty/l.Vare=sidecaption}
7 \IfBooleanTF{#1}
8 { % starred
9 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
10 \caption[#4]
11 \end{BlockClass}
12 }
13 { % unstarred
14 \IfNoValueOrEmptyTF{#2}
15 {\def@sidenotes@sidecaption@tof[#4]}
16 {\def@sidenotes@sidecaption@tof[#2]}
17 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
18 \caption[@sidenotes@sidecaption@tof][#4]
19 \end{BlockClass}
20 }
21 \endgroup
22 \LWR@startpars
23 }
\end{Verbatim}

Borrowed from the lwarp version of keyfloat:

\begin{Verbatim}
24 \NewDocumentEnvironment{KFLTsidenotes@marginfloat}{O{-1.2ex} m}
25 (% start
26 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}(){marginblock}%
27 \captionsetup{type=#2}%
28 (%
29 (%}
The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the \LaTeX\,2\epsilon\,article.cls source:

\begin{verbatim}
\renewenvironment{figure*}
{\@dbf{figure}}
{\end\@dbf}
\renewenvironment{table*}
{\@dbf{table}}
{\end\@dbf}
\end{verbatim}

\textbf{l warp-SIunits.sty}

\textbf{SIunits}

(\textit{Emulates or patches code by Marcel Heldorn.})

\textbf{Pkg SIunits} SIunits is patched for use by lwarp.

It is recommended to use \unit where possible, which combines the entire expression into a single lateximage, and adds the alt tag containing the \LaTeX\ code, allowing for copy/paste. When units are used outside of the \unit macro, each unit macro will have its own lateximage, and each will have the alt tag set to "(<\mathimagename>)", which defaults to "(math image)".

\textbf{for HTML output:} 1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]

Patched for copy/paste with the HTML alt tag:

\begin{verbatim}
\DeclareRobustCommand{\unit}[2][% original
\LWR@subsing\textbackslash unit\LWR@HTMLsanitize{#1}]{% extra space
% alt tag
\textbackslash unit\LWR@HTMLsanitize{#2}% add'\l\ hashing
%\LWR@origensuredmath% lwarp modification
\end{verbatim}
### siunitx

*(Emulates or patches code by Joseph Wright.)*

**Package**

`siunitx` is patched for use by `lwarp`.

**fractions**

Due to `pdftotext` limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.

⚠️ **math mode required**

Some units will require that the expression be placed inside math mode.

**NOTE:** As of this writing, the `siunitx` extension for `M/A.sc/T.sc/H.scJ/A.sc/X.sc` is not currently hosted at any public CDN, thus `siunitx` is not usable with `MATHJAX` unless a local copy of this extension is created first. See \MathJaxFilename to select a custom MathJax script.

⚠️ **tabular**

Tabular `S` columns are rendered as simple `c` columns, and tabular `s` columns are not supported. These may be replaced by `c` columns with each cell contained in \num or \si.

**for HTML output:**

1 \RequirePackage{xcolor}% for \convertcolorspect
2 3 \LWR@ProvidesPackagePass{siunitx}[2018/05/17]

4 \AtBeginDocument{% in case textcomp was not loaded
5 \DeclareSIUnit\bohr{\textit{a}\textsubscript{0}}
6 \DeclareSIUnit\clight{\textit{c}\textsubscript{0}}
7 \ DeclareSIUnit\elementarycharge{\textit{e}}
8 \DeclareSIUnit\electronmass{\textit{m}\textsubscript{e}}
9 \DeclareSIUnit\hartree{\textit{E}\textsubscript{h}}
10 \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
11 % AtBeginDocument

\ensuredmath is not supported inside an \hbox, so it must temporarily be restored to its original. Similar for \mbox. SVG math is created explicitly when necessary, using \LWR@subsingdollar.

12 13 \ExplSyntaxOn
14 %

Modified to set set HTML \textcolor if not black:

15 \cs_undefine:N \__siunitx_print_aux:
\cs_new_protected:Npn \__siunitx_print_aux:n { \__siunitx_set_math_fam:n #1 \cs_new_protected:Npn \__siunitx_set_math_fam:n #1 { \group_begin: % lwp \int_new:c { c__siunitx_math #1 _int } \group_end: % lwp } \cs_undefine:N \__siunitx_set_math_fam:n \cs_new_protected:Npn \__siunitx_set_math_fam:n #1 { \group_begin: % lwp \int_new:c { c__siunitx_math #1 _int } \group_end: % lwp } \cs_undefine:N \__siunitx_combined_output:n \cs_new_protected:Npn \__siunitx_combined_output:n #1 { \group_begin: % lwp \int_new:c { c__siunitx_math #1 _int } \group_end: % lwp } \cs_undefine:N \__siunitx_combined_output:n
\begin{verbatim}
\let\LtxMacro\ensuredmath\LWR@origensuredmath% \lwrp
\let\LtxMacro\mbox\LWR@print@mbox% \lwrp
\bool_if:NTF \l__siunitx_number_parse_bool
\tl_clear:N \l__siunitx_number_out_tl
\bool_set_false:N \l__siunitx_number_compound_bool
\__siunitx_number_output_parse:n {#1}
\}
\begin{verbatim}
\__siunitx_unit_output_pre_print:
\end{verbatim}
\end{verbatim}

For parse-numbers=false:

\begin{verbatim}
\__siunitx_unit_output_pre_print:
\end{verbatim}

For quotients, the fraction code is replaced by the symbol code:

\begin{verbatim}
\cs_undefine:N \__siunitx_number_output_quotient_fraction:
\cs_new_protected:Npn \__siunitx_number_output_quotient_fraction: {
\__siunitx_number_output_quotient_aux_i:
\tl_set_eq:NN \l__siunitx_number_out_t \l__siunitx_number_numerator_t
\tl_set_eq:NN \l__siunitx_number_out_t \l__siunitx_number_denominator_t
\__siunitx_number_output_sing_aux:
}
\end{verbatim}

For units, the fraction code is replaced by the symbol code:

\begin{verbatim}
\cs_undefine:N \__siunitx_unit_format_fraction_fraction:
\cs_new_protected:Npn \__siunitx_unit_format_fraction_fraction: {
\__siunitx_unit_format_fraction_symbo_aux:
\int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
\bool_if:NT \l__siunitx_unit_denominator_bracket_bool
\tl_put_left:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
\tl_put_right:NV \l__siunitx_number_denominator_tl
\__siunitx_number_output_single_aux:
}
\end{verbatim}
\tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
\tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
\tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_denominator_tl

\cs_undefine:N \__siunitx_ang\l.Vare_print_astronomy_aux:
\cs_new_protected:Npn \__siunitx_ang\l.Vare_print_astronomy_aux: {
  \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer } \l__siunitx_tmpa_t
  \ifnumcomp{\va\l.Varue{LWR@/l.Varateximagedepth}}{>}{0}% l.warp
  { \hbox_set:Nn \l__siunitx_ang\l.Vare_marker_box {
    \__siunitx_print:nn { number } { \l__siunitx_output_decimal_tl }
  }
  \hbox_set:Nn \l__siunitx_ang\l.Vare_unit_box {
    \__siunitx_print:nV { unit } \l__siunitx_unit_t
    \skip_horizontal:n { -\scriptspace }
  }
  \__siunitx_ang\l.Vare_print_astronomy_aux:n { marker }
  \__siunitx_ang\l.Vare_print_astronomy_aux:n { unit }
  \hbox_set:Nn \l__siunitx_ang\l.Vare_marker_box
  \hbox_set:Nn \l__siunitx_ang\l.Vare_unit_box

  \dim_compare:nNnTF { \l__siunitx_ang\l.Vare_marker_dim } > { \l__siunitx_ang\l.Vare_unit_dim }
  \__siunitx_ang\l.Vare_print_astronomy_marker: }
  \__siunitx_ang\l.Vare_print_astronomy_unit: }
  \ifnumcomp{\va\l.Varue{LWR@/l.Varateximagedepth}}{>}{0}% l.warp
  { \hbox_set:Nn \l__siunitx_ang\l.Vare_marker_box
    \hbox_set:Nn \l__siunitx_ang\l.Vare_unit_box

  \dim_compare:nNnTF { \l__siunitx_ang\l.Vare_marker_dim } > { \l__siunitx_ang\l.Vare_unit_dim }
  \__siunitx_ang\l.Vare_print_astronomy_marker: }
  \__siunitx_ang\l.Vare_print_astronomy_unit: }
\RenewDocumentCommand \num { o m } {
\RenewDocumentCommand{\numrange}{o m m}{\leavevmode\group_begin:% l\textcompwordmark{warp}\LetLtxMacro\@ensuredmath{\LWR@origensuredmath}l\textcompwordmark{warp}\LetLtxMacro\mbox{\LWR@print\mbox}l\textcompwordmark{warp}\IfNoValueF{#1}{\keys_set:nn{\siunitx}{#1}}\__\textcompwordmark{s}iunitx\_range\_numbers:nnn{#2}{#3}\group_end:% l\textcompwordmark{warp}}}\\n\\n\RenewDocumentCommand{\ang}{o > {\SplitArgument{2}{;}} m}{\leavevmode\group_begin:% l\textcompwordmark{warp}\LetLtxMacro\@ensuredmath{\LWR@origensuredmath}l\textcompwordmark{warp}\LetLtxMacro\mbox{\LWR@print\mbox}l\textcompwordmark{warp}\IfNoValueF{#1}{\keys_set:nn{\siunitx}{#1}}\__\textcompwordmark{s}iunitx\_angle\_output:nnn{#2}\\n\__\textcompwordmark{s}iunitx\_range\_numbers:nnn{#2}\group_end:% l\textcompwordmark{warp}}}\\n\\n\RenewDocumentCommand{\si}{o m}{\leavevmode\group_begin:% l\textcompwordmark{warp}\LetLtxMacro\@ensuredmath{\LWR@origensuredmath}l\textcompwordmark{warp}\LetLtxMacro\mbox{\LWR@print\mbox}l\textcompwordmark{warp}\IfNoValueF{#1}{\keys_set:nn{\siunitx}{#1}}\__\textcompwordmark{s}iunitx\_unit\_output:nnn{#2}{}{#3}\IfNoValueF{#4}{\keys_set:nn{\siunitx}{#4}}\__\textcompwordmark{s}iunitx\_range\_unit\_output:nnn{#4}{#2}{#3}\group_end:% l\textcompwordmark{warp}}}\\n\\n\ExplSyntaxOff
File 328  \texttt{lwp-soul.sty}

\textbf{§ 427} Package \texttt{soul}

(Emulates or patches code by MELCHIOR FRANZ.)

Pkg soul Emulated.

\texttt{for HTML output:}
1 \texttt{\ProvidesPackageDrop{soul}[2003/11/17]}
2 \texttt{\RequirePackage{xcolor}} for \texttt{\convertcolors}

Storage for the colors to use:

\begin{verbatim}
3 \newcommand*{\LWR@soulcolor}{}
4 \newcommand*{\LWR@soulstcolor}{}
5 \newcommand*{\LWR@soulcolor}{\definecolor{\LWR@soulcolor}{HTML}{F8E800}}
6 \newcommand*{\LWR@soulcolor}{\LWR@soulcolordefaut}{HTML}
7 \newcommand*{\LWR@soulcolor}{\LWR@soulcolordefault}{HTML}
8 \newcommand*{\LWR@soulcolor}{\LWR@soulcolor}
\end{verbatim}

\texttt{\so \texttt{\{(text)\}}}

Basic markup with css:

\begin{verbatim}
10 \newcommand{\so}[1][%}
11 \In/l VarineC/l Varass(/l Varetter-spacing:.2ex){/l Varetterspacing}{#1}}%
12 \}
\end{verbatim}

\texttt{\caps \texttt{\{(text)\}}}

\begin{verbatim}
13 \newcommand{\caps}[1][%}
14 \In/l VarineC/l Varass%
15 (font-variant:small-caps;letter-spacing:.3em)%
16 \{capsspacing}{#1}%
17 \}
\end{verbatim}

\texttt{\LWR@soulcolor \texttt{\{(text)\}} \{\texttt{\{(color)\}} \{\texttt{\{(class)\}} \{\texttt{\{(colorstyle)\}} \{\texttt{\{(FormatWPstyle)\}}\}}\}}}

Add colors if not empty:

\begin{verbatim}
18 \newcommand{\LWR@soulcolor}[5][%}
19 \ifcempty{#2}%
20 {%
21 \In/l VarineC/l Varass(#5){#3}{#1}%
22 }%
23 {%
24 \convertcolors{\named}{\@nameuse{#2}}{HTML}\LWR@tempcolor%
25 \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor][#3]{#1}%
26 }%
27 }
\end{verbatim}
\newcommand{\ul}{[1][1][%
  \LWR@soulcolor(#1){\LWR@soululcolor}{uline}{text-decoration-color}%
  {text-decoration:underline; text-decoration-skip: auto;}%
}  

\newcommand{\st}{[1][%
  \LWR@soulcolor(#1){\LWR@soulstcolor}{sout}{text-decoration-color}%
  {text-decoration:line-through}%
}  

\newcommand{\h}{[1][%
  \LWR@soulcolor(#1){\LWR@soulhcolor}{high}{background-color}%
  {background:\LWR@origpound{}F8E800}%
}  

\newcommand*{\souaccent}{[1]{}%  
\newcommand*{\soulregister}{[2]{}%  
\newcommand*{\sloppyword}{[1][#1]{}%  
\newcommand*{\sodef}{[5][\DeclareRobustCommand*#1[1][\so[#1]]}{}%  
\newcommand*{\resetso}{}%  
\newcommand*{\capsdef}{[5][}{}%  
\newcommand*{\capsreset}{}%  
\newcommand*{\capssave}{}%  
\newcommand*{\capssext}{}%  
\newcommand*{\setul}{[2]{}%  
\newcommand*{\resetul}{}%  
\newcommand*{\setuldepth}{[1]{}%  
\newcommand*{\setuloverlap}{[1]{}%  

\setcolors{[1][1][1][1][1][1][1][1][1][1][1]}%  

\setlong{[1][1][1][1][1][1][1][1][1][1][1]}%  

\let\textso\so%  
\let\textul\ul%  
\let\texthl\hl%  
\let\textcaps\caps

---

**lwparsoulpos.sty**

§ 428  Package soulpos

*(Emulates or patches code by Javier Bezos.)*

Pkg soulpos soulpos is emulated.

for HTML output:
lwarp

\RequirePackage{soul}
\RequirePackage{soulutf8}
\LWR@ProvidesPackageDrop{soulpos}[2012/02/25]

\NewDocumentCommand{\ulposdef}{m o m}{
  \newdimen\ulwidth
  \ifnum\imu{starttype}=1\expandafter\@secondoftwo\else\fi
  \ifnum\imu{endtype}=1\expandafter\@secondoftwo\else\fi
  \ifnum\imu{posttolerance}=0\fi
}

\newcommand\ulwidth{0}
\newcommand\ulstarttype{0}
\newcommand\ulenctype{0}
\newcommand\ulposttolerance{0}

---

File 330 lwarp-soulutf8.sty

§ 429 Package soulutf8

soulutf8 is emulated.

lwarp's HTML output naturally supports utf-8 encoding.

for HTML output: 1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]

---

File 331 lwarp-splitidx.sty

§ 430 Package splitidx

(Emulates or patches code by Markus Kohm.)

splitidx is patched for use by lwarp.

If the latexmk option is selected for lwarp, latexmk will compile the document but will not compile the indexes. lwarpmk printindex and lwarpmk htmlindex will still be required.

⚠ When using \AtWriteToIndex or \AtNextWriteToIndex, the user must not refer to \thepage during HTML output, as the concept of a page number is meaningless. Instead, do

\addtocounter{LWR@autoindex}{1}
\LWR@newlabel{LWRindex-\arabic{LWR@autoindex}}
where the \index-like action occurs, and then refer to \arabic{LWR@autoindex} instead of \thepage where the reference should occur.

See section \ref{519.17} in the \texttt{lwp-patch-memoir} package for the \texttt{@@wrspindexhyp} macro as an example.

for HTML output:

\begin{verbatim}
1 \LWR@ProvidesPackagePass{splitidx}[2016/02/18]
2 \catcode`\_=12%
3 \xpatchcmd\{\newindex\}
4 \{\jobname-#2.idx\}
5 \{\jobname-#2_html.idx\}
6 \{}
7 \{\LWR@patcherror{splitidx}\{@newindex\}\}
8 \catcode`\_=8%

Patched to use \texttt{lwp}'s automatic indexing counter instead of \texttt{\thepage}:

\begin{verbatim}
9 \renewcommand*{\@wrsindex}{\{#2\}}%
10 \ifx\relax\section\relax
11 \if\splitidx
12 \@wrsindex[\#2]%
13 \else
14 \def\@tempa{#2}\
15 \if@verbindex\onelevel\sanitize\@tempa\fi
16 \@wrindex{\@tempa}%
17 \fi
18 \def\@tempa{#2}\
19 \csname index@#1@hook\endcsname\relax
20 \addtocounter{LWR@autoindex}{1}% /l.Varwarp
21 % \expandafter\ifx\csname @@wrsindex\endcsname\relax
22 % \@@@wrsindex{#1}{\@tempa}{\thepage}%
23 % \fi
24 \endgroup
25 \@esphack
26 \fi
27 \def\@tempb{\@@wrsindex{#1}}\%\relax
28 \expandafter\@tempb\@tempa||\%\relax
29 \fi
30 }\%\relax
31 \@esphack
32 \fi
33 }
\end{verbatim}

\texttt{lwp} defines sectioning commands with \texttt{xparse}, so the below patches are done as temporary redefinitions instead of being \texttt{\let}.

\begin{verbatim}
34 \xpatchcmd\{\printsubindex\}
35 \{\let\section\subsection\}
36 \{\renewcommand*{\section}{\subsection}\}
37 \{}
38 \{\LWR@patcherror{splitidx}\{\printsubindex-section\}\}
39 \xpatchcmd\{\printsubindex\}
40 \{\let\chapter\section\}
\end{verbatim}
\texttt{lwpard}  
\texttt{892}

\begin{verbatim}
42 \{\renewcommand*{\chapter}{\section}}
43 {}\{\LWR@patcherror{sp/l.Varitidx}{printsubindex-chapter}}
45 {\xpatchcmd{\printsubindex}
47 {{\let@makechapterhead\section}}
48 {{\def@makechapterhead\section}}
49 {}\{\LWR@patcherror{sp/l.Varitidx}{printsubindex-chapter}}

\texttt{File 332}  \texttt{lwp-arcltx.sty}

\texttt{§ 431 Package} \texttt{srcltx}

\texttt{Pkg srcltx} \texttt{srcltx} is ignored.

\texttt{for HTML output:}  \texttt{1} \texttt{\LWR@ProvidesPackageDrop{srcltx}[2006/11/12]}
\texttt{2} \texttt{\newif{\ifSRCOK \SRCOKfalse}
\texttt{3} \texttt{\newcommand*{\srcIncludeHook}[1]{}}
\texttt{4} \texttt{\newcommand*{\srcInputHook}[1]{}}
\texttt{5} \texttt{\newcommand*{\MainFile}{}}
\texttt{6} \texttt{\def\MainFile{\jobname.tex}}
\texttt{7} \texttt{\newcommand*{\CurrentInput}{}}
\texttt{8} \texttt{\gdef\CurrentInput{\MainFile}}
\texttt{9} \texttt{\newcommand*{\Input}{}}
\texttt{10} \texttt{\let\Input\input}

\texttt{File 333}  \texttt{lwp-srcrctex.sty}

\texttt{§ 432 Package} \texttt{srcrctex}

\texttt{Pkg srcrctex} \texttt{srcrctex} is ignored.

\texttt{for HTML output:}  \texttt{1} \texttt{\LWR@ProvidesPackageDrop{srcrctex}[2006/11/12]}
\texttt{2} \texttt{\LWR@origRequirePackage{lwp-srcrctex}}

\texttt{File 334}  \texttt{lwp-stabular.sty}

\texttt{§ 433 Package} \texttt{stabular}

\texttt{(Emulates or patches code by Sigita\v{T}"{o}tisas.)}

\texttt{Pkg stabular} \texttt{stabular} is emulated.

\texttt{for HTML output:}  \texttt{1} \texttt{\LWR@ProvidesPackageDrop{stabular}[2014/03/20]}
\begin{tabular}{l}
\textbf{Env stabular} \[ (\textit{vpos}) \{ (\textit{colspec}) \] \\
2 \newenvironment{stabular}[2][c]
3 { \\
4 \begin{tabular}[#1]{#2} \\
5 \renewcommand{\noalign}{\relax}
6 } \\
7 {\end{tabular}} \\
\end{tabular} \\

\begin{tabular}{l}
\textbf{Env stabular} \{ (\textit{width}) \} \[ (\textit{vpos}) \] \{ (\textit{colspec}) \] \\
8 \NewDocumentEnvironment{stabular*}{m o m}
9 { \\
10 \begin{tabular}[#2]{#3} \\
11 \renewcommand{\noalign}{\relax}
12 } \\
13 {\end{tabular}} \\
\end{tabular}

\section*{\textbf{lwp-\textit{stfloats}.sty}}

\textbf{$\S$ 434 Package \textit{stfloats}}

\textbf{Pkg \textit{stfloats}} \textit{stfloats} is ignored.

\textbf{for HTML output:} \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

\textit{stfloats} may have been preloaded by a \textit{ltj*} class.

The following are provided in case they have not yet been defined:

\begin{tabular}{l}
2 \providecommand*{\fnbelowfloat}{} \\
3 \providecommand*{\fnumbelowfloat}{} \\
4 \providecommand*{\setbaselinefloat}{} \\
5 \providecommand*{\setbaselinefixed}{} \\
\end{tabular}

\textbf{Nullified for HTML:}

\begin{tabular}{l}
6 \renewcommand*{\fnbelowfloat}{} \\
7 \renewcommand*{\fnumbelowfloat}{} \\
8 \renewcommand*{\setbaselinefloat}{} \\
9 \renewcommand*{\setbaselinefixed}{} \\
\end{tabular}

\section*{\textbf{lwp-\textit{struktex}.sty}}

\textbf{$\S$ 435 Package \textit{struktex}}

\textbf{Pkg \textit{struktex}} \textit{struktex} is patched for use by \textit{lwp}.
for HTML output:

\LWR@ProvidesPackagePass{struktex}[2018/06/04]
\BeforeBeginEnvironment{struktogramm}{\begin{lateximage}\begin{struktogramm}\end{lateximage}\end{struktogramm}}\AfterEndEnvironment{struktogramm}{\end{lateximage}}
\newenvironment{LWR@HTML@centernss}{\begin{center}}{\end{center}}\LWR@formattedenv{centernss}
\newcommand{\LWR@HTML@CenterNssFile}[1]{%\begin{center}\input{#1.nss}\end{center}}\LWR@formatted{CenterNssFile}
\newcommand{\LWR@HTML@centernssfi}{\LWR@HTML@CenterNssFile}
\LWR@formatted{centernssfi}

\LWAR@ProvidesPackagePass{subcaption}[2018/05/01]
\ifdef{\subcaption@minipage}{\xpatchcmd{\subcaption@minipage}{\minipage}{\minipage\\minipage}{\LWR@patcherror{subcaption}{subcaption@minipage}}}{\LWR@patcherror{subcaption}{subcaption@minipage}}
\ifdef{\subcaptionbox}{\xpretocmd{\subcaptionbox}{\minipage\\minipage}{\LWR@patcherror{subcaption}{subcaptionbox}}}{\LWR@patcherror{subcaption}{subcaptionbox}}

Likewise for a \texttt{subcaptionbox}:
lwarp

File 338 lwarp-subfig.sty

§ 437 Package subfig

(Emulates or patches code by Steven Douglas Cochran.)

Pkg subfig subfig is supported and patched by lwarp.

⚠️ lof/lotdepth At present, the package options for lofdepth and lotdepth are not working. These counters must be set separately after the package has been loaded.

In the document source, use \hfill and \hspace* subfig-inline between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

for HTML output: Accept all options for lwarp-subfig:

1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]

\sf@@@subfloat \{(I type)\} \{(2 LOF entry)\} \{(3 caption)\} \{(4 contents)\}

The outer minipage allows side-by-side subfloats with \hfill between.

2 \long\def\sf@@@subfloat#1[#2][#3][#4]{% 3 \begin{minipage}{#2}\lfhrp warrp

4 \IfValueTF#2{% 5 \LWR@setlatestname#2% 6 }{% 7 \IfValueTF#3{% 8 \LWR@setlatestname#3% 9 }{}% 10 }% 11 \LWR@stoppars lwarp 12 \@ifundefined{FBsc@max}{}% 13 {\FB@readaux{\let\FBsuboheight\relax}}% 14 \@tempcnta=\@ne 15 \if@minipage 16 \@tempcnta=z@ 17 \else\ifdim lastskip=z@ \else 18 \@tempcnta=tw@ 19 \fi\fi 20 \ifmaincaptiontop 21 \sf@top=\sf@nearskip 22 \sf@bottom=\sf@farskip 23 \else 24 \sf@top=\sf@farskip 25 \sf@bottom=\sf@nearskip 26 \fi 27 \leavevmode
Do not use boxes, which interfere with \texttt{lateximage}:

\begin{verbatim}
\lWarp
\vbox{\global\advance\hsize-\wd\tempboxa
    \dimen@=\ht\tempboxa
    \advance\dimen@-\dp\tempboxa
    \ifdim\dimen@>\FBso\max
        \global\FBso\max\dimen@
    \fi}

\do not use boxes, which interfere with \texttt{lateximage}:
\end{verbatim}
\sf@subcaption \{⟨1 type⟩\} \{⟨2 LOF entry⟩\} \{⟨3 caption⟩\}

\long\def\sf@subcaption#1#2#3{% 
\LWR@stoppars% lwparg\n\iffalse\relax#2\relax\else
\begingroup
\let\label=\gobble
\let\protect=\string
\def\subcaplabel{%
\caption@lofmt{\@nameuse{p@#1}}{\@nameuse{the@captype}}%
\sf@updatecaptionlist{#1}{#2}{\value{#1}}{\value{#1}}%
\egroup
\fi
\bgroup
\if\relax#3\relax
\caption@make
{\@nameuse{sub@captype name}}%
{\@nameuse{thesub@captype}}%
{#3}%
\else
\hbox{\tempdimb{\@captype}}%
\caption@lofmt{\@nameuse{p@#1}}{\@nameuse{the@captype}}%
\hss
\parbox[t]{\tempdimb}{\@captype%}
\caption@make
{\@nameuse{sub@captype name}}%
{\@nameuse{thesub@captype}}%
{#3}%
\hss
}%
\fi
\bgroup
\if\relax#3\relax
\caption@make
{\@nameuse{sub@captype name}}%
{\@nameuse{thesub@captype}}%
{#3}%
\else
\box0%
\fi
\eifundef{FBsc@max}%
{%
\parbox[t]{\tempdimb}{\@captype%}
\LWR@traceinfo{sfsubcap B1}%
\LWR@figcaption%
\caption@make
{\@nameuse{sub@captype name}}%

Patches for \subfloat:\n
\subfloatlabel{\textbf{Patches for \texttt{\textbackslash sf@sub\textbackslash label}:}}
\begin{verbatim}
174 \def\subfloatlabel{%
175 \LWR@ensuredoingapar % lwp
176 \@ifnextchar( % match left parenthesis
177 \{\sf@sub\label\}
178 \{\sf@sub\label{Sub\textbackslash@captype\space}
179 \@ifundefined{thechapter}{}{\@nameuse{thechapter}\space}%
180 \@nameuse{p@sub\textbackslash@captype}%
181 \@nameuse{thesub\textbackslash@captype}.}}
\end{verbatim}

\subref
\sf@subref
\{(label)\}
The unstarred version uses a \ref link whose printed text comes from the sub@\{label\}:
\begin{verbatim}
182 \renewcommand{\sf@subref}[1]{\LWR@subnewref{#1}{sub@#1}}
183 \LWR@subnewref{#1}{sub@#1}
\end{verbatim}

\sf@@subref
\{(label)\}
The starred version uses the printed sub@\{label\} which is stored as if it were a page number:
\begin{verbatim}
185 \renewcommand{\sf@@subref}[1]{\LWR@orig@pageref{sub@#1}}
\end{verbatim}
Defining new subfloats. The l@sub\{type\} for each is redefined.
\begin{verbatim}
186 \LetLtxMacro{\LWR@orig@newsubf}{\@newsubf}
187 \def{\@newsubf}[#1]{\LWR@orig@newsubf[#1]{#2}}
188 \renewcommand{\subfigure}[2]{\hypertocf{2}{subfigure}{/lof}{#1}{#2}}
\end{verbatim}

Pre-defined for figures and tables:
\begin{verbatim}
192 \renewcommand{\subfigure}[2]{\hypertocf{2}{subfigure}{/lof}{#1}{#2}}
\end{verbatim}
\begin{verbatim}
193 \renewcommand{\subtable}[2]{\hypertocf{2}{subtable}{/lot}{#1}{#2}}
\end{verbatim}

File 339 lwarp-subfigure.sty

§ 438 Package subfigure

\texttt{subfigure} is emulated by subfig.

\texttt{for HTML output}:
\begin{verbatim}
1 \LWR@ProvidesPackageDrop{subfigure}[2002/03/15]
2 \RequirePackage{subfig}
3 \LetLtxMacro{\subfigure}{\subfloat}
4 \LetLtxMacro{\subtable}{\subfloat}
5 \LetLtxMacro{\subref}{\subref}
6 \Ifundef{\subfiguretopcaptrue}{\newif{\iffiguretopcap}}{}
7 \newif{\ifsubfiguretopcap}
8 \newif{\ifsucaphang}
9 \newif{\ifsubcapcenter}
\end{verbatim}
supertabular is emulated.  

For \tablefirsthead, etc., enclose them as follows: 
\StartDefiningTabulars
\tablefirsthead
... 
\StopDefiningTabulars

See section 9.10.1.

supertabular and xtab are not supported inside a lateximage.
\newcommand*{\LWRST@caption}{}
\newcommand*{\shrinkheight}[1]{}
\NewDocumentEnvironment{supertabu}{s o m}{\LWR@traceinfo{supertabu}}{\begin{tabular}{#3}}{\TabularMacro\ifdefvoid{\LWRST@firsthead}{}{\expandafter\LWR@getmynexttoken\LWRST@firsthead}}{\ifdefvoid{\LWRST@lasttail}{}{\ResumeTabular\LWRST@lasttail}}{\end{tabular}{\end{tabular}}}
\gdef\LWRST@caption{}
\LWR@traceinfo{supertabu done}
\NewDocumentEnvironment{mpsupertabu}{s o m}{\minipage{\linewidth}}{\supertabular{#3}}{\endsupertabular\endminipage}

\ProvidesPackage{lwarp-syntonly}[2017/06/30]

\Package{syntonly}

(Emulates or patches code by Frank Mittelbach, Rainer Schöpe.)

\ProvidesPackageDrop{syntonly}

for HTML output:
\LWR@ProvidesPackageDrop{lwarp-syntonly}[2017/06/30]
§ 441 Package \texttt{tablefootnote} \smallskip

\verb+tablfootnote+ is ignored. \smallskip

\texttt{Pkg tablfootnote} \texttt{tablfootnote} is ignored. \smallskip

\texttt{for HTML output:} \texttt{1 \textbackslash LWRR@ProvidesPackageDrop\{tablfootnote\}[2014/01/26]}\smallskip

This works because in HTML tables are no longer floats. \smallskip

\texttt{2 \textbackslash LetLtxMacro\{tablfootnote\}	extbackslash footnote}

---

§ 442 Package \texttt{tabl}} \smallskip

\texttt{Pkg tabls} \texttt{tabl} is emulated. \texttt{\textbackslash LWRR@hline} is used to handle the optional argument when \texttt{tabl} is loaded. \smallskip

\texttt{for HTML output:} \texttt{1 \textbackslash LWRR@ProvidesPackageDrop\{tabl\}} \smallskip

\texttt{2 \textbackslash newdimen\{tablinesep\}}\smallskip

\texttt{3 \textbackslash newdimen\{arraylinesep\}}\smallskip

\texttt{4 \textbackslash newdimen\{extrarulesep\}}

---

§ 443 Package \texttt{tabularx} \smallskip

\texttt{Pkg tabularx} \texttt{tabularx} is emulated by \texttt{lwrar}. \smallskip

\texttt{for HTML output:} \texttt{Discard all options for lwrar-tabularx:} \smallskip

\texttt{1 \textbackslash LWRR@ProvidesPackageDrop\{tabularx\}[2016/02/03]} \smallskip

\texttt{2 \textbackslash RequirePackage\{array\}}
lwarp

\DeclareDocumentEnvironment{tabularx}{m o m}{\tabularx[#3]}{\endtabular}

\DeclareDocumentEnvironment{tabularx*}{m o m}{\tabularx*[#3]}{\endtabular}

File 345 lwarp-tabulary.sty

§ 444 Package tabulary

(Emulates or patches code by David Carlisle.)

Pkg tabulary tabulary is emulated by lwarp.

for HTML output: Discard all options for lwarp-tabulary.

Column types L, C, R, and J are emulated by lwarp core code.

File 346 lwarp-tasmac.sty

§ 445 Package tasmac

Pkg tasmac tasmac is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{tasmac}[2018/03/09]

2 \newenvironment*{boxnote}{
3 \begin{BlockClass[
4 \setlength{\parskip}{.5ex} ;
5 \setlength{\parindent}{0ex} ;
6 border: 1px solid black ;
7 border-top: 1px dashed black ;
8 ]{boxnote}
\newenvironment*{screen}[]{
  \BlockClass[
    padding: .5ex ;
    border: 1px solid gray ;
    border-radius: 8pt
  ]{boxnote}
}{\endBlockClass}
\newenvironment*{itembox}[]{
  \BlockClass[
    padding: .5ex ;
    border: 1px solid gray ;
    border-radius: 8pt
  ]{boxnote}
  \InlineClass{itemboxtitle}{#2}\par
}{\endBlockClass}
\newenvironment*{shadebox}[]{
  \BlockClass[
    padding: .5ex ;
    border: 1px solid black ;
    box-shadow: 3px 3px 3px \#808080 ;
  ]{boxnote}
}{\endBlockClass}
\newcommand*{\mask}[]{\InlineClass[background: lightgray]{mask}{#1}}
\newcommand*{\maskbox}[]{\InlineClass[background: lightgray]{mask}{#5}}
\newcommand*{\Maskbox}[]{\InlineClass[background: lightgray ;
  border: #5 solid black
]{mask}{#6}}
\newcommand*{\keytop}[]{\InlineClass[
  padding: .2ex ;
  border: 1px solid black ;
  border-radius: .7ex ;
]{keytop}{#2}}
lwarp

64 )
65 \def\yen{\HTMLunicode{00A5}}
66 \def\return{\HTMLunicode{23CE}}
67 \def\Return{\HTMLunicode{23CE}}
68 \def\ascii{ASCII Corporation}
69 \def\Ascii{ASCII Corporation}
70 \def\ASCII{ASCII Corporation}
71 \def\Asci{ASCII Corporation}
72 \def\ASCII{ASCII Corporation}
73
74
75
76

File 347 lwarp-textarea.sty

§ 446 Package textarea

(Emulates or patches code by Alexander I. Rozhenko.)

Pkg textarea textarea is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop{textarea}[2005/12/26]
2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand\RestoreTextArea{}
5 \newcommand\ExpandTextArea[1][*]{
6 \let\NCC@restoretexarea\empty

File 348 lwarp-textcomp.sty

§ 447 Package textcomp

(Emulates or patches code by Frank Mittelbach, Robin Fairbairns, Werner Lemberg.)

Pkg textcomp textcomp is patched for use by lwarp.

§ 447.1 Limitations

Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

⚠️ missing symbols

Many textcomp symbols are not supported by many system/browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.
§ 447.2 Package loading

For HTML output: \LWR@ProvidesPackagePass[textcomp][2017/04/05]

§ 447.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.
\AtBeginDocument improves support for LuaL\TeX\ and X\LaTeX.

§ 447.3.1 pdfl\TeX\ symbols

\begin{verbatim}
2 \AtBeginDocument{
3  ifPDFTeXX pdflatex or dvi latex
4  \newcommand*{\LWR@HTML@textdegree}{\HTMLentity{deg}}
5  \newcommand*{\LWR@HTML@textcelsius}{\HTMLentity{2103}}
6  \newcommand*{\LWR@HTML@textohm}{\HTMLentity{2126}}
7  \newcommand*{\LWR@HTML@textmu}{\HTMLentity{00B5}}
8  \newcommand*{\LWR@HTML@textnu}{\HTMLentity{2045}}
9  \newcommand*{\LWR@HTML@textmu}{\HTMLentity{00B5}}
10 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2117)}}
11 \newcommand*{\LWR@HTML@texttwelveudash}{\HTMLentity{(2014)}% emdash
12 \newcommand*{\LWR@HTML@textthreequartersemdash}{\HTMLentity{(2014)}% emdash
13 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2117)}}
14 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
15 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
16 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
17 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
18 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
19 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
20 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
21 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
22 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
23 \newcommand*{\LWR@HTML@textcircledP}{\HTMLentity{(2014)}}
24 \else

§ 447.3.2 X\LaTeX\ and LuaL\TeX\ symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

\begin{verbatim}
25 \newcommand*{\LWR@HTML@textdegree}{\degree}
26 \newcommand*{\LWR@HTML@textcelsius}{\celsius}
27 \newcommand*{\LWR@HTML@textohm}{\ohm}
28 \newcommand*{\LWR@HTML@textmu}{\mu}
29 \newcommand*{\LWR@HTML@textnu}{\nu}
30 \newcommand*{\LWR@HTML@textmu}{\mu}
31 \newcommand*{\LWR@HTML@textcircledP}{\circledP}
32 \newcommand*{\LWR@HTML@texttwelveudash}{\texttwelveudash}% emdash
33 \newcommand*{\LWR@HTML@textthreequartersemdash}{\textthreequartersemdash}% emdash
34 \newcommand*{\LWR@HTML@textcircledP}{\circledP}
35 \newcommand*{\LWR@HTML@textcircledP}{\circledP}
36 \newcommand*{\LWR@HTML@textcircledP}{\circledP}
\end{verbatim}
\end{verbatim}
\newcommand*{\LWR@HTML@textrecipe}{}
\newcommand*{\LWR@HTML@textinterrobang}{}
\newcommand*{\LWR@HTML@textinterrobangdown}{}
\newcommand*{\LWR@HTML@textperthousand}{}
\newcommand*{\LWR@HTML@textpertenthousand}{}
\newcommand*{\LWR@HTML@textbaht}{}
\newcommand*{\LWR@HTML@textdiscount}{{}\%}
\newcommand*{\LWR@HTML@textservicemark}{}
\\fi
\LWR@formatted{textdegree}
\LWR@formatted{textce/l.Varsius}
\LWR@formatted{textohm}
\LWR@formatted{textmu}
\LWR@formatted{text/l.Varqui/l.Var/l.Var}
\LWR@formatted{textrqui/l.Var/l.Var}
\LWR@formatted{textcirc/l.VaredP}
\LWR@formatted{texttwe/l.Varveudash}
\LWR@formatted{textthreequartersemdash}
\LWR@formatted{textmho}
\LWR@formatted{textnaira}
\LWR@formatted{textpeso}
\LWR@formatted{textrecipe}
\LWR@formatted{textinterrobang}
\LWR@formatted{textinterrobangdown}
\LWR@formatted{textperthousand}
\LWR@formatted{textpertenthousand}
\LWR@formatted{textbaht}
\LWR@formatted{textdiscount}
\LWR@formatted{textservicemark}

§ 447.4 \textbf{HTML diacritics}

For HTML, Unicode diacritical marks are used:

\providecommand*{\LWR@HTML@capitalcedilla}{{1}[\#1\HTMLunicode{0327}]}
\providecommand*{\LWR@HTML@capitalogonek}{{1}[\#1\HTMLunicode{0328}]}
\providecommand*{\LWR@HTML@capitalgrave}{{1}[\#1\HTMLunicode{0300}]}
\providecommand*{\LWR@HTML@capitalacute}{{1}[\#1\HTMLunicode{0301}]}
\providecommand*{\LWR@HTML@capitalcircumflex}{{1}[\#1\HTMLunicode{0302}]}
\providecommand*{\LWR@HTML@capitaltilde}{{1}[\#1\HTMLunicode{0303}]}
\providecommand*{\LWR@HTML@capitaladieresis}{{1}[\#1\HTMLunicode{0308}]}
\providecommand*{\LWR@HTML@capitalhungarumlaut}{{1}[\#1\HTMLunicode{030B}]}
\providecommand*{\LWR@HTML@capitalring}{{1}[\#1\HTMLunicode{030A}]}
\providecommand*{\LWR@HTML@capitalcaron}{{1}[\#1\HTMLunicode{030C}]}
\providecommand*{\LWR@HTML@capitalbreve}{{1}[\#1\HTMLunicode{0306}]}
\providecommand*{\LWR@HTML@capitalmacron}{{1}[\#1\HTMLunicode{0304}]}
\providecommand*{\LWR@HTML@capitaldotaccent}{{1}[\#1\HTMLunicode{0307}]}
\textcirc/l.Vared becomes a span with a rounded border. \providecommand is used to avoid conflict with xunicode.
Nullify textcomp macros when generating filenames:

\FILENAME\Nullify%
\renewcommand*{{\textdegree}}{}
\renewcommand*{{\textce\textsius}}{}
\renewcommand*{{\textohm}}{}
\renewcommand*{{\textmu}}{}
\renewcommand*{{\textqu}}{}
\renewcommand*{{\textrqu}}{}
\renewcommand*{{\textcirc\textredP}}{}
\renewcommand*{{\texttwelve\textvudash}}{}
\renewcommand*{{\textthreequartersemidash}}{}
\renewcommand*{{\textmho}}{}
\renewcommand*{{\textnaira}}{}
\renewcommand*{{\textpeso}}{}
\renewcommand*{{\textrecipe}}{}
\renewcommand*{{\textinterrobang}}{}
\renewcommand*{{\textperthousand}}{}
\renewcommand*{{\textpertenthousand}}{}
\renewcommand*{{\textbaht}}{}
\renewcommand*{{\textdiscount}}{}
\renewcommand*{{\textservicemark}}{}
\renewcommand*{{\textcirc\textred}}[#1]{#1}
lwarp\textfit{\texttt{sty}}

§ 448 Package \texttt{textfit}

\texttt{textfit} is emulated.

Text is placed into a \texttt{<span> of class textfit}. Sizes are approximated, and also limited by browser min/max font-size settings.

\texttt{for HTML output:}

1 \LWR@ProvidesPackageDrop{textfit}[1994/04/15]

2 \NewDocumentEnvironment{textb}{m o r()}{}}\{}{}

3 \newcommand*{\TPGrid}{\{}{}

4 \newcommand*{\TPMargin}{s o}{}}

5 \newcommand*{\textb}{co}{}}\{}

File 350 \lwarp-textpos.sty

§ 449 Package \texttt{textpos}

(Emulates or patches code by Norman Gray.)

\texttt{textpos} is emulated.

\texttt{for HTML output:}

1 \LWR@ProvidesPackageDrop{textpos}[2016/06/07]
§ 450 Package \textbf{theorem}

(Emulates or patches code by Frank Mittelbach.)

\textbf{theorem} is patched for use by \textit{lwpars}.  

---

**Table 16:** Theorem package — css styling of theorems and proofs

\textbf{Theorem:} \texttt{<div>} of class \texttt{theorembody}</div>

\textbf{Theorem Header:} \texttt{<span>} of class \texttt{theoremheader}

where \texttt{<theorembody>} is \texttt{plain}, \texttt{break}, etc.

---

\texttt{for HTML output:}

1\LWR@ProvidesPackagePass{theorem}[2014/10/28]

\section*{§ 450.1 Remembering the \textbf{theorem} style}

Storage for the style being used for new theorems:

2\newcommand{\LWR@newtheoremstyle}{plain}

Patched to remember the style being used for new theorems:

\begin{verbatim}
3\gdef\theorembody#1{% 
  \ifundefined{th@#1}{\@warning
  {Unknown \textit{theoremstyle} #1'. Using 'plain'}% 
   \theorembody{plain}%
  \renewcommand{\LWR@newtheorembody}{plain} lwpars%
  %
  }% 
  \renewcommand{\LWR@newtheorembody}{#1}%
  \renewcommand{\LWR@newtheorembody}{#1} lwpars%
  \begingroup
texname th@the\textit{theoremstyle} \endcsname
\endgroup}
\end{verbatim}
Patched to remember the style for this theorem type, and set it later when the environment is started.

\gdef\@nthm#1[#2][#3]{%
  \expandafter\ifx\csname c@#2\endcsname\relax
  \@nocounterr{#2}%
  \else
  \expandafter\ifx\csname c@#2\endcsname\relax
  \@nocounterr{#2}%
  \else
    %
    \csedef{LWR@thmsty#1}{\LWR@newtheoremstyle}
    \@definecounter{#1}[
      \foreach\i\in{#2}{\csname the\i\endcsname\@thmcounter{#1}}]
    \foreach\j\in{#3}{\csname th@	he \theorem@sty \expandafter \endcsname \the \theorem@bodyfont \@thm{#1}}%
  \fi
  \fi}
\gdef\@nthm#1{%
  \expandafter\ifx\csname c@#2\endcsname\relax
  \@nocounterr{#2}%
  \else
    %
    \csedef{LWR@thmsty#1}{\LWR@newtheoremstyle}
    \@definecounter{#1}[
      \foreach\i\in{#2}{\csname the\i\endcsname\@thmcounter{#1}}]
    \foreach\j\in{#3}{\csname th@	he \theorem@sty \expandafter \endcsname \the \theorem@bodyfont \@thm{#2}}%
  \fi
  \fi}
\gdef\@othm#1[#2][#3]{%
  \expandafter\ifx\csname c@#2\endcsname\relax
  \@nocounterr{#2}%
  \else
    %
    \csedef{LWR@thmsty#1}{\LWR@newtheoremstyle}
    \@definecounter{#1}[
      \foreach\i\in{#2}{\csname the\i\endcsname\@thmcounter{#1}}]
    \foreach\j\in{#3}{\csname th@	he \theorem@sty \expandafter \endcsname \the \theorem@bodyfont \@thm{#2}}%
  \fi
  \fi}
§ 450.2  **css patches**

The following are patched for *css*.

These were in individual files *thp.sty* for plain, *thmb.sty* for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class *theorembody<sty>/Varast*.

Each header is encased in an *\InlineClass* of class *theoremheader*.

62 \gdef\th@plain{%
63 \def@begintheorem###1###2{%
64 \item[
65  \InlineClass{theoremheader}{###1 \ ###2}
66  ]
67 }%
68 \def@opargbegintheorem###1###2###3{%
69 \item[
70  \InlineClass{theoremheader}{###1 \ ###2 \ (###3)}
71  ]
72  }
73 }
74 \gdef\th@break{%
75 \def@begintheorem###1###2{%
76 \item[
77  \InlineClass{theoremheader}{###1 \ ###2}\newline%
78  ]
79 }%
81 \def@opargbegintheorem###1###2###3{%
82 \item[
83  \InlineClass{theoremheader}{###1 \ ###2 \ (###3)}\newline
84  ]
85  }
86 }
87 \gdef\th@marginbreak{%
89 \def@begintheorem###1###2{%
90 \item[
91  \InlineClass{theoremheader}{###2 \quad ###1}\newline
92  ]
93 }%
94 \def@opargbegintheorem###1###2###3{%
95 \item[
96  \InlineClass{theoremheader}{###2 \quad ###1 \ %
97     (###3)}\newline
98  ]
99  }
100 }
101 \gdef\th@changebreak{%
103 \def@begintheorem###1###2{%
104 \item[
105  \InlineClass{theoremheader}{###2 \ ###1}\newline
106  ]
\def\@opargbegintheorem##1##2##3{% 
\item[\InlineClass{theoremheader}{ ##2\ % (##3)}\newline ]
}
}
}
\gdef\th@change{% 
\def\@begintheorem##1##2{ 
\item[\InlineClass{theoremheader}{##2\ %}]
}
}
\def\@opargbegintheorem##1##2##3{% 
\item[\InlineClass{theoremheader}{##2\ % (##3)}]
}
}
\gdef\th@margin{% 
\def\@begintheorem##1##2{ 
\item[\InlineClass{theoremheader}{##2 \qquad ##1}]
}
}
\def\@opargbegintheorem##1##2##3{% 
\item[\InlineClass{theoremheader}{##2 \qquad ##1\ (##3)}]
}
}
\gdef\@thm#1#2{\refstepcounter{#1}% 
\LWR@forcenewpage /l.Varwarp 
\B/l.VarockC/l.Varass{theorembody\LWR@thisthmsty/l.Vare}% /l.Varwarp 
\trivlist 
\@topsep \theorempreskipamount % used by first \item 
\@topsepadd \theorempostskipamount % used by \@endparenv 
\@ifnextchar [\% 
\@ythm{#1}{#2}% 
\endtrivlist 
\@thm{\csname the#1\endcsname}{\ignorespaces}}
\gdef\@endtheorem{% 
\endtrivlist 
\endBlockClass 
}
lwarp

File 352  \texttt{lwp\-thinspace.sty}

\textbf{§ 451 Package} \texttt{thinspace}

\texttt{Pkg} \texttt{thinspace} \texttt{thinspace} is emulated.

\texttt{for HTML output:} \begin{verbatim}
1 \LWR@ProvidesPackageDrop{thinspace}[2016/10/02]
2 \AtBeginDocument{
3 \let\thinspace\relax% defined by some packages
4 \newcommand*{\thinspace}{\thinspace}
5 }
6
7 \newcommand*{\stretchthinspace}{\thinspace}
8 \newcommand*{\stretchthinthinspace}{\thinspace}
9 \newcommand*{\stretchnegthinspace}{\negthinspace}
\end{verbatim}

File 353  \texttt{lwp\-threadcol.sty}

\textbf{§ 452 Package} \texttt{threadcol}

\texttt{Pkg} \texttt{threadcol} \texttt{threadcol} is ignored.

\texttt{for HTML output:} \begin{verbatim}
1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]
2 \newcommand{\setthreadname}[1]{}
\end{verbatim}

File 354  \texttt{lwp\-threeparttable.sty}

\textbf{§ 453 Package} \texttt{threeparttable}

\texttt{Pkg} \texttt{threeparttable} \texttt{threeparttable} is emulated.

\texttt{for HTML output:} \begin{verbatim}
1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]
\end{verbatim}

\texttt{Env} \texttt{threeparttable} \begin{verbatim}
[(alignment)] To emulate threeparttable:
2 \newenvironment{threeparttable}[1][b]
\end{verbatim}
\begin{tabular}{|c|c|c|}
\hline
1 & 2 & 3 \\
\hline
\end{tabular}

File 355 \texttt{lwp-threeparttablex.sty}

§ 454 Package \texttt{threeparttablex}

\texttt{threeparttablex} is patched for use by lwarp.

\texttt{threeparttablex} is used with longtable and booktabs as follows:

\begin{verbatim}
\begin{longtable}{ [column specifiers] }
[ ... ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly% % not used in HTML
[ ... ] \endhead % or \endfirsthead
[ ... ] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}

\end{longtable}
\end{verbatim}

\textbf{table width} The table notes are created using a \texttt{multicolumn}. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, \texttt{lwarp} guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use \texttt{\UseMinipageWidths} before \texttt{\insertTableNotes}. The width is then specified, and in many cases the result is an improvement in overall table layout.
The width is guessed depending on the number of columns, then limited to a min/max.

\begin{verbatim}
\renewcommand{\insertTableNotes}{%
  \setlength{\LWR@templeft}{\maxof{2.5\textwidth}{\LWR@templeft}}%
  \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{c}{%
    \parbox{\LWR@templeft}{%
      \begin{tabular}{\TPTL@optarg}
        \TPTL@font
        \TPTL@body
      \end{tabular}%
    }%
  }%
}\end{verbatim}

\begin{verbatim}
\renewcommand{\TPTL@tnote}[2]{\tnote{\nameref{#2}}}
\end{verbatim}

§ 455 Package \texttt{thumb}

thumb is ignored.

\begin{verbatim}
\newcommand{\Overviewpage}{}
\newcommand{\thumbheight}{
\newcommand{\thumbwidth}{
\newcommand{\addthumb}{\addtitlthumb}{\stopthumb}{\continuethumb}{\thumbsoverview}{\thumbsoverviewback}{\thumbsoverviewverso}{\thumbnewcolumn}{}
\end{verbatim}

§ 456 Package \texttt{thumbs}

thumbs is ignored.
\newcommand{\thumbsnophantom}{}
\newcommand{\addthumbsoverviewtocontents}[2]{}
\newcommand{\lwarp}{917}
\newcommand{\lwarpMtikzNsty}{File 358}
\lwarp{lwarp-tikz.sty}
\section{Package tikz}
\SectionTitle{(Emulates or patches code by Till Tantau.)}

\pkg{tikz} is supported.

\begin{锭}{displaymath and matrices}
If using display math with \texttt{tikzpicture} or \texttt{tikz}, along with matrices with the \& character, the document must be modified as follows:

\begin{verbatim}
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
\end{verbatim}

and each instance of \& in the \texttt{tikz} expression must be replaced with \texttt{\&}.
\end{锭}

Accept all options for \texttt{l warp-tikz}:

\begin{verbatim}
1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]
\end{verbatim}

\begin{锭}{catcodes}
\texttt{l w a r p} changes the catcode of $ for its own use. The \texttt{Ti k z} babel library temporarily changes catcodes back to normal for \texttt{Tikz}'s use. \texttt{tikz v3.0.0} introduced the babel library which handles catcode changes. For older versions, \texttt{l w a r p} must change $'s catcode itself. Also see:

https://tex.stackexchange.com/questions/16199/
   test-if-a-package-or-package-option-is-loaded
\end{锭}

\begin{verbatim}
2 \newbool{LWR@tikzbabel}
3 \@ifpackage{tikz}[2013/12/20]% Test for Tikz version v3.0.0
4 {\usetikzlibrary{babel}}\booltrue{LWR@tikzbabel}
5 {\boolfalse{LWR@tikzbabel}}
\end{verbatim}

The \texttt{pgfpicture} environment is enclosed inside a \texttt{lateximage}. Enclose the low-level \texttt{pgfpicture} in a \texttt{lateximage}. This is also used by the higher-level \texttt{tikz} and \texttt{tikzpicture}.

\begin{verbatim}
7 \preto{pgfpicture}{% 
8 \begin{lateximage}% 
9 \ifbool{LWR@tikzbabel}% Test for Tikz version v3.0.0
10 {}%
11 {\catcode'\$=3}% dollar sign is math shift
12 }% 
13 \appto{endpgfpicture}{\end{lateximage}}
\end{verbatim}
Tikz is placed inside an svg image, so use the original meanings of the following:

\begin{verbatim}
\let\pgfuti/l.Var@minipage=LWR@print@minipage
\let\pgfuti/l.Var@endminipage=\endLWR@print@minipage
\let\pgfuti/l.Var@ragged=\LWR@print@ragged
\let\pgfuti/l.Var@raggedright=\LWR@print@raggedright
\def\pgfuti/l.Var@font@tiny=\LWR@printtiny
\def\pgfuti/l.Var@font@scriptsize=\LWR@printscriptsize
\def\pgfuti/l.Var@font@footnotesize=\LWR@printfootnotesize
\def\pgfuti/l.Var@font@small=\LWR@printsmall
\def\pgfuti/l.Var@font@normal=\LWR@printnormal
\def\pgfuti/l.Var@font@large=\LWR@printlarge
\def\pgfuti/l.Var@font@Huge=\LWR@printHuge
\def\pgfuti/l.Var@font@itshape=\LWR@origitshape
\def\pgfuti/l.Var@font@bfseries=\LWR@origbfseries
\def\pgfuti/l.Var@font@norma=\LWR@orignorma
\end{verbatim}

\section*{lwarp-titleps.sty}

\section*{titleps}

\textit{(Emulates or patches code by Javier Bezos.)}

\section*{Pkg titleps}

\textit{titleps} is loaded and used by \texttt{lwarp} during HTML output. All user options and macros are ignored and disabled.

Discard all options for \texttt{lwarp-titleps}:

\subsubsection*{for HTML output}

1. \LWR@ProvidesPackageDrop{titleps}[2016/03/15]

\texttt{\textbackslash pagestyle} and \texttt{\thispagestyle} are already disabled in the \texttt{lwarp} code.

\begin{verbatim}
\newpagestyle{{(name)}{style}}{(commands)}
2 \NewDocumentCommand{\newpagestyle}{m o m}{
\sethead{{(el)}{(ec)}{(er)}{(ol)}{(oc)}{(or)}}
4 \NewDocumentCommand{\sethead}{o o m m m}{
\setfoot{{(el)}{(ec)}{(er)}{(ol)}{(oc)}{(or)}}
\end{verbatim}
\settitlemarks *\{names\}
\newDocumentCommand{\settitlemarks}{s m}{...}

\headrule
\newcommand{\headrule}{...}
\setheadru
\newcommand{\setheadru}[1]{...}
\makeheadru
\newcommand{\makeheadru}{...}

\footrule
\newcommand{\footrule}{...}
\setfootru
\newcommand{\setfootru}[1]{...}
\makefootru
\newcommand{\makefootru}{...}

\setmarkboth \{code\}
\newcommand{\setmarkboth}[1]{...}

\widenhead
\newDocumentCommand{\widenhead}{s o o m m}{...}

\bottitlemarks
\newcommand{\bottitlemarks}{...}

\toptitlemarks
\newcommand{\toptitlemarks}{...}

\firsttitlemarks
\newcommand{\firsttitlemarks}{...}

\nexttitlemarks
\newcommand*{\nexttoptitlemarks}{}
***
\newcommand*{\outertit/l.Varemarks}{}

\newcommand*{\innertit/l.Varemarks}{}

\newtit/l.Varemark

\pretit/l.Varemark

\ifsamemark

\setf/l.Varoathead

\setf/l.Varoatfoot

\nextf/l.Varoathead

\nextf/l.Varoatfoot

\newcommand\newmarkset[1]{}

\newcommand\newextramarkset[1]{}

\newcommand\botextramarks{}

\newcommand\topextramarks{}
lwarp

31 \newcommand{\topextramarks}[1]{}
\firstextramarks \{(markset)\}
32 \newcommand{\firstextramarks}[1]{}
\nextextramarks \{(markset)\}
33 \newcommand{\nexttopextramarks}[1]{}
\outerextramarks \{(markset)\}
34 \newcommand{\outerextramarks}[1]{}
\innerextramarks \{(markset)\}
35 \newcommand{\innerextramarks}[1]{}

File 360 lwarp-titleref.sty

§ 459 Package titleref

Pkg titleref titleref is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{titleref}[2001/04/05]
2 \LetLtxMacro{titleref}{nameref}
3 \providecounter{LWR@currenttitle}
4 \newcommand*[\currenttitle]{% 5 \addtocounter{LWR@currenttitle}[1]% 6 \label{currenttitle\arabic{LWR@currenttitle}}% 7 \nameref{currenttitle\arabic{LWR@currenttitle}}% 8 }% 9 \newcommand*[\theTitleReference]{% 10 }% 11 \newcommand*[\theTitleReference]{% 12 }% 13

File 361 lwarp-titlesec.sty

§ 460 Package titlesec

(Emulates or patches code by Javier Bez.)

Pkg titlesec titlesec is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesec:

for HTML output: 1 \LWR@ProvidesPackageDrop{titlesec}[2016/03/21]
\titlelabel \{(label-format)\}
2 \newcommand*{\titlelabel}[1]{}

\titleformat*
\{(command)\} \{(format)\}
\titleformat
\{(command)\} \{(shape)\} \{(format)\} \{(label)\} \{(sep)\} \{(begfore)\} \{(after)\}
3 \newcommand{\titleformat}{% 
4 \@ifstar{\tt/l.Var@format@s}% 
5 {\tt/l.Var@format@i})% 
6 \newcommand{\tt/l.Var@format@s}[1]{}% 
7 \NewDocumentCommand{\tt/l.Var@format@i}{m o m m m o}{}

\chaptertitlename
8 \@ifundefined{\chapapp}{\chapapp\chaptername}{}
9 \newcommand{\chaptertitlename}{\@chapapp}

\titlespacing
\{(command)\} \{(left)\} \{(before)\} \{(after)\} \{(right)\}
10 \NewDocumentCommand{\titlespacing}{s m m m m o}{}

\filright
11 \newcommand*{\filright}{}

\filcenter
12 \newcommand*{\filcenter}{}

\fileft
13 \newcommand*{\fileft}{}

\fillast
14 \newcommand*{\fillast}{}

\fillinner
15 \newcommand*{\fillinner}{}

\fillouter
16 \newcommand*{\fillouter}{}

\wordsep
17 \newcommand{\wordsep}{\fontdimen\tw@\font \@plus \fontdimen\thr@@\font \@minus \fontdimen\four\font}
\titleline  \*[\texttt{align}] \{(\texttt{material})\]
19 \NewDocumentCommand{\titleline}{s o m}{\}
\titlerule  \*[\texttt{height}]
20 \providecommand*{\titlerule}{\texttt{\ifstar{\tt\titlerule}{\tt\titlerule}}}  
21 \newcommand*{\tt\titlerule}[1][1]{}  
22 \newcommand*{\tt\titlerule}[2][]{}
\iftitlemeasuring  \*[\texttt{true}] \texttt{\false}\]
23 \newcommand{\iftitlemeasuring}[2][2]{\}
\assignpagestyle  \*[\texttt{command}] \texttt{\pagestyle}\]
24 \newcommand{\assignpagestyle}[2][2]{\}
\titleclass  \*[\texttt{name}] \texttt{\startlevel} \texttt{\class} \texttt{\cmd}\]
25 \NewDocumentCommand{\titleclass}{m o m o}{}

File 362  \texttt{lwpavl-varec-la}

§ 461  Package  \texttt{titletoc}

(\textit{Emulates or patches code by Javier Bezos}.)

\texttt{titletoc} is emulated. All user options and macros are ignored and disabled.

Discard all options for \texttt{lwpavl-varec}:  

\texttt{for HTML output:} \texttt{1\LWRR@ProvidesPackageDrop{titletoc}[2011/12/15]}

\dottedcontents  \*[\texttt{section}] \texttt{\left} \texttt{\above} \texttt{\label} \texttt{\leader}\]
2 \NewDocumentCommand{\dottedcontents}{m o m m m}{\}
\titlecontents  \*[\texttt{section}] \texttt{\left} \texttt{\above} \texttt{\numbered} \texttt{\numberless} \texttt{\filler} \texttt{\below or begin} \texttt{\separator} \texttt{\end}\]
3 \newcommand{\titlecontents}[\texttt{\ifstar{\tt\titlecontents}{\tt\titlecontents}}]{\texttt{\ifstar{\tt\titlecontents}{\tt\titlecontents}}}  
4 \newcommand{\tt\titlecontents}[2][2][2]{\}
\contentsmargin  \*[\texttt{correction}] \texttt{\right}\]
6 \newcommand{\contentsmargin}[2][2]{\}
\thecontentslabel
\newcommand*{\thecontentslabel}{\thecontentslabel}

\thecontentspage

\newcommand*{\thecontentspage}{\thecontentspage}

\contentslabel \langle \text{format} \rangle \langle \text{space} \rangle
\newcommand{\contentslabel}[2][\thecontentslabel]

\contentspage \langle \text{format} \rangle
\newcommand{\contentspage}[1][\thecontentspage]

\contentspush \langle \text{text} \rangle
\newcommand{\contentspush}[1][\thecontentspush]

\contentsuse \langle \text{name} \rangle \langle \text{text} \rangle
\newcommand{\contentsuse}[2][\thecontentsuse]

\startcontents \langle \text{name} \rangle
\newcommand{\startcontents}[1][\thestartcontents]

\stopcontents \langle \text{name} \rangle
\newcommand{\stopcontents}[1][\thestopcontents]

\resumecontents \langle \text{name} \rangle \langle \text{prefix} \rangle \langle \text{start} \rangle \langle \text{code} \rangle
\newcommand{\resumecontents}[2][\theresumecontents]

\printcontents \langle \text{name} \rangle \langle \text{list} \rangle \langle \text{prefix} \rangle \langle \text{start} \rangle \langle \text{code} \rangle
\newcommand{\printcontents}[4][\thprintcontents]

\startlist \langle \text{name} \rangle \langle \text{list} \rangle
\newcommand{\startlist}[2][\thestartlist]

\stoplist \langle \text{name} \rangle \langle \text{list} \rangle
\newcommand{\stoplist}[2][\thestoplist]

\resumelist \langle \text{name} \rangle \langle \text{list} \rangle
\newcommand{\resumelist}[2][\theresumelist]

\printlist \langle \text{name} \rangle \langle \text{list} \rangle \langle \text{prefix} \rangle \langle \text{code} \rangle
\newcommand{\printlist}[4][\thprintlist]
lwarp supports the native \LaTeX\ titling commands, and also supports the packages authblk and titling. If both are used, authblk should be loaded before titling.

If using the titling package, additional titlepage fields for \texttt{\ published} and \texttt{\ subtitle} may be added by using \texttt{\ AddSubtitle\ Published} in the preamble. See section 67.8.

The various titling footnote restyling commands have no effect.

Pass all options to lwarp-titling:

\begin{verbatim}
1 \LWR@ProvidesPackagePass{titling}[2009/09/04]

\@bsmtitleempty
Patch \@bsmtitleempty:

2 \let\LWR@orig@bsmtitleempty\@bsmtitleempty
3 \renewcommand*{\@bsmtitleempty}{%}
4 \LWR@orig@bsmtitleempty%
5 }

\keepthetitle
Patch \keepthetitle:

6 \let\LWR@orig@keepthetitle\keepthetitle
7 \renewcommand*{\keepthetitle}{%}
8 \LWR@orig@keepthetitle%
9 }

\killtitle
Patch \killtitle:

10 \let\LWR@orig@killtitle\killtitle
11 \renewcommand*{\killtitle}{%}
12 \LWR@orig@killtitle%
13 }

\titlingpage
Env \titlingpage

14 \renewenvironment*{\titlingpage}{%}
15 (%

Start an HTML titlepage div:

16 \LWR@printpendingfootnotes
17 \begin{titlepage}
Prepare for a custom version of \maketitle inside the titlingpage:

\LWAR@maketitlesetup
\let\maketitle\LWAR@titlingmaketitle

At the end of the environment, end the HTML titlepage div:

\end{titlepage}

Patch the pre/post title/author/date to add HTML tags, then initialize:

\pretit{
\posttit{
\preauthor{
\postauthor{
\predate{
\postdate{

\LWAR@maketitlesetup \thanks_\maketitlesetup Patches \thanks macros.

\renewcommand*{\LWAR@maketitlesetup}{%"}
Redefine the footnote mark:

\def\@makefnmark{\textsuperscript{\@thefnmark}}
\thefootnote \Rightarrow \text{arabic}{\text{footnote}}, or
\thefootnote \Rightarrow \text{fnsymbol}{\text{footnote}}

Redefine the footnote text:

\longdef\makefntext#1{%
Make the footnote mark and some extra horizontal space for the tags:

\makethanksmark~%
\makethanksmark \Rightarrow \thanksfootmark \Rightarrow \itshape a (or similar)

Print the text:

##1%
\%)% \@makefntext
\)
\thanksfootmark

\renewcommand{\thanksfootmark}{%
  \hb@xt{\thanksmarkwidth}{\hfil\normalfont
    \thanksfootpre \tamark \thanksfootpost
  }%
%
}

\maketitle HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

\renewcommand*{\maketitle}{%

An HTML titlepage <div> is used for all classes.

\begin{titlepage}

Select which kind of footnote marks to use:

\@bsmarkseries

Set up special patches:

\LWR@maketitlesetup

Typeset the title, etc:

\@maketitle

Immediately generate any \thanks footnotes:

\@thanks

Close the HTML titlepage div:

\end{titlepage}

Reset the footnote counter:

\@bscontmark

\@maketitle Typesets the title, etc. Patched for HTML.

\DeclareDocumentCommand{\@maketitle}{%}
\maketitlehooka

{ \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
\maketit \maketitle for use inside an HTML titlingpage environment.

\renewcommand*{\LWR@titlingmaketitle}{%
Keep pending footnotes out of the title block:
\@thanks

Select which kind of footnote marks to use:
\@bsmarkseries

Set up special patches:
\LWR@maketitlesetup

Typeset the title, etc:
\@maketitle

Immediately generate any \thanks footnotes:
\@thanks

Reset the footnote counter:
\@bscontmark}
\thanksmarkseries \{\langle \text{series} \rangle \}

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fnsymbol’, etc.

\renewcommand{\thanksmarkseries}[1]{\def{\@bsmarkseries}{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}}%

Set default titlepage thanks footnote marks. See section 67.7.

\ifclassloaded{memoir}{% not memoir
\if@titlepage
\thanksmarkseries{arabic}
\else
\thanksmarkseries{fnsymbol}
\fi
}% not memoir

---

File 364 lwarp-toobasic.sty

§ 463 Package tocbasic

(Emulates or patches code by Markus Kohm.)

Pkg tocbasic tocbasic is nullified for lwarp.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

for HTML output:

\LWR@ProvidesPackagePass{tocbasic}[2018/12/30]
File 365  lwarp-tocebbind.sty

§ 464  Package  tocebbind

(Emulates or patches code by Peter Wilson.)

Pkg  tocebbind  tocebbind is patched for use by lwarp.

placement and toc options  An index may be placed inline with other HTML text, or on its own HTML page:

Pkg  makeidx  Inline, with a manual toc entry:

A commonly-used method to introduce an index in a \TeX document:
\begin{verbatim}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname} % or chapter
\printindex
\end{verbatim}

Pkg  makeidx  On its own HTML page, with a manual toc entry:

\begin{verbatim}
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname} % or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
\end{verbatim}

Pkg  tocebbind  Inline, with an automatic toc entry:

The tocebbind package may be used to automatically place an entry in the toc.
\begin{verbatim}
\usepackage[nottoc]{tocebbind}
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
\end{verbatim}

Pkg  tocebbind  On its own HTML page, with an automatic toc entry:

\begin{verbatim}
\usepackage[nottoc]{tocebbind}
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
\end{verbatim}

Opt [tocebbind] numindex  Use the tocebbind numindex option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as imakeidx, may also have options for including the index in the Table of Contents.
The following code is shared by anonchap.

\DeclareDocumentCommand{\simplechapter}{O{\@empty}}{% 
def\chapcntformat##1{% #1~\csname the##1\endcsname\quad% }% }
\DeclareDocumentCommand{\restorechapter}{% \let\chapcntformat@secntformat%}

\providecommand{\LWR@ProvidesPackagePass}{tocbibind}[2010/10/13]
\renewenvironment{theindex}{% \if@bibchapter
  \if@donumindex
    \chapter{\indexname}
  \else
    \if@dotocind
      \chapter*{\indexname}
      \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
    \else
      \chapter*{\indexname}
    \fi
  \fi
  \fi
}{% \fi
  \if@dotocind
  \section*{\indexname}
  \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
  \section*{\indexname}
  \fi
}
\let\LWR@indexitem\item
\let\LWR@indexsubitem\subitem
\let\LWR@indexsubsubitem\subsubitem

\Dec@areDocumentCommand{\simp@chapter}{O{\@empty}}{% 
def\@chapcntformat##1{#1~\csname the##1\endcsname\simp@chapterdelim\quad% }% }
\Dec@areDocumentCommand{\restorechapter}{}{% \@chapcntformat\@seccntformat%}

File 366 larp-tocdata.sty

§ 465 Package \texttt{tocdata}

(Emulates or patches code by Brian Dunn.)
tocdata is patched for use by lwp.

for HTML output:

```latex
\ProvidesPackagePass{tocdata}[2019/03/21]

\renewcommand*{\maybetocdata}{%
  \ifempty{\thistocdata}{%
    \quad --- \textbf{authorartist}\text{\thistocdata}%
    \def\thistocdata{}
  }%
}

\renewrobustcmd{\tocdatapartprint}[4]
  \htmltag{br /}%
  \InlineClass{\textbf{\textbf{#1}}\textbf{\textbf{#2}}#3#4}%

\ifdefined{chapter}{}{\let\tocdatachapterprint\tocdatapartprint}
\let\tocdatasectionprint\tocdatapartprint
\let\tocdatasubsectionprint\tocdatapartprint

\newcommand*{\settexta}{[1]{%
  \def\texta{justify}%
  \ifcsstring{\texta}{center}{}%
  \ifcsstring{\texta}{right}{}%
}

\renewcommand{\artistauthorprint}{5}{%
  \begin{BlockClass}{\text-align:\textbf{\textbf{#1}}\textbf{\textbf{#2}}#3#4#5}%
  \InlineClass{\textbf{\textbf{#1}}\textbf{\textbf{#2}}#3#4#5}%
  \end{BlockClass}%
}

\newcommand*{\setnamea}{[1]{%
  \def\texta{justify}%
  \ifcsstring{\texta}{center}{}%
  \ifcsstring{\texta}{right}{}%
}
```

$\texttt{lwparch}$

§ 466 Package *tocenter*

*Pkg* tocenter **tocenter** is ignored.

*for HTML output:* 1 \LWR@ProvidesPackageDrop{tocenter}[2004/12/09]

2 \NewDocumentCommand{\ToCenter}{s o m m}{}

3 \NewDocumentCommand{\FromMargins}{s o m m m m}{}

---

File 368  

$\texttt{lwp-tocloft.sty}$

§ 467 Package *tocloft*

*(Emulates or patches code by Peter Wilson.)*

*Pkg* tocloft **tocloft** is emulated. Most user options and macros are ignored and disabled. \newlistof and \cftchapterprecis are supported.

*Pkg* tocloft **tocloft & other packages**

If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its *titles* option, which tells tocloft to use standard \LaTeX{} commands to create the titles, allowing other packages to work with it.

Discard all options for lwp-tocloft:

*for HTML output:* 1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31]

2 \newcommand{\tocloftpagestyle}{(style)}

3 \newcommand*{\cftmarktoc}{}
\newcommand*{\cfttoctitlefont}{\em}
\cftaftertoctitle
\newcommand*{\cftaftertoctitle}{\par}
\newlength{\cftbeforetoctitleskip}
\newlength{\cftaftertoctitleskip}

\cftmarklof
\newcommand*{\cftmarklof}{\em}
\cftloftitlefont
\newcommand*{\cftloftitlefont}{\em}
\cftafterloftitle
\newcommand*{\cftafterloftitle}{\par}
\newlength{\cftbeforeloftitleskip}
\newlength{\cftafterloftitleskip}

\cftmarklof
\newcommand*{\cftmarklof}{\em}
\cftloftitlefont
\newcommand*{\cftloftitlefont}{\em}
\cftafterloftitle
\newcommand*{\cftafterloftitle}{\par}
\newlength{\cftbeforeloftitleskip}
\newlength{\cftafterloftitleskip}

\cftmarklot
\newcommand*{\cftmarklot}{\em}
\cftloftitlefont
\newcommand*{\cftloftitlefont}{\em}
\cftafterloftitle
\newcommand*{\cftafterloftitle}{\par}
\newlength{\cftbeforeloftitleskip}
\newlength{\cftafterloftitleskip}

\cftdot
\providecommand*{\cftdot}{.}
\cftdotsep
\providecommand*{\cftdotsep}{1}
\cftnodots
\providecommand*{\cftnodots}{5000}
The part-related items are also provided by \texttt{memoir}:

\begin{verbatim}
\LWR@provide\length{cftbeforepartskip}
\LWR@provide\length{cftpartindent}
\LWR@provide\length{cftpartnumwidth}
\providecommand*{\cftpartfont}{}
\providecommand*{\cftpartpresnum}{}
\providecommand*{\cftpartaftersnum}{}
\providecommand*{\cftpartaftersnumb}{}
\providecommand*{\cftpartreader}{}
\providecommand*{\cftpartdotsep}{1}
\providecommand*{\cftpartpagefont}{}
\providecommand*{\cftpartafterpnum}{}
\end{verbatim}

\texttt{memoir} uses the full name "chapter" instead of "chap":

\begin{verbatim}
\LWR@provide\length{cftbeforechapskip}
\LWR@provide\length{cftchapindent}
\LWR@provide\length{cftchapnumwidth}
\newcommand*{\cftchapfont}{}
\newcommand*{\cftchappresnum}{}
\newcommand*{\cftchapafterpnum}{}
\newcommand*{\cftchapaftersnum}{}
\newcommand*{\cftchapaftersnumb}{}
\newcommand*{\cftchapreader}{}
\newcommand*{\cftchapdotsep}{1}
\newcommand*{\cftchappagefont}{}
\end{verbatim}

The following do not appear in \texttt{memoir}:

\begin{verbatim}
\LWR@provide\length{cftbeforesecskip}
\LWR@provide\length{cftsecindent}
\LWR@provide\length{cftsecnumwidth}
\newcommand*{\cftsecpresnum}{}
\newcommand*{\cftsecafterpnum}{}
\end{verbatim}
\texttt{\newlistentry} \texttt{[(within)] \{\{counter\}\} \{\{ext\}\} \{\{level-1\}\}}

\begin{verbatim}
150  \DeclareDocumentCommand{\newlistentry}{o m m m}
151 \LWR@traceinfo{newlistentry #2 #3 #4}%
152  \IfValueTF{#1}\
153  \IfValueTF{#1}\
154  \IfValueTF{#1}\
155  \IfValueTF{#1}\
156  \IfValueTF{#1}\
157  \IfValueTF{#1}\
158  \IfValueTF{#1}\
159  \IfValueTF{#1}\
160  \IfValueTF{#1}\
161  \IfValueTF{#1}\
162  \IfValueTF{#1}\
163  \IfValueTF{#1}\
164  \IfValueTF{#1}\
165  \IfValueTF{#1}\
166  \IfValueTF{#1}\
167  \IfValueTF{#1}\
168  \IfValueTF{#1}\
169  \IfValueTF{#1}\
170  \IfValueTF{#1}\
171  \IfValueTF{#1}\
172  \IfValueTF{#1}\
173  \IfValueTF{#1}\
174  \IfValueTF{#1}\
175  \IfValueTF{#1}\
176  \IfValueTF{#1}\
177  \IfValueTF{#1}\
178  \IfValueTF{#1}\
179  \IfValueTF{#1}\
180  \IfValueTF{#1}\
181  \IfValueTF{#1}\
182  \IfValueTF{#1}\
183  \IfValueTF{#1}\
184  \IfValueTF{#1}\
185  \IfValueTF{#1}\
\end{verbatim}

\texttt{\newlistof} \texttt{[(within)] \{\{type\}\} \{\{ext\}\} \{\{listofname\}\}}

Emulated through the \texttt{\newfloat} mechanism.

\begin{verbatim}
186  \DeclareDocumentCommand{\newlistof}{o m m m}
187  \LWR@traceinfo{newlistof #2 #3 #4}%
188  \IfValueTF{#1}\
189  \IfValueTF{#1}\
190  \IfValueTF{#1}\
191  \IfValueTF{#1}\
192  \IfValueTF{#1}\
193  \IfValueTF{#1}\
194  \IfValueTF{#1}\
195  \IfValueTF{#1}\
196  \IfValueTF{#1}\
197  \IfValueTF{#1}\
198  \IfValueTF{#1}\
199  \IfValueTF{#1}\
200  \IfValueTF{#1}\
\end{verbatim}
\ctchapterprecis \{(text)\}
\newcommand{\ctchapterprecis}[1]{%
  \ctchapterprecishere[#1]
  \ctchapterprecistoc[#1]}
\newcommand{\ctchapterprecishere}[1]{%
  \begin{quote}#1\end{quote}}
\newcommand{\ctchapterprecistoc}[1]{%
  \addtocontents{toc}{%
    \protect\begin{quote}#1\protect\end{quote}}}
The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.
\newcommand{\ext@todo}{tdo}
\renewcommand{\l.Var@todo}{\hypertoc/l.Varoat{1}{todo}{/l.Vardo}{#1}{#2}}
\renewcommand*{\todototoc}{%}
\phantomsection%
\LWRTODONOTES@orig@todototoc%
\renewcommand{\@todonotes@drawMarginNoteWithLine}{%}
\fcolorbox{%}
{\@todonotes@currentbordercolor}%
{\@todonotes@currentbackgroundcolor}%
{\arabic{\@todonotes@numberoftodonotes}}
\marginpar{\@todonotes@drawMarginNote}%
\renewcommand{\@todonotes@drawInlineNote}{%}
\fcolorboxBlock{%}
{\@todonotes@currentbordercolor}%
{\@todonotes@currentbackgroundcolor}%
{\if\@todonotes@authorgiven%
{\@todonotes@author:\,}%
\fi%
\@todonotes@text%}
\renewcommand{\@todonotes@drawMarginNote}{%}
{\if\@todonotes@authorgiven%
\@todonotes@author\par%
\fi%
\arabic{\@todonotes@numberoftodonotes}: %}
\fcolorbox%
{\@todonotes@currentbordercolor}%
{\@todonotes@currentbackgroundcolor}%
{\@todonotes@sizecommand%
\@todonotes@text %}
\renewcommand{\@todonotes@drawLineToRightMargin}{}%}
\renewcommand{\@todonotes@drawLineToLeftMargin}{}%}
\renewcommand{\missingfigure}[2][2]{%}
\setkeys{todonotes}{#1}%
\addcontentsline{tdo}[todo]{\@todonotes@MissingFigureText: #2}%
\fcolorboxBlock{%}
{\@todonotes@currentbordercolor}%
\let\LetLtxMacro\LWRTODONOTES@orig@todo\@todo
\renewdocumentcommand{\@todo}{o m}{\begingroup
\renewcommand*{\phantomsection}{}
\ifverbatimtruefalse{#1}{\LWRTODONOTES@orig@todo[#1]{#2}}{\LWRTODONOTES@orig@todo{#2}}\endgroup
}\if@todonotes@disabled

File 372 \texttt{lwp-topcapt.sty}

§ 471 Package \texttt{topcapt}

Pkg \texttt{topcapt} \texttt{topcapt} is emulated.

\textbf{for HTML output:} 1 \texttt{\LWR@ProvidesPackageDrop{topcapt}[2004/12/11]}

\begin{verbatim}
 for HTML output: 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]
2 \let\LetLtxMacro\topcaption\caption
\end{verbatim}

File 373 \texttt{lwp-tram.sty}

§ 472 Package \texttt{tram}

Pkg \texttt{tram} \texttt{tram} is emulated.

\textbf{⚠️ block only} The HTML emulation uses a \texttt{<div>}, which must not appear inside an HTML \texttt{<span>} or an HTML paragraph. For this reason, the \texttt{tram} environment should only be used to contain paragraphs inside a \texttt{parbox} or \texttt{minipage}. \texttt{tram} should not be used to mark up inline text.

To disable \texttt{tram}, allowing source compatibility with inline uses:

\begin{verbatim}
\begin{warpHTML}
\renewenvironment{tram}[1][]{}
\end{warpHTML}
\end{verbatim}

\textbf{for HTML output:} 1 \texttt{\LWR@ProvidesPackageDrop{tram}[2013/04/04]}

\newenvironment{tram}{\BlockClass[background:lightgray]{tram}}{\endBlockClass}

\newcommand*{\transparent}{\edef\LWR@opacity{#1}}
\newcommand*{\texttransparent}[2]{% 
  \begingroup% 
  \transparent{#1}% 
  \In{\textClass[opacity: #1]}{transparent}{#2}% 
  \endgroup% 
}

\LWR@ProvidesPackageDrop{transparent}[2016/05/16]
\newcommand*{\transparent*}{\edef\LWR@opacity{#1}}
\newcommand*{\texttransparent*}[2]{% 
  \begingroup% 
  \transparent*{#1}% 
  \In{\textClass[opacity: #1]}{transparent}{#2}% 
  \endgroup% 
}

\LWR@ProvidesPackageDrop{trimc}[2018/04/08]
\csdef{trimbox}{\@ifstar\@gobble\@gobble}
\csletcs{trimbox*}{trimbox}
\def\endtrimbox{} 
\csletcs{endtrimbox*}{endtrimbox}
\csletcs{clipbox}{trimbox}
\csletcs{endclipbox}{endtrimbox}
\csletcs{endclipbox*}{endtrimbox}

\LWR@ProvidesPackageDrop{trimclip}[2018/04/08]
\csdef{trimbox}{\@ifstar\@gobble\@gobble}
\csletcs{trimbox*}{trimbox}
\def\endtrimbox{} 
\csletcs{endtrimbox*}{endtrimbox}
\csletcs{clipbox}{trimbox}
\csletcs{endclipbox}{endtrimbox}
\csletcs{endclipbox*}{endtrimbox}
§ 475 Package \texttt{trivfloat}

(Emulates or patches code by 

\texttt{trivfloat} is forced to use the built-in \texttt{lwp} emulation for floats.

To create a new float type and change its name:

\begin{verbatim}
\trivfloat{example}
\renewcommand{\exampname}{Example Name}
\crefname{example}{example}{examples}
\Crefname{example}{Example}{Examples}
\end{verbatim}

Discard all options for \texttt{lwp-trivfloat}. This tells \texttt{trivfloat} not to use \texttt{floatrow} or \texttt{memoir}.

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{trivfloat}[2009/04/23]
2 \LWR@origRequirePackage{trivfloat}
\end{verbatim}

\texttt{\chapter{example}} Nullified at the beginning of the document. Is used by \texttt{trivfloat} to correct float chapter numbers, but is not needed for \texttt{lwp}.

\texttt{for HTML output:} \begin{verbatim}
3 \begin{warpHTML}
4 \AtBeginDocument{\DeclareDocumentCommand{\chapter}{m m}{}{}}
5 \end{warpHTML}
\end{verbatim}

§ 475.1 \textbf{Combining \texttt{newfloat}, \texttt{trivfloat}, and algorithmicx}

\texttt{for HTML \& PRINT:} \begin{verbatim}
6 \begin{warpall}
\end{verbatim}

\textbf{For both print and HTML output:}

\begin{itemize}
  \item \textbf{⚠️} When using \texttt{float}, \texttt{trivfloat}, or \texttt{algorithmicx} at the same time, be aware of conflicting file usage. \texttt{algorithmicx} uses \texttt{.loa}. \texttt{trivfloat} by default starts with \texttt{.loa} and goes up for additional floats, skipping \texttt{.lof} and \texttt{.lot}.
  \item \textbf{⚠️} When using \texttt{newfloat}, be sure to manually assign higher letters to the \texttt{newfloat} files to avoid \texttt{.loa} used by \texttt{algorithmicx}, and any files used by \texttt{trivfloat}. Also avoid using \texttt{.lof} and \texttt{.lot}.
\end{itemize}
When using `\trivfloat`, you may force it to avoid conflicting with `algorithmicx` by starting `\trivfloat`'s file extensions with `.lob`:

\begin{verbatim}
\makeatletter
\setcounter{tf@float@cnt}{1} % start \trivfloats with .lob
\makeatletter
\end{verbatim}

File 377  \texttt{lwarptruncate.sty}  

§ 476 Package  \texttt{truncate}  

\begin{verbatim}
\LWR@ProvidesPackageDrop{truncate}[2001/08/20]
\providecommand{\TruncateMarker}{}
\newcommand{\truncate}[3]{\TruncateMarker{#3}}
\end{verbatim}

File 378  \texttt{lwarpturnthepage.sty}  

§ 477 Package  \texttt{turnthepage}  

\begin{verbatim}
\LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]
\newcommand{\turnthepage}{}
\end{verbatim}

File 379  \texttt{lwarptwoup.sty}  

§ 478 Package  \texttt{twoup}  

\begin{verbatim}
\LWR@ProvidesPackageDrop{twoup}[2007/02/26]
\newcommand{\cleartolastpage}{}
\end{verbatim}
§ 479 Package \texttt{typearea}

(\textit{Emulates or patches code by Markus Kohm.})

\textbf{Pkg typearea} \texttt{typearea} is emulated.

This package may be loaded standalone, but is also loaded automatically if \texttt{koma-script} classes are in use. \texttt{\DeclareDocumentCommand} is used to overwrite the \texttt{koma-script} definitions.

\textbf{For HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{typearea}[2018/03/30]
2 \DeclareDocumentCommand{\typearea}{o m}{
3 \DeclareDocumentCommand{\reca/\typearea}{}{ }
4 \@ifundefined{footheight}{\new/l.Varength\footheight}{ }
5 \DeclareDocumentCommand{\areaset}{o m m}{ }
6 \DeclareDocumentCommand{\activateareas}{ }
7 \DeclareDocumentCommand{\storeareas}{m}{ }
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{ }
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{ }
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{ }
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{ }
\end{verbatim}

§ 480 Package \texttt{typicons}

(\textit{Emulates or patches code by Arthur Vigil, Xavier Danaux.})

\textbf{Pkg typicons} \texttt{typicons} is patched for use by \texttt{l warp}.

If \texttt{\textbackslash ticon} is used, the name of the icon is used in the \texttt{alt} tag. Otherwise, for each of the individual icon macros, a generic \texttt{alt} tag is used.

\textbf{For HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackagePass{typicons}[2015/05/20]
2 \let\LtxMacro\LWR@orig\symbol\symbol
3 4 \let\LWR@orig\typicon\TI\TI
5 6 \newcommand*{\LWR@typicon\symbol}[1][]{
7 \begin{lateximage}*[\LWR@typicon\symbol][typicon#1]
8 \begingroup%
9 \LWR@orig\typicon\TI%
10 \LWR@orig\symbol[#1]%
11 \endgroup%
\end{verbatim}
File 382  lwarp-ulem.sty

§ 481  Package  ulem

(Emulates or patches code by Donald Arseneau.)

Pkg  ulem  Patched for use by lwarp.

Use the original package:

1 \LWR@ProvidesPackagePass{ulem}[2012/05/18]

Basic markup commands, using CSS:

2 \NewDocumentCommand{\LWR@HTML@uline}{+m}{% 
  \InlineClass%
  (text-decoration:underline; text-decoration-skip: auto)%
  {uline}\{\LWR@isolate[#1]\}%
  }
\LWR@formatted{uline}

9 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{% 
  \InlineClass%
  (%
    text-decoration:underline; text-decoration-skip: auto;%
    text-decoration-style:double%
  )%
  {uuline}\{\LWR@isolate[#1]\}%
  }
\LWR@formatted{uuline}

19 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{% 
  \InlineClass%
  (%
    text-decoration:underline; text-decoration-skip: auto;%
    text-decoration-style:wavy%
  )%
  {uwave}\{\LWR@isolate[#1]\}%
  }
\LWR@formatted{uwave}

\NewDocumentCommand{\LWR@HTML@sout}{+m}{%
\InlineClass%
  (text-decoration:line-through)%
  {sout}{\LWR@isolate[#1]}%
}%
\LWR@formatted{sout}

\NewDocumentCommand{\LWR@HTML@xout}{+m}{%
\InlineClass%
  (text-decoration:line-through)%
  {xout}{\LWR@isolate[#1]}%
}%
\LWR@formatted{xout}

\NewDocumentCommand{\LWR@HTML@dashu}{+m}{%
\InlineClass%
  (%
    text-decoration:underline;%
    text-decoration-skip: auto;%
    text-decoration-style:dashed%
  )%
  {dashline}{\LWR@isolate[#1]}%
}%
\LWR@formatted{dashline}

\NewDocumentCommand{\LWR@HTML@dotu}{+m}{%
\InlineClass%
  (%
    text-decoration:underline;%
    text-decoration-skip: auto;%
    text-decoration-style:dotted%
  )%
  {dotline}{\LWR@isolate[#1]}%
}%
\LWR@formatted{dotline}

Nullified/emulated macros:

\NewDocumentCommand{\LWR@HTML@markoverwith}{m}{()}\LWR@formatted{markoverwith}
\NewDocumentCommand{\LWR@HTML@ULon}{+m}{\u{#1}\egroup}\LWR@formatted{ULon}

File 383  lwpumoline.sty

§ 482  Package  umoline

(Emulates or patches code by Hiroshi Nakashima.)

Pkg  umoline  umoline is patched for use by lwp.
for HTML output:

1 \LWR@ProvidesPackagePass{umoline}[2000/07/11]

2 \newcommand*{\LWR@HTML@Under{line}[1]}{\In{line}\{uline\}(#1)}

3 \LWR@formatted{Under\line}

4 \newcommand*{\LWR@HTML@Mid{line}[1]}{\In{line}\{sout\}(#1)}

5 \LWR@formatted{Mid\line}

6 \newcommand*{\LWR@HTML@Over{line}[1]}{\In{line}\{oline\}(#1)}

7 \LWR@formatted{Over\line}

8 \newcommand*{\LWR@HTML@UMO{line}[2]}{\In{line}\{ulo\}(#2)}

9 \LWR@formatted{UMO\line}

10 \NewDocumentCommand{\LWR@HTML@UMOspace}{s m o}{\hspace*{#2}}

11 \LWR@formatted{UMOspace}

12 \NewDocumentCommand{\LWR@HTML@UMOnew{line}[1]}{\new\line}{\new\{line\}}

13 \LWR@formatted{UMOnew\line}

---

File 384  **lwarf-underscore.sty**

§ 483  Package  **underscore**

\textbf{Pkg}  underscore  underscore is ignored.

\textbf{for HTML output:}  1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 385  **lwarf-units.sty**

§ 484  Package  **units**

\textbf{(Emulates or patches code by Axel Reichert.)}

\textbf{Pkg}  units  units is patched for use by lwarp.

Values are not styled by css, and take the style of the surrounding HTML text.

Units are styled according to the print version, so they will be forced to upright roman in HTML if the print version does so. It may be necessary to adjust the document’s body css to match the print version.
unitsdef is patched for use by lwarp.

(Emulates or patches code by Patrick Happel.)
\renewunit{\arcsec}{}% 
\ifnumcomp{\value{\LW@lateximagedepth}}{>}{0}{}% 
{\ensuremath{\text{''}}}% dbl prime
\renewrobustcmd{\SI}{% 
\begingroup% 
/\text@xspace\re@ax%
/\unitSIdef\se@ctfont%
/\LW@textcurrentfont(#1#2)% lwarp
\endgroup%}

---

File 387  lwarp-upref.sty

§ 486 Package upref

Pkg upref Ignored.

for HTML output: Discard all options for lwarp-upref:

1 \LW@ProvidesPackageDrop{upref}[2007/03/14]

---

File 388  lwarp-url.sty

§ 487 Package url

(Emulates or patches code by Donald Arseneau.)

Pkg url url is patched for use by lwarp.

for HTML output: 1 \LW@ProvidesPackagePass{url}[2013/09/16]

url uses math mode to print its string inside a group, so the original meaning of math
is restored first.

2 \LetLtxMacro{\LW@origUrl@FormatString}{\Url@FormatString}
3 \renewcommand*{\Url@FormatString}{% 
4 \InlineClass{verbatim}{% 
5 \LW@restoreorigformatting%
6 \LW@origUrl@FormatString
7 }% 
8 }%
§ 488 Package **uspace**

**uspace** is ignored.

### for HTML output:

```latex
\LWR@ProvidesPackageDrop{uspace}[2016/11/06]
```

---

§ 489 Package **verse**

(Emulates or patches code by Peter Wilson.)

**verse** is supported and patched by **l warp**.

### for HTML output:

```latex
\LWR@ProvidesPackagePass{verse}[2009/09/04]
```

When using **verse** or **memoir**, always place a `\` after each line.

```latex
\begin{warpHTML}
\texttt{\verb|verse|}
\end{warpHTML}
```

The documentation for the **verse** and **memoir** packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. **l warp** provides `\attribution`, which works for both print and **HTML** output. To combine the two so that `\attrib` is used for print and `\attribution` is used for **HTML**:

```latex
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

These lengths are used by **verse** and **memoir** to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLv/leftskip` and `\HTMLv/leftmargini` are provided to control the margins in **HTML** output. These new lengths may be set by the user before any **verse** environment, and persist until they are manually changed again. One reason to change `\HTMLv/leftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLv/leftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

### spacing

Horizontal spacing relies on **pdftotext**'s ability to discern the layout (`-layout` option) of the text in the **HTML**-tagged **PDF** output. For some settings of `\HTMLv/leftmargini` or `\HTMLv/leftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.
The verse environment will be placed inside a HTML <pre>.

\AfterEndPreamble{
  \LWR@traceinfo{Patching verse.}
}

At the beginning of the verse environment:

\AtBeginEnvironment{verse}
{\%}

Use the original list environment inside a <pre> to attempt to preserve formatting.

\LWR@restoreoriglists%

The \texttt{verse} or \texttt{memoir} packages can place stanza numbers to the left with their \texttt{\flagverse} command. Do not allow them to go into the left margin, which would cause \texttt{pdfcrop} to crop the entire page further to the left:

\ifdef{\v/leftskip}{
\setlength{\v/leftskip}{\HTMLv/leftskip}
\setlength{\leftmargini}{\HTMLleftmargini}
}{
\LWR@forcenewpage
\LWR@atbeginverbatim{3}{verse}%
}

After the end of the verse environment, which places the <pre> tag at the regular left margin:

\AtEndEnvironment{verse}{\%}
\leavevmode%
\LWR@afterendverbatim{1}%

Patch to place \texttt{poemtitle} inside an HTML <span> of class \texttt{poemtitle}:

\ifdef{\poemtitle}{
\DeclareDocumentCommand{\vstypeptit}{m}{
\vspace{\beforepoemtitleskip}%
{\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
\vspace{\afterpoemtitleskip}%
}
}{
\LWR@traceinfo{Finished patching verse.}
}
% AfterEndPreamble

---

File 391  \texttt{lwpark-vironotes.sty}

§ 490  Package  \texttt{vironotes}

(Emulates or patches code by Norman Gray.)
\textbf{lwr} 954

\texttt{lwarp}

\texttt{versonotes} \texttt{is emulated.}

\texttt{Pkg versonotes} \texttt{for HTML output:}

1 \LWR@ProvidesPackageDrop{versonotes}[2015/12/08]

2 \newcommand{\versonote}[1]{\marginpar{#1}}
3 \newdimen\versotextwidth
4 \newdimen\verso/l.Vareftmargin
5 \newcommand*{\verso/l.Varayout}{}

\texttt{OlNvarwarpMvertbarsNsty File 392} \texttt{lwr-vertbars.sty}

\texttt{§ 491 Package} \texttt{vertbars}

\texttt{(Emulates or patches code by Peter Wilson.)}

\texttt{Pkg vertbars} \texttt{vertbars is emulated.}

\texttt{Pkg vertbars} \texttt{for HTML output:}

1 \LWR@ProvidesPackageDrop{vertbars}[2010/11/27]

2 \newlength{\barwidth}
3 \setlength{\barwidth}{0.4pt}
4 \newlength{\barspace}
5 \setlength{\barspace}{1em}
6
7 \newenvironment{vertbar}{
8 \LWR@forcenewpage
9 \LWR@forceminwidth{\barwidth}
10 \begin{BlockClass}[
11 \texttt{border-left: \LWR@print\LWR@atleastonept \texttt{solid black ; \%
12 \texttt{padding-left: \LWR@print\LWR@barspace} \%
13 \texttt{vertbar}}
14 \texttt{)}
15 \end{BlockClass}
16 }

\texttt{OlNvarwarpMvmarginNsty File 393} \texttt{lwr-vmargin.sty}

\texttt{§ 492 Package} \texttt{vmargin}

\texttt{Pkg vmargin} \texttt{vmargin is ignored.}

\texttt{Pkg vmargin} \texttt{for HTML output:}

1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]

2 \newcommand*{\LWRVM@customsize}[2]{}
3 \newcommand*{\setpapersize}[2][]{\ifstrequal{#2}{custom}{\LWRVM@customsize}{}{}
4 \newcommand*{\setmargins}{[8][8][4][4]}{[]}{
5 \newcommand*{\setmarginsrb}{[8][8]}{[]}{
6 \newcommand*{\setmargnohf}{[4][4]}{[
7 \newcommand*{\setmargnohrb}{[4][4]}{[}
File 394  lwarp-vowel.sty

§ 493   Package  vowel

(Emulates or patches code by FUKUI REL.)

Pkg  vowel  vowel is patched for use by lwarp.

This package has been tested with pdflatex and the Type 1 TIPA fonts using the following package load sequence:

\usepackage[T3,T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[noenc]{tipa}
\usepackage{vowel}

for HTML output:  1 \LWR@ProvidesPackagePass{vowel}[2002/08/08]

2 \renewenvironment{vowel}[1][]
3  {
4   \begin{lateximage}[(-vowel--\packagediagramname)]%
5     \@vowel[#1]%
6   }
7  \}
8  \end{lateximage}%
9 }
10 }

File 395  lwarp-vpe.sty

§ 494   Package  vpe

Pkg  vpe  vpe is ignored.

for HTML output:  1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]
lwarp

File 396  lwarp-vwcol.sty

§ 495  Package  vwcol

(Emulates or patches code by Will Robertson.)

Pkg  vwcol  vwcol is patched for use with lwarp.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depending on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

for HTML output:

Factored from \vwcol. Each is given a style tag to append to the final style.

\LWR@vwcol@addrule  \{(style tag)\}

\LWR@vwcol@addrule  \{(style tag)\}

Env  vwcol  \{(key/values)\}

Redefine the environment to add a HTML style. The style is built depending on the required options.

\renewenvironment*{vwcol}[1][]% New paragraph, and process the options:

\LWR@vwcol@addrule  \if@vwcol@presep

presep and postsep are created with HTML margins:
sep becomes column-gap:

24 \ifdimgreater{\vwcol@sep}{1sp}{
25 \vwcol@addgap{column-gap}
26 \vwcol@addgap{moz-column-gap}
27 \vwcol@addgap{webkit-column-gap}
28 }

rule become column-rule, while prerule and postrule become HTML borders:

29 \convertcolor{named}{\vwcol@rulecol}{HTML}{\vwcol@rulecolor}{%}
30 \ifdimgreater{\vwcol@rule}{0pt}{
31 \ifdimless{\vwcol@rule}{1pt}{
32 \setlength{\vwcol@rule}{1pt}
33 }
34 \vwcol@addrule{column-rule}
35 \vwcol@addrule{moz-column-rule}
36 \vwcol@addrule{webkit-column-rule}
37 \if\vwcol@prerule\vwcol@addrule{border-left}\fi
38 \if\vwcol@postrule\vwcol@addrule{border-right}\fi
39 }

Each of the justify options becomes a text-align. Indentation is added where appropriate.

40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
41 \appto{\vwcol@style}{text-align: left ; }
42 \ifdimgreater{\vwcol@parindent}{0pt}{
43 \appto{\vwcol@style}{text-indent: \printlength{\vwcol@parindent} ; %
44 }
45 }
46 }
47 }
48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
49 \appto{\vwcol@style}{text-align: right ; }
50 }
51 \ifdefequal{\vwcol@justify}{\Centering}{
52 \appto{\vwcol@style}{text-align: center ; }
53 }
54 \ifdefequal{\vwcol@justify}{\justifying}{
55 \appto{\vwcol@style}{text-align: justify ; }
56 \ifdimgreater{\vwcol@parindent}{0pt}{
57 \appto{\vwcol@style}{text-indent: \printlength{\vwcol@parindent} ; %
58 }
59 }
60 }
61 }

Create the <div> with the assembled style:

62 \BlockClass{\vwcol@style}{multicols}
When the environment ends:

```
}{
\endB/l.VarackC/l.Varass
```

---

File 397  **lwpaper**

§ 496  Package  **wallpaper**

(Emulates or patches code by Michael H.F. Wilkinson.)

Pkg  **wallpaper**  is emulated.

for HTML output:

1. \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]
2. \newcommand*{\CenterWallPaper}[2]{}
3. \newcommand*{\ThisCenterWallPaper}[2]{}
4. \newcommand*{\TileWallPaper}[3]{}
5. \newcommand*{\ThisTileWallPaper}[3]{}
6. \newcommand*{\TileSquareWallPaper}[2]{}
7. \newcommand*{\ThisTileSquareWallPaper}[2]{}
8. \newcommand*{\ULCornerWallPaper}[2]{}
9. \newcommand*{\ThisULCornerWallPaper}[2]{}
10. \newcommand*{\LLCornerWallPaper}[2]{}
11. \newcommand*{\ThisLLCornerWallPaper}[2]{}
12. \newcommand*{\URCornerWallPaper}[2]{}
13. \newcommand*{\ThisURCornerWallPaper}[2]{}
14. \newcommand*{\LRCornerWallPaper}[2]{}
15. \newcommand*{\ThisLRCornerWallPaper}[2]{}
16. \newcommand*{\ClearWallPaper}{}
17. \newlength{\wpXoffset}
18. \newlength{\wpYoffset}

---

File 398  **lwpaper**

§ 497  Package  **watermark**

(Emulates or patches code by Alexander I. Rozhenko.)

Pkg  **watermark**  is emulated.

for HTML output:

1. \LWR@ProvidesPackageDrop{watermark}[2004/12/09]
2. \newcommand{\watermark}[1]{}
3. \newcommand{\leftwatermark}[1]{}
4. \newcommand{\rightwatermark}[1]{}
5. \newcommand{\thiswatermark}[1]{}
6. \newcommand{\thisthpageheading}[1]{}
File 399  **lwrap-widows-and-orphans.sty**

§ 498  Package  **widows-and-orphans**

Pkg  widows-and-orphans

widows-and-orphans is ignored.

for HTML output:

1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]

2 \NewDocumentCommand\WaOsetup{m}{}
3 \NewDocumentCommand\WaOparameters{}{}
4 \NewDocumentCommand\WaOignorenext{}{}

File 400  **lwrap-wrapfig.sty**

§ 499  Package  **wrapfig**

(Emulates or patches code by Donald Arseneau.)

Pkg  wrapfig

wrapfig is emulated.

for HTML output:

1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]

2 \newcommand*{\LWR@wrapposition}{}
3 \newcommand*{\LWR@subwrapfigure}[2]{%
4 \renewcommand*{\LWR@wrapposition}{}%
5 \ifthenelse{\equal{(#1)}{r}OR\equal{(#1)}{R}OR%
6 \equal{(#1)}{o}OR\equal{(#1)}{O}%
7 )}%
8 \setlength{\LWR@templelengthone}{#2}%
9 \LWR@BlockClassWP{%
10 \width:\LWR@printlength{\LWR@templelengthone}; \LWR@wrapposition; %
11 margin:10pt%
12 }%
13 \)%
14 width:\LWR@printlength{\LWR@templelengthone}; \LWR@wrapposition%
15 \)%
16 \)%
17 \)%
18 \width:\LWR@printlength{\LWR@templelengthone}; \LWR@wrapposition%
19 \)%
20 \marginblock%
21 }
22
23 \NewDocumentEnvironment{wrapfigure}{o m o m}
24 (%
25 \LWR@subwrapfigure(#2)(#4)%
26 \captionsetup{type=figure}%
\NewDocumentEnvironment{wraptab}{o m o m}{\LWR@subwrapfigure{#2}{#4}}{\captionsetup{type=table}}
\NewDocumentEnvironment{wrapf}{m o m o m}{\LWR@subwrapfigure{#3}{#5}}{\captionsetup{type=#1}}
\newlength{\wrapoverhang}

File 401  \texttt{lwp-xbmks.sty}

\textbf{§ 500  Package \texttt{xbmks}}

\textbf{Pkg \texttt{xbmks}} \texttt{xbmks} is ignored.

\textbf{for HTML output:}

1 \LWR@ProvidesPackageDrop{xbmks}[2018/07/04]

2 \newcommand{\xbmksetup}{1}

3 \NewDocumentCommand{\pdfbookmarkx}{o o m}{0}

4 \NewDocumentCommand{\currentpdfbookmarkx}{m o m}{0}

5 \NewDocumentCommand{\subpdfbookmarkx}{m o m}{0}

6 \NewDocumentCommand{\belowpdfbookmarkx}{m o m}{0}

File 402  \texttt{lwp-xcolor.sty}

\textbf{§ 501  Package \texttt{xcolor}}

\textbf{(Emulates or patches code by Dr. Uwe Kern.)}

\textbf{Pkg \texttt{xcolor}} \texttt{xcolor} is supported by lwp.
§ 501.1 Limitations

\colorboxBlock and \fcolorboxBlock are provided for increased HTML compatibility, and they are identical to \colorbox and \fcolorbox in print mode. In HTML mode they place their contents into a <div> instead of a <span>. These <div>s are set to display: inline-block so adjacent \colorboxBlocks appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for \colorboxBlock and \fcolorboxBlock are created by lwarp’s core if xcolor is loaded.

background: none \fcolorbox and \fcolorboxBlock allow a background color of none, in which case only the frame is drawn, which can be useful for HTML.

color support Color definitions, models, and mixing are fully supported without any changes required.

colored tables \rowcolors is supported, except that the optional argument is ignored so far.

colored text and boxes \textcolor, \colorbox, and \fcolorbox are supported.

\color and \pagecolor \color and \pagecolor are ignored. Use css or \textcolor where possible.

§ 501.2 xcolor definitions: location and timing

The lwarp core and its lwarp-xcolor package are tightly integrated to allow comparable results for print, HTML, and print inside an HTML lateximage. This requires a number of definitions and redefinitions depending on whether each of xcolor and lateximage is being used, and whether print or HTML is being generated. Some of these actions are one-time when xcolor is loaded, and others are temporary as lateximage is used.

When xcolor is loaded in print mode: No special actions are taken at the time that xcolor is loaded in print mode, but see \AtBeginDocument below.

When lwarp-xcolor is loaded in HTML mode: xcolor’s original definitions are saved for later restoration. \LWR@restoreorigformatting is appended to restore these definitions for use inside a lateximage. New HTML-mode definitions are created for \textcolor, \pagecolor, \nopagecolor, \colorbox, \colorboxBlock, \fcolorbox, \fcolorboxBlock, and \fcolorminipage.

\AtBeginDocument in print or HTML mode: See Section 86. If xcolor has been loaded, the print-mode \fcolorbox is modified to accept a background color of none, and additional definitions are created for lwarp’s new macros print-mode macros \colorboxBlock, \fcolorboxBlock, and \fcolorminipage. The HTML versions of these macros will already have been created by lwarp-xcolor if it has been loaded.

For use inside an HTML lateximage, \LWR@restoreorigformatting is appended to temporarily set these functions to their print-mode versions.

In a lateximage in HTML mode: \LWR@restoreorigformatting temporarily restores the print-mode definitions of xcolor’s functions. See \LWR@restoreorigformatting on page 493.

\color:
\textcolor{\textvar{lateximage}}: Colors will appear in a lateximage.

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Used as-is.
  \item HTML: Ignored by pdftotext, and will not appear.
  \item HTML lateximage: Colors will appear in a lateximage.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Used as-is.
  \item HTML: Redefined by lwp-xcolor, page 965.
  \item HTML lateximage: Remembers and reuses the print version.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Used as-is.
  \item HTML: Ignored.
  \item HTML lateximage: Colors will be picked up in a lateximage.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Used as-is.
  \item HTML: Ignored.
  \item HTML lateximage: Colors will be picked up in a lateximage.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Used as-is.
  \item HTML: Redefined by lwp-xcolor, page 965.
  \item HTML lateximage: Remembers and reuses the print version.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Becomes \textcolor{\textvar{lateximage}}.
  \item HTML: Newly defined by lwp-xcolor to use a \textvar{div}, page 966.
  \item HTML lateximage: Remembers and reuses the print version \textcolor{\textvar{lateximage}}.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Modified to allow a background of none.
  \item HTML: Redefined by lwp-xcolor, page 966.
  \item HTML lateximage: Remembers and reuses the print version \textcolor{\textvar{lateximage}}.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Becomes \textcolor{\textvar{lateximage}}. Section 86
  \item HTML: Newly defined by lwp-xcolor to use a \textvar{div}, page 967.
  \item HTML lateximage: Remembers and reuses the print version \textcolor{\textvar{lateximage}}.
\end{itemize}

\textcolor{\textvar{lateximage}}:
\begin{itemize}
  \item Print: Newly defined in the lwp core.
  \item HTML: \textvar{lateximage} at section 86
\end{itemize}
HTML: Newly defined by lwarp-xcolor, page 968.

HTML lateximage: Uses the print version.

\boxframe:

Print: Used as-is.

HTML: Redefined by lwarp-xcolor, page 969.

HTML lateximage: Remembers and reuses the print version.

§ 501.3 Package loading

for HTML output:

1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]

2 \begin{warpHTML}

§ 501.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a lateximage environment:

3 \begin{warpHTML}

4 \begin{warpHTML}

\LWR@restoreorigformatting

Inside a lateximage the following gets restored to their print-mode actions:

5 \begin{warpHTML}

6 \begin{warpHTML}

\LWR@restoreorigformatting

§ 501.5 HTML color style

\LWR@findcurrenttextcolor Sets \LWR@tempcolor to the current color.

9 \begin{warpHTML}

10 \begin{warpHTML}

11 \begin{warpHTML}

\LWR@findcurrenttextcolorstyle

Prints a color style for the current color.

13 \begin{warpHTML}

14 \begin{warpHTML}

\LWR@findcurrenttextcolorstyle

\LWR@textcurrentcolor \langle text \rangle Like \textcolor but uses the current \color instead.

19 \begin{warpHTML}

20 \end{warpHTML}
\LWR@colorstyle \{(2: model) \{3: color}\} For a color style, prints the color converted to HTML colors.

\LWR@bgcolor \{(model) \{(color)\} \{(text)\} Similar to \textcolor, but prints black text against a color background.

\LWR@border \{(colorstyle) \{(color)\} \{(text)\} Prints the HTML attributes for a black border and padding. \LWR@forceminwidth must be used first in order to set the border width.
§ 501.7  **High-level macros**

\textcolor \[⟨model⟩\] {⟨color⟩} {⟨text⟩}

Converted into an HTML hex color span.

\NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
\begingroup%
Set the PDF color, to be picked up by svg math if possible.
The print-mode \color command cannot accept the named option with color mixing,
but it works with no option at all.
%\IfValueTF{#1}{%
\color[#1]{#2}%
\}%
\color{#2}%
\LWR@FBcancel%
}\IfValueTF{#1}{%
\InlineClass[color:\LWR@colorstyle[#1][#2]][textcolor]%
\renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
\LWR@colorstyle[#3]{%}
\InlineClass[color:\LWR@colorstyle[named][#2]][textcolor]{%}
\renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
\LWR@colorstyle[#3]{%}
\endgroup%
%
\LWR@formatted{textcolor}

\pagecolor \[⟨model⟩\] {⟨color⟩}

Ignored. Use css instead.

\renewcommand*{\pagecolor}[2][named]{}

\nopagecolor Ignored.

\renewcommand*{\nopagecolor}{}

\colorbox \[⟨model⟩\] {⟨color⟩} {⟨text⟩}

Converted into an HTML hex background color <span>.
Converted into an HTML hex background color <div>.

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.
\fcolorboxBlock \{⟨framemodel⟩\} \{⟨framecolor⟩\} \{⟨boxmodel⟩\} \{⟨boxcolor⟩\} \{⟨text⟩\}

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.
Prevent paragraph tags around horizontal white space until the start of the next paragraph:

\global\booltrue{\LWR@minipagethispar}
\LWR@traceinfo{HTML \fcolorboxBlock done}

\AtBeginDocument{
\LWR@formatted{\fcolorboxBlock}
}

Creates a framed HTML `<div>` around its contents.

A print-output version is defined in the \texttt{lwarf} core: section 86

```
\LWR@subfcolorminipage

\NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{
  \LWR@stoppars%
  \begin{B\LWR@ass}
    \LWR@borderpadding{#1}{#2} ;
    \IfValueT{#4}{height:\LWR@print\LWR@length{\LWR@tempheight} ;}
    \width:\LWR@print\LWR@length{\LWR@tempwidth} ;
  \}{fcolorminipage}
}
```

```
\NewDocumentEnvironment{\LWR@HTML@fcolorminipage}{O{named} m O{named} m O{c} o o m}{%
  \LWR@FBcancel%
  \setlength{\LWR@tempwidth}{#8}%
  \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}%}
  \LWR@forceminwidth{\fboxrule}%
  \convertcolorspec(#1)(#2)(HTML)\LWR@tempcolor%
  \ifthenelse{\equal{#4}{none}}%
  {\LWR@subfcolorminipage(#1)(#2)(#6)%}
  {%
    \convertcolorspec(#3)(#4)(HTML)\LWR@tempcolorortwo%
    \LWR@subfcolorminipage(#1)(#2)%
  }
  }
  }
```

```
\LWR@subfcolorminipage{framemodel}{framecolor}{background tag}{height}

\NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%
  \LWR@stoppars%
  \begin{B\LWR@ass}
    \LWR@borderpadding{#1}{#2} ;
    \IfValueT{#4}{height:\LWR@print\LWR@length{\LWR@tempheight} ;}
    \width:\LWR@print\LWR@length{\LWR@tempwidth} ;
  \}{fcolorminipage}
}
```

A print-output version is defined in the \texttt{lwarf} core: section 86

```
\NewDocumentEnvironment{\LWR@HTML@fcolorminipage}{O{named} m O{named} m O{c} o o m}{%
  \LWR@FBcancel%
  \setlength{\LWR@tempwidth}{#8}%
  \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}%}
  \LWR@forceminwidth{\fboxrule}%
  \convertcolorspec(#1)(#2)(HTML)\LWR@tempcolor%
  \ifthenelse{\equal{#4}{none}}%
  {\LWR@subfcolorminipage(#1)(#2)(#6)%}
  {%
    \convertcolorspec(#3)(#4)(HTML)\LWR@tempcolorortwo%
    \LWR@subfcolorminipage(#1)(#2)%
  }
  }
  }
```

```
\NewDocumentEnvironment{\LWR@HTML@fcolorminipage}{O{named} m O{named} m O{c} o o m}{%
  \LWR@FBcancel%
  \setlength{\LWR@tempwidth}{#8}%
  \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}%}
  \LWR@forceminwidth{\fboxrule}%
  \convertcolorspec(#1)(#2)(HTML)\LWR@tempcolor%
  \ifthenelse{\equal{#4}{none}}%
  {\LWR@subfcolorminipage(#1)(#2)(#6)%}
  {%
    \convertcolorspec(#3)(#4)(HTML)\LWR@tempcolorortwo%
    \LWR@subfcolorminipage(#1)(#2)%
  }
  }
  }
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:
\begin{Verbatim}
\global\booleantrue{LWR@minipagethispar}
\end{Verbatim}

\AtBeginDocument{
\LWR@formattedenv{fcolorminipage}
}

\verb|	extco| or \verb|	extcolor| is honored.

\newcommand{\LWR@HTML@boxframe}[3]{
\setlength{\LWR@tempwidth}{#1}
\setlength{\LWR@tempheight}{#2}
\addtolength{\LWR@tempheight}{#3}
\LWR@forceminwidth{\fboxru}
\In\InineC\Inass[\disparray:
\border:\LWR@printlength{\LWR@atleastonept} so \LWR@currenttextcolor{} ; 
\width:\LWR@printlength{\LWR@tempwidth} ;
\height:\LWR@printlength{\LWR@tempheight}]
\}{boxframe}{}
\}

\LWR@formatted{boxframe}

\section{Row colors}

\rowc@rs

\newcommand{\LWR@xcolor@tempcolor}{()}
\def\rowc@rs[#1]#2#3#4{
\global\rownum=1
\global\rowcolorstrue
\@ifempty{#3}{\def\@oddrowcolor{\@norowcolor}}{
\convertcolors{named}{#3}{\HTML}{\LWR@xcolor@tempcolor}
\edef\@oddrowcolor{\csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolor@tempcolor}}
}
\@ifempty{#4}{\def\@evenrowcolor{\@norowcolor}}{
\convertcolors{named}{#4}{\HTML}{\LWR@xcolor@tempcolor}
\edef\@evenrowcolor{\csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolor@tempcolor}}
}
%}
% \if@rowcmd
% \def\@rowcolors
% (%
% #1%
% \if\@rowcolors
% \noalign(%
% \relax ifnum\rownum<#2@norowcolor\else
% \ifodd\rownum@oddrowcolor@evenrowcolor\fi\fi%
% )%
% \fi%
% }%
% \else
% \def\@rowcolors
% (%
% \if\@rowcolors
% \ifnum\rownum<#2%
% \noalign(%
% \g@boa\row@advance\rownum\@ne%
% }%
% \@rowcolors%
% )%
% \else
% #1%
% \noalign(%
% \ifodd\rownum@oddrowcolor@evenrowcolor\fi%
% )%
% \fi%
% )%
% \fi
% %)
% \end{warpHTML}

\@norowcolor \hspace{-1cm} Turns off color for this row.
\def\@norowcolor(
% \renewcommand{\LWR@xcolorrowHTMLcolor}while{)%

\@rowcolors \hspace{-1cm} Executed at the end of each row.
\def\@rowcolors(%
% \noalign(%
% \global\advance\rownum@ne%
% )%
% \@rowcolors%
% )%
\end{warpHTML}
§ 502 Package \texttt{xchangebar}
\begin{minipage}{.95\textwidth}
\texttt{xchangebar} is ignored.
\end{minipage}

\textbf{for HTML output:}
\begin{minipage}{.95\textwidth}
\verbatiminput{\LWR@origRequirePackage{l.Varwarp-changebar}}\end{minipage}

\section*{File 404 \texttt{lwp-xellipsis.sty}}

§ 503 Package \texttt{xellipsis}
\begin{minipage}{.95\textwidth}
(\textit{Emulates or patches code by Donald P. Goodman III})
\end{minipage}

\texttt{xellipsis} is patched for use by \texttt{lwp}.

When non-zero, each of the spaces is converted to an HTML thin unbreakable space.

\textbf{for HTML output:}
\begin{minipage}{.95\textwidth}
\verbatiminput{\LWR@ProvidesPackagePass{xellipsis}[2015/11/01]}\end{minipage}
lwarp

29) %
30) %

---

File 405 lwarp-xetexko-vertical.sty

§ 504 Package xetexko-vertical

(emulates or patches code by DoHyun Kim.)

Pkg xetexko-vertical xetexko-vertical is patched for use by lwarp.

for HTML output:
1 \LWR@loadBefore{xetexko-vertical}
2 \LWR@ProvidesPackagePass{xetexko-vertical}[2018/04/06]

4 \renewcommand{verticaltypesetting}{}
5 \renewenvironment{vertical}[1]{\BlockClass{verticalr1}}{\endBlockClass}
6 \renewenvironment{horizontal}[1]{\BlockClass{horizontaltb}}{\endBlockClass}
7 \renewcommand{\vertlatin}[1]{#1}

---

File 406 lwarp-xfakebold.sty

§ 505 Package xfakebold

(emulates or patches code by Herbert Voss.)

Pkg xfakebold xfakebold is patched for use by lwarp, and additional underlying support is found in the lwarp core.

⚠️ page breaks Note that the print version resets to unbold at each page break, whereas the HTML version maintains the bold state until it is undone.

for HTML output:
1 \LWR@ProvidesPackagePass{xfakebold}[2018/07/25]
2 \let\LWR@orig@setBold\setBold
3 \let\LWR@orig@unsetBold\unsetBold
4 \renewcommand*{\setBold}{\booltrue{LWR@xfakebold}}
5 \renewcommand*{\unsetBold}{\boolequal{LWR@xfakebold}}
6 \renewcommand*{\applyxfakebold}{% 
7 \ifbool{LWR@xfakebold}{\LWR@orig@setBold}{\LWR@orig@unsetBold}%
8 )

---

File 407 lwarp-xfrac.sty

§ 506 Package xfrac

(emulates or patches code by The \L\TeX\3 Project.)
Supported by adding \texttt{xfrac} instances.

\begin{warpa/l.Var/l.Var}
\newcommand*{\xfracHTMLfontsize}{.6em}
\end{warpa/l.Var/l.Var}

\begin{warpHTML}
Instances of \texttt{xfrac} for various font choices:

Produce css for a small raised numerator and a small denominator.

Scaling is turned off so that \texttt{pdftotext} correctly reads the result.

For \texttt{pdftotext}, do not scale the text:
\DeclareInstance{xfrac}{l}{mr}{text}{
numererator-format = {%
  \begingroup
  \RenewDocumentCommand{\scalebox}{m o m}{#3}%
  \InlineClass{numerator}{#1}\% 
  \endgroup
},
denominator-format = {%
  \begingroup
  \RenewDocumentCommand{\scalebox}{m o m}{#3}%
  \InlineClass{denominator}{#1}\%
  \endgroup
},
}

For \texttt{pdftotex}, do not scale the text:

\DeclareInstance{xfrac}{l}{mss}{text}{
numererator-format = {%
  \begingroup
  \RenewDocumentCommand{\scalebox}{m o m}{#3}%
  \InlineClass{numerator}{#1}\%
  \endgroup
},
denominator-format = {%
  \begingroup
  \RenewDocumentCommand{\scalebox}{m o m}{#3}%
  \InlineClass{denominator}{#1}\%
  \endgroup
},
}

For \texttt{pdftotex}, do not scale the text:

\DeclareInstance{xfrac}{l}{mtt}{text}{
numererator-format = {%
  \begingroup
  \RenewDocumentCommand{\scalebox}{m o m}{#3}%
  \InlineClass{numerator}{#1}\%
  \endgroup
},
denominator-format = {%
  \begingroup
  \RenewDocumentCommand{\scalebox}{m o m}{#3}%
  \InlineClass{denominator}{#1}\%
  \endgroup
},
}
For `pdftotext`, do not scale the text:

```latex
  \begin{warpHTML}

  \end{warpHTML}
```

---

**File 408**  
**lwp-xltabular.sty**

### § 507 Package  
**xltabular**

*(Emulates or patches code by Rolf Nieprasch, Herbert Voss.)*

**Pkg**  
**xltabular**  
xltabular is emulated by lwp.

**for HTML output:**

At present, an xltabular without a caption or with only a `\caption*` may be misnumbered in HTML, so it may be necessary to place at the end of the table:

```
  \warpHTMLonly{\addtocounter{table}{-1}}
```

---

**File 409**  
**lwp-xltxtra.sty**

### § 508 Package  
**xltxtra**

*(Emulates or patches code by Will Robertson, Jonathan Kew.)*

**Pkg**  
**xltxtra**  
xltxtra is emulated.

**for HTML output:**

```
  \LWR@ProvidesPackageDrop{xltxtra}[2016/01/21]
```
\newcommand\namedglyph[1]{%
   \@tempcnta=\XeTeXglyphindex "#1"\relax
   \ifnum\@tempcnta>0
      \XeTeXglyph\@tempcnta
   \else
      \xxt@namedglyph@fallback[#1]
   \fi}
\newcommand\xxt@namedglyph@fallback[1]{[#1]}
\DecimenaryDocumentCommand{\showhyphens}{m}{}

File 410  \texttt{lwp-xmpincl.sty}

\section{Package \texttt{xmpincl}}

\textit{(Emulates or patches code by Maarten Smeets.)}

\texttt{Pkg xmpincl  Emulated.}

\texttt{for HTML output:}  Discard all options for \texttt{lwp-xmpincl}:  

1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10]
2 \newcommand*{\includelem}[1]{}

File 411  \texttt{lwp-xpiano.sty}

\section{Package \texttt{xpiano}}

\textit{(Emulates or patches code by Enrico Gregorio.)}

\texttt{Pkg xpiano  xpiano is patched for use by lwp.}

\texttt{for HTML output:}  

1 \LWR@ProvidesPackagePass{xpiano}
2 \ExpSyntaxOn
3 \NewDocumentCommand{\LWR@print@keyboard}{ O{}m }{\xpiano_keyboard:nn { #1 } { #2 } }
4 {\expandafter{\detokenize{\expandafter{#1}{#2}}}\xpiano_keyboard:nn}
5 \NewDocumentCommand{\LWR@HTML@keyboard}{ O{}m }{\begin{lateximage}*
6 \detokenize{\expandafter{#1}}\xpiano_keyboard:nn}
7 \end{lateximage}
\expandafter\ExplSyntaxOff
\LWR@formatted{keyboard}

---

File 412 \texttt{lwp-xpinyin.sty}

§ 511 Package \texttt{xpinyin}

\emph{(Emulates or patches code by Soben Lee.)}

\texttt{xpinyin} is partly supported. \texttt{\xpinyin} and \texttt{pinyin\_scope} are nullified, but \texttt{\pinyin} works.

\textbf{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackagePass{xpinyin}[2018/01/28]
2 \RenewDocumentEnvironment{pinyin\_scope}{O{}}{}{}%
3 \RenewDocumentCommand{\xpinyin}{s O{}}{m}{%}
4 \IfBooleanTF{#1}{#3}{\@firstoftwo#3}%
5 \LWR@formatted{keyboard}
6 \RenewDocumentCommand{\enablepinyin}{%}

\end{verbatim}

---

File 413 \texttt{lwp-xtab.sty}

§ 512 Package \texttt{xtab}

\emph{(Emulates or patches code by Peter Wilson.)}

\texttt{xtab} is emulated.

\textbf{for HTML output:}

\begin{verbatim}
1 \LWR@ProvidesPackageDrop{xtab}[2011/07/31]

\end{verbatim}

\begin{itemize}
  \item \textbf{Misplaced alignment tab character &}
  \texttt{\long\gdef\LWRXT@firsthead{}}
  \begin{verbatim}
  \long\gdef\LWRXT@firsthead{}}
  \end{verbatim}

\end{itemize}

\begin{itemize}
  \item \textbf{lateximage}
  \texttt{\texttt{\long\gdef\LWRXT@firsthead{}}}
  \begin{verbatim}
  \end{verbatim}

\end{itemize}

\textbf{for HTML output:}

\begin{verbatim}
2 \newcommand{\LWRXT@firsthead}{%}
3 \newcommand{\tablefirsthead}[1]{%}
4 \newcommand{\tablefirsthead}[1]{%}
5 \long\gdef\LWRXT@firsthead{#1}%
6 \LWR@formatted{keyboard}
7
\end{verbatim}
\newcommand{\tablehead}[1]{\ }
\newcommand{\tablelasthead}[1]{\ }
\newcommand{\notablelasthead}{\ }
\newcommand{\tabletail}[1]{\ }
\newcommand{\LWRXT@lasttail}{\ }
\newcommand{\tablelasttail}[1]{%\
   \long\gdef\LWRXT@lasttail{#1}%
}
\newcommand{\Varehead}{\ }
\newcommand{\Vare/l.Varasthead}[1]{\ }
\newcommand{\Varecaption}{\ }
\newcommand{\Varecaption}[2][\ ]{\%
   \long\gdef\LWRXT@caption{\ifblank{#1}{\caption{#2}}{\caption{#1}(#2)}%\}
}
\newcommand{\Varetai}{\ }
\newcommand{\Vare/l.Varasttai/l.Var}{\ }
\newcommand{\LWRXT@caption}{\}
\newcommand{\Varet}{\topcaption}
\newcommand{\Varetcaption}{\ }
\newcommand{\Varetbottomcaption}{\bottomcaption}
\newcommand{\Varecaption}{\ }
\newcommand{\Varecaption}{\ }
\newcommand{\shrinkheight}[1]{\}
\newcommand{\xentrystretch}[1]{\}
\NewDocumentEnvironment{xtabu}{s o m}{%\}
   \LWR@traceinfo{xtabu}\}
   \begin{xtabu}{#3}\%
   {\bf\expandafter\LWR@getmynexttoken\LWRXT@firsthead}\%
   {\bf\expandafter\LWR@getmynexttoken\LWRXT@caption\%
   \end{xtabu}\%
   \gdef\LWRXT@caption{\}
\newcommand{\LWRXT@caption}{\}
\newcommand*{\shrinkheight}[1]{\}
\newcommand*{\xentrystretch}[1]{\}
\NewDocumentEnvironment{xtabu}{s o m}{%\}
   \LWR@traceinfo{xtabular}\%
   \begin{xtabular}{#3}\%
   {\bf\expandafter\LWR@getmynexttoken\LWRXT@firsthead}\%
   {\bf\expandafter\LWR@getmynexttoken\LWRXT@caption\%
   \end{xtabular}\%
   \gdef\LWRXT@caption{\}
lwarp

File 414 lwarp-xunicode.sty

§ 513 Package xunicode

Pkgs: xunicode Error if xunicode is loaded after lwarp.

Patch lwarp-xunicode, but also verify that it was loaded before lwarp:

for HTML output:
1 \LWR@loadbefore(xunicode)\%
2 \LWR@ProvidesPackagePass{xunicode}[2011/09/09]

\textcircled becomes a span with a rounded border. \providecommand is used to avoid conflict with textcomp.

4 \providecommand*{\LWR@HTML@textcircled}[1][]{%
5 \InlineClass{border: 1px solid \LWR@currenttextcolor}{textcircled}{#1}%
6 }%
7
8 \LWR@formatted{textcircled}

Nullify xunicode macros when generating filenames:

9 \FilenameNullify(%
10 \renewcommand*{\textdegree}{%}
11 \renewcommand*{\textcelsius}{%}
12 \renewcommand*{\textohm}{%}
13 \renewcommand*{\textmu}{%}
14 \renewcommand*{\textdegree}{%}
15 \renewcommand*{\textcent}{%}
16 \renewcommand*{\textcircled}{%}
17 \renewcommand*{\texttwelveu{dash}}{%}
18 \renewcommand*{\textthreequartersemdash}{%}
19 \renewcommand*{\textohm}{%}
20 \renewcommand*{\textnaira}{%}
21 \renewcommand*{\textp{eso}}{%}
22 \renewcommand*{\textrecipe}{%}
23 \renewcommand*{\textinterrobang}{%}
24 \renewcommand*{\textinterro{bangdown}}{%}
25 \renewcommand*{\textperthousand}{%}
26 \renewcommand*{\textpertenthousand}{%}
27 \renewcommand*{\textbaht}{%}
28 \renewcommand*{\textdiscount}{%}
29 \renewcommand*{\textservicemark}{%}
30 \renewcommand*{\textcircled}{1}[1][1]
§ 515 Package \texttt{xy}

\begin{quote}
(\textit{Emulates or patches code by Kristoffer H. Rose, Ross Moore.})
\end{quote}

\begin{itemize}
\item \texttt{xypolygon} \texttt{xypolygon} must be used inside the \texttt{xy} environment, or inside \texttt{\begin{xy} ... \end{xy}}.
\end{itemize}

\texttt{\textbackslash AtBeginDocument{\textbackslash LetLtxMacro{\textbackslash LWR@origxymatrix}{\textbackslash xymatrix}}}\% 
\texttt{\textbackslash xypolygon} is patched for use by \texttt{lwparp}.

\texttt{\textbackslash LWR@ProvidesPackagePass{xy}[2013/10/06]}

\begin{verbatim}
2 \AtBeginDocument{
3 4 \preto{\xy}{\begin{lateximage}[-xy--\packagediagramname]}\% 
5 \appto{\endxy}{\end{lateximage}}
6 7 \ifundefined{\xymatrix}{\% 
8 \LetLtxMacro{\LWR@origxymatrix}{\xymatrix}
9 10 \renewcommand{\xymatrix}[1]{% 
11 \begin{lateximage}[-xy- \xymatrix \packagediagramname][\% 
12 \LWR@origxymatrix(#1)
13 \end{lateximage}
14 }$
15 $}
16 \end{verbatim}

\texttt{\textbackslash LWR@ProvidesPackageDrop{\texttt{xurl}}[2018/06/02]}

\texttt{\textbackslash File 415 \texttt{lwparp-xurl.sty}}

\texttt{\textbackslash File 416 \texttt{lwparp-xy.sty}}

\texttt{xurl} is ignored.

\texttt{\textbackslash LWR@ProvidesPackageDrop{xurl}[2018/06/02]}

\texttt{\textbackslash File 415 \texttt{lwparp-xurl.sty}}
\@ifundefined{xygraph}{}{\LetLtxMacro{\LWR@origxygraph}{\xygraph}}\begin{lateximage}[\begin{xygraph}{}{\Packagediagramname}\end{lateximage}}\LWR@origxygraph{#1}\end{lateximage}}\let\SetMathEnvironmentSing{l.Varespace}\let\RestoreMathEnvironmentLeading\let\SetTextEnvironmentSing{l.Varespace}\let\RestoreTextEnvironmentLeading\@on{l.Varypreamb\l.Vare\noBboxes}\expandafter\ifx\csname definecolor\endcsname\re\l.Varse\definecolor{cmykred}{cmyk}{0,1,0,1}\definecolor{cmykgreen}{cmyk}{1,0,1,0}\definecolor{cmykblue}{cmyk}{1,1,0,0}\definecolor{rgbred}{rgb}{1,0,0}\definecolor{rgbgreen}{rgb}{0,1,0}
\definecolor{rgbb}{rgb}{0,0,1}
\ifxwpl@redefinetocmyk
\definecolor{red}{cmyk}{0,1,1,0}
\definecolor{green}{cmyk}{1,0,1,0}
\definecolor{blue}{cmyk}{1,1,0,0}
\fi
\fi

\let\OverprintXeTeXExtGState=relax
\DeclareRobustCommand\SetOverprint[1]{{\SetOverprint#1}}
\DeclareRobustCommand\textoverprint[1]{{\textoverprint[1]{{\SetOverprint#1}}}}
\DeclareRobustCommand\SetKnockout[1]{{\SetKnockout#1}}
\DeclareRobustCommand\textknockout[1]{{\textknockout[1]{{\SetKnockout#1}}}}
\def\SetPDFminorversion#1{}
\@on\newcommand\Vcorr{}
\newcommand\vb[1]{}[]{}
\NewDocumentCommand{\New OddPage}{o}{}
\NewDocumentCommand{\New EvenPage}{o}{}
\def\SetOddPageMessage#1#2#3\ZW@oddwarning\ZW@evenwarning\let\ZW@oddwarning\ZW@evenwarning
\def\c#1{#1}
\def\CropF#1{2in}
\def\CropSpine{1in}
\def\CropXSpine{1in}
\def\CropXtrim{.25in}
\def\CropYtrim{.25in}
\def\UserWidth{5in}
\def\UserLeftMargin{1in}
\def\UserRightMargin{1in}
\def\UserTopMargin{1in}
\def\UserBotMargin{1in}
\def\thePageNumber{\LWR@origpound\arabic{page}}
\ifXeTeX\def\ifcaseZWdriver{\ifcase2}
\else\fi\ZWifdriver[2]{}\fi

File 419 lwp-patch-komascript.sty

§ 518 Package patch-komascript

Pkg lwp-patch-komascript  Patches for komascript classes.
lwarp loads this package when \texttt{scrbook}, \texttt{scrartcl}, or \texttt{scrreprt} classes are detected.

Many features are ignored during the \texttt{html} conversion. The goal is source-level compatibility.

\texttt{\titlehead}, \texttt{\subject}, \texttt{\captionformat}, \texttt{\figureformat}, and \texttt{\tableformat} are not yet emulated.

⚠️ Not fully tested! Please send bug reports!

Some features have not yet been tested. Please contact the author with any bug reports.

\texttt{for HTML output:}  

\begin{verbatim}
1 \ProvidesPackage{lwarp-patch-komascript}

lwarp
\end{verbatim}

typearea is emulated.

\begin{verbatim}
2 \RequirePackage{lwarp-typearea}
\end{verbatim}

tocbasic is emulated.

\begin{verbatim}
3 \RequirePackage{lwarp-tocbasic}
\end{verbatim}

\texttt{scrextend} patches most of the new macros.

\begin{verbatim}
4 \RequirePackage{lwarp-scrextend}
\end{verbatim}

Indexing macros, simplified for \texttt{lwarp}:

\begin{verbatim}
5 \AtBeginDocument{
6 \renewcommand*{\idx@heading}{% 
7 \idx@@heading{\indexname}% 
8 ) 
9 }
10 \renewenvironment{theindex}{% 
11 \idx@heading\
12 \index@preamble\par
13 \index@preamble\par
14 \let\item\LWR@indexitem%
15 \let\subitem\LWR@indexsubitem%
16 \let\subsubitem\LWR@indexsubsubitem%
17 } 
18 {} 
19 \renewcommand*{\indexspace{}} 
20 }% \AtBeginDocument

The \texttt{\minisec} is placed inside a \texttt{<div>} of class \texttt{minisec}.

\begin{verbatim}
21 \renewcommand*{\minisec}[1]{
22 \begin{BlockClass}[minisec]
23 #1
24 \end{BlockClass}
25 }% \AtBeginDocument
\end{verbatim}
The part and chapter preambles are placed as plain text just after each heading.

\ifundef{setpartpreamb}{\}{
\ RenewDocumentCommand{\setpartpreamb}{o o +m}{
\ renewcommand{\part@preamb}{#3}\}
\}
\}@undef{setchapterpreamb}{\}{
\ RenewDocumentCommand{\setchapterpreamb}{o o +m}{
\ renewcommand{\chapter@preamb}{#3}\}
\}

Simple captions are used in all cases.

\ LetLtxMacro{\captionbelow}{\caption}
\ LetLtxMacro{\captionabove}{\caption}
\ LetLtxMacro{\captionofbelow}{\captionof}
\ LetLtxMacro{\captionofabove}{\captionof}
\ RenewDocumentEnvironment{\captionbeside}{o m o o s}
\% \% \%
\ IfValueTF{#1}{\caption{#2}}{\caption{#2}}
\% \%
\ RenewDocumentEnvironment{\captionofbeside}{m o m o o s}
\% \%
\ IfValueTF{#2}{\captionof{#1}{#2}}{\captionof{#1}{#2}}
\% \%
\ RenewDocumentCommand{\setcapindent}{s m}{}
\ renewcommand*{\setcaphanging}{}
\ renewcommand*{\setcapwidth}{#2}{#2}{#2}
\ renewcommand*{\setcapdynwidth}{#2}{#2}{#2}
\ renewDocumentCommand{\setcapmargin}{s o m}{}}
lwarp loads this package when the \texttt{memoir} class is detected.

While emulating \texttt{memoir}, lwarp pre-loads a number of packages (section 519.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading lwarp:

\begin{verbatim}
\documentclass[\texttt{memoir}]
  \PassOptionsToPackage{options_list}{package\_name}
  \usepackage{\texttt{l\_warp}}
  \usepackage{package\_name}
\end{verbatim}

\section*{Version Numbers}

\texttt{memoir} emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since lwarp is intended to support the freestanding packages, which are often newer than the date declared by \texttt{memoir}, it is hoped that \texttt{memoir} will update and change its emulated version numbers to match.

\verbfootnote{is not supported.}
\newfootnoteseries, etc. are not supported.

\texttt{lwarp} loads \texttt{pagenote} to perform \texttt{memoir}'s \texttt{pagenote} functions, but there are minor differences in \texttt{pagenotesubhead} and related macros.

Poem numbering is not supported.

The \texttt{verbatim} environment does not yet support the \texttt{memoir} enhancements. It is currently recommended to load and use \texttt{fancyvrb} instead.

The \texttt{memoir} glossary system is not yet supported by \texttt{lwarp}. The \texttt{glossaries} package may be used instead, but does require the glossary entries be changed from the \texttt{memoir} syntax to the \texttt{glossaries} syntax.

\begin{verbatim}
\texttt{for HTML output:}  \\
1 \ProvidesPackage{lwarp\_patch\_memoir}
\end{verbatim}

\section*{§ 519.1 Packages}

These are pre-loaded to provide emulation for many of \texttt{memoir}'s functions. \texttt{memoir} pretends that \texttt{abstract}, etc. are already loaded, via its "emulated" package mechanism, but lwarp is directly loading the "\texttt{l\_warp}-" version of each, which happens to avoid \texttt{memoir}'s emulation system.

\begin{verbatim}
2 \RequirePackage{lwarp\_abstract}\% req'd
3 \RequirePackage{lwarp\_array}\% req'd
4 \RequirePackage{lwarp\_booktabs}\% req'd
5 \% \RequirePackage{lwarp\_ccaption}\% emulated below
6 \RequirePackage{lwarp\_changepage}\% req'd
7 \RequirePackage{lwarp\_crop}
8 \RequirePackage{lwarp\_dcolumn}\% req'd
9 \RequirePackage{lwarp\_enumerate}\% req'd
10 \RequirePackage{lwarp\_epigraph}\% req'd
11 \RequirePackage{lwarp\_fancyvrb}\% req'd
\end{verbatim}
\RequirePackage{lwp-footmisc}% req'd
\RequirePackage{lwp-framed}% req'd
\RequirePackage{lwp-hanging}% req'd
\RequirePackage{lwp-makeidx}% req'd
\Disemu/l.VaratePackage{moreverb}
\RequirePackage{l.Varwarp-moreverb}
\RequirePackage{l.Varwarp-mparhack}
\RequirePackage{l.Varwarp-needspace}% req'd
\RequirePackage{l.Varwarp-nextpage}% req'd
\RequirePackage{l.Varwarp-pagenote}% req'd
\RequirePackage{l.Varwarp-parskip}
\RequirePackage{l.Varwarp-setspace}% req'd
\RequirePackage{l.Varwarp-showidx}
\require{l.Varwarp-subfigure}% req'd
\makeindex

\let\LWR@memorignewsubfigure\newsubfigure
\RenewDocumentCommand{\newsubfigure}{O{} m}{%}
\ifundefined{c@sub#2}{%}
\LWR@memorignewsubfigure[#1]{#2}%
\else{%}
}
\fi

\RequirePackage{l.Varwarp-tabularx}% req'd
\RequirePackage{l.Varwarp-tiling}% req'd
% \RequirePackage{lwp-tocbibind}% not emulated by memoir
\RequirePackage{lwp-tocloft}% req'd
\RequirePackage{lwp-verse}% req'd

\section{Preliminary setup}

Bypass the memoir package mechanism:

\let\LWR@orig@\@mem@o\@mem@rd\@mem
\let\LWR@orig@\@mem@old\@mem

memoir already set the page size to a default, so it must be forced large for lwarp's use, to avoid tag overflows off the page.

\setstocksize{190in}{20in}
\setlrmarginsandblock{2in}{2in}{*}
\setulmarginsandblock{1in}{1in}{*}
§ 519.3  Laying out the page

43 \renewcommand*{\stockavi}{}
44 \renewcommand*{\stockav}{}
45 \renewcommand*{\stockaiv}{}
46 \renewcommand*{\stockaiii}{}
47 \renewcommand*{\stockbvi}{}
48 \renewcommand*{\stockbv}{}
49 \renewcommand*{\stockbiv}{}
50 \renewcommand*{\stockbiii}{}
51 \renewcommand*{\stockmetriccrownvo}{% in docs but not in the package
52 \renewcommand*{\stockmlargecrownvo}{}
53 \renewcommand*{\stockmdemyvo}{}
54 \renewcommand*{\stockmsmallroya/vo}{}
55 \renewcommand*{\pageavi}{}
56 \renewcommand*{\pageav}{}
57 \renewcommand*{\pageaiv}{}
58 \renewcommand*{\pageaiii}{}
59 \renewcommand*{\pagebvi}{}
60 \renewcommand*{\pagebv}{}
61 \renewcommand*{\pagebiv}{}
62 \renewcommand*{\pagebiii}{% in docs but not in the package
63 \renewcommand*{\pagemetriccrownvo}{}
64 \renewcommand*{\pagesmallcrownvo}{}
65 \renewcommand*{\pagemdemyvo}{}
66 \renewcommand*{\pagemsmallroya/vo}{}
67 \renewcommand*{\stockdbi}{}
68 \renewcommand*{\stockstatement}{}
69 \renewcommand*{\stockexecutive}{}
70 \renewcommand*{\stockletter}{}
71 \renewcommand*{\stockold}{}
72 \renewcommand*{\stocklegal}{}
73 \renewcommand*{\stockledger}{}
74 \renewcommand*{\stockbroadsheet}{}
75 \renewcommand*{\pagedbill}{}
76 \renewcommand*{\pagestatement}{}
77 \renewcommand*{\pageexecutive}{}
78 \renewcommand*{\pageletter}{}
79 \renewcommand*{\pageold}{}
80 \renewcommand*{\pagelegal}{}
81 \renewcommand*{\pageledger}{}
82 \renewcommand*{\pagebroadsheet}{}
83 \renewcommand*{\pottvo}{}
84 \renewcommand*{\foolscapvo}{}
85 \renewcommand*{\stockcrowvo}{}
86 \renewcommand*{\stockpostvo}{}
87 \renewcommand*{\stocklargecrownvo}{}
88 \renewcommand*{\stocklargepostvo}{}
89 \renewcommand*{\stocksmalldemyvo}{}
90 \renewcommand*{\stockdemyvo}{}
91 \renewcommand*{\stockmediumvo}{}
92 \renewcommand*{\stocksmallroya/vo}{}
93 \renewcommand*{\stocksuperroya/vo}{
94 \renewcommand*{\stocksuperroya/vo}{
\renewcommand*{\stockimperialvo}{}
\renewcommand*{\pagepottvo}{}
\renewcommand*{\pagefoolscapvo}{}
\renewcommand*{\pagecrownvo}{}
\renewcommand*{\pagepostvo}{}
\renewcommand*{\pagelargecrownvo}{}
\renewcommand*{\pagelargepostvo}{}
\renewcommand*{\pagesmalldemoyo}{}
\renewcommand*{\pagedemoyo}{}
\renewcommand*{\pagemediumvo}{}
\renewcommand*{\pagesmallroyalvo}{}
\renewcommand*{\pageroyalvo}{}
\renewcommand*{\pagesuperroyalvo}{}
\renewcommand*{\pageimperialvo}{}
\renewcommand*{\memfontfami}{\Vary}
\renewcommand*{\memfontenc}{}
\renewcommand*{\memfontpack}{}
\renewcommand*{\anyptfi}{\Varebase}
\renewcommand*{\anyptsize}{10}
\setstocksize[2]{}
\settrimmedsize[3]{}
\settrimmedsize[2]{}
\setx{190pt}
\setxvchars{190pt}
\setblocksize{3}
\setMargins{3}
\setMarginsandblock{3}
\setbinding{1}
\setulmargins{3}
\setulmarginsandblock{3}
\setcolsepandrule{2}
\setheadfoot{2}
\setheaderspaces{3}
\setmarginsnotes{3}
\setfootins{2}
\checkandfixtheoutput{}\checktheoutput{}\fixtheoutput{}
\newlength{\stockheight}\newlength{\trimtop}\newlength{\trimedge}\newlength{\stockwidth}\newlength{\spinemargin}\newlength{\foremargin}
\renewcommand*{\typeoutlayout}{}
\renewcommand*{\typeoutstandardlayout}{}
\renewcommand*{\settyleoutlayoutunit}[1]{}
\renewcommand*{\fixpdflayout}{}
\renewcommand*{\fixdvipslayout}{}
\renewcommand*{\typeoutunit}{1}
\renewcommand*{\medievalpage}[1][]{}
\renewcommand*{\isopage}[1][]{}
\renewcommand*{\semiisopage}[1][]{}
\renewcommand*{\setpagebl}[3][]{}
\renewcommand*{\setpagemfl}[3][]{}
\renewcommand*{\setpagetl}[3][]{}
\renewcommand*{\setpagetm}[3][]{}
\renewcommand*{\setpagegr}[3][]{}
\renewcommand*{\setpagebr}[3][]{}
\renewcommand*{\setpagebm}[3][]{}
\renewcommand*{\setpagecc}[3][]{}

§ 519.4 Text and fonts

\let\miniscule\tiny
\let\HUGE\Huge
\renewcommand*{\abnormalparskip}[1][]{}
\renewcommand*{\nonzeroparstop}[1][]{}
\renewcommand*{\traditionalparstop}[1][]{}
\let\oneskip\baselineskip
\let\OnehalfSpacing\onehalfspacing
\let\DoubleSpacing\doublespacing
\renewcommand*{\setPagernoteSpacing}[1][]{}
\renewcommand*{\setFloatSpacing}[1][]{}
\let\SingleSpacing\ singlespacing
\let\setSingleSpace\ SetSingleSpace
\let\SingleSpace\ singlespace
\let\endSingleSpace\ endsingle
\let\Spacing\ spacing
\let\endSpacing\ endspace
\let\OnehalfSpacing\ onehalfspace
\let\endOnehalfSpace\ endonehalfspace
\csteq{\OnehalfSpace}{\onehalfspace}
\csteq{\endOnehalfSpace}{\endonehalfspace}
\let\DoubleSpace\ doublespace
\let\endDoubleSpace\ enddoublespace
\csteq{\DoubleSpace}{\doublespace}
\renewcommand*{\setDisplayskipStretch}[1][1]{}
\renewcommand*{\memskipstretch}{}
\newcommand*{\memdskips}{}
\renewcommand*{\mids-ln}{}
\renewenvironment{mids-ln}{\relax}{\relax}
\renewcommand*{\s-ln}{\relax}
\renewcommand*{\tit-ln}{\relax}
\newcommand{\tit-ln}{\relax}
\renewcommand*{\thanksmarksty-ln}{\relax}
\renewcommand{\thanksfootmark}{\relax}
\renewcommand{\thanksscript-ln}{\relax}
\renewcommand*{\abstractco-ln}{\relax}
\renewcommand*{\abstractintoc-ln}{\relax}
\renewcommand*{\abstractnum-ln}{\relax}
\renewcommand*{\abstractrunin-ln}{\relax}

\section*{Titles}
\cs-ln{tit-ln}{}\tit-ln{end}\cs-ln{tit-ln}{}
\newcommand{\tit-ln}{\relax}
\renewcommand{\thanksmarksep-ln}{\relax}

\section*{Abstracts}
\renewcommand*{\abstractcol-ln}{\relax}
\renewcommand*{\abstractintoc-ln}{\relax}
\renewcommand*{\abstractnum-ln}{\relax}
\renewcommand*{\abstractrunin-ln}{\relax}

\section*{Document divisions}
\def-ln{\apppage}{\relax}
\part-ln{\appendixpagename}\def-ln{\apppage}{\relax}
\renewcommand{\mempreaddappagetotochook-ln}{\relax}
\renewcommand{\mempostaddappagetotochook-ln}{\relax}
\def-ln{\sapppage}{\relax}
\part-ln{\appendixpagename}\def-ln{\sapppage}{\relax}
\cs-ln{frontmatter-ln}{}\frontmatter
\cs-ln{mainmatter-ln}{}\mainmatter
\renewcommand*{\raggedbottomsection-ln}{\relax}
\renewcommand*{\normalbottomsection-ln}{\relax}
\renewcommand*{\bottomsectionskip-ln}{\relax}
\renewcommand*{\bottomsectionpenalty-ln}{\relax}
\cs-ln{appendixpage-ln}{}\appendixpage
\renewcommand*{\namedsubappendices-ln}{\relax}
\renewcommand*{\unnamedsubappendices-ln}{\relax}
\renewcommand*{\setsecnumdepth-ln}{\relax}
\renewcommand*{\maxsecnumdepth-ln}{\relax}
\renewcommand*{\beforebookskip-ln}{\relax}
\renewcommand*{\afterbookskip-ln}{\relax}
\renewcommand*{\beforepartskip-ln}{\relax}
\renewcommand*{\afterpartskip-ln}{\relax}
\let\chapterprecistoc\cftchapterprecistoc
\renewcommand*{\precisfont}{}
\renewcommand*{\prechapterprecis}{}
\renewcommand{\precistocformat}{}
\renewcommand*{\precistoctext}[1]{}
\renewcommand*{\precistocfont}{}
\renewcommand*{\precistocformat}{}
\renewcommand{\setbeforesecskip}[1]{}
\renewcommand{\setaftersecskip}[1]{}
\renewcommand{\setsecindent}[1]{}
\renewcommand{\setsecheadstyle}[1]{}
\renewcommand{\setsubsecskip}[1]{}
\renewcommand{\setsubsecindent}[1]{}
\renewcommand{\setsubsecheadstyle}[1]{}
\renewcommand{\setbeforesubsecskip}[1]{}
\renewcommand{\setaftersubsecskip}[1]{}
\renewcommand{\setsubparaindent}[1]{}
\renewcommand{\setsubparaheadstyle}[1]{}
\renewcommand{\setbeforeparaskip}[1]{}
\renewcommand{\setafterparaskip}[1]{}
\renewcommand{\setparaindent}[1]{}
\renewcommand{\setparaheadstyle}[1]{}
\renewcommand*{\hangsecnum}[1]{}
\renewcommand*{\defautsecnum}{}
\renewcommand*{\sechook}{}
\renewcommand*{\setsechook}[1]{}
\renewcommand*{\subsechook}{}
\renewcommand*{\setsubsechook}[1]{}
\renewcommand*{\subsubsechook}{}
\renewcommand*{\setsubsubsechook}[1]{}
\renewcommand*{\parahook}{}
\renewcommand*{\setparahook}[1]{}
\renewcommand*{\setsubparahook}{}
\renewcommand*{\setsubparahook}[1]{}
\RenewDocumentCommand{\p{plainbreak}}[s m]{\begin{center}~\end{center}}
\RenewDocumentCommand{\fancybreak}[s +m]{\begin{center}{#2}\end{center}}
\RenewDocumentCommand{\plainfancybreak}[s m m +m]{\begin{center}{#4}\end{center}}
% \RenewDocumentCommand{\pfbreak}{s}{%
\begin{center}
\pfbreak\disp/l.Varay
\end{center}
%
\% \newlength{\pfbreakskip}
\renewcommand{\pfbreakdisplay}{*\quad*\quad*}
\renewcommand*{\makeheadstyles}[2]{}
\renewcommand*{\headstyles}[1]{}

\$519.8$  Paging and headers

\renewcommand*{\savepagenumber}{}
\renewcommand*{\restorepagenumber}{}
\renewcommand*{\uppercaseheads}{}
\renewcommand*{\nouppercaseheads}{}
\renewcommand*{\bookpagemark}[1]{}
\renewcommand*{\partmark}[1]{}
\renewcommand*{\bibmark}{ }
\renewcommand*{\indexmark}{ }
\renewcommand*{\g/\Varossarymark}{ }% 
\renewcommand*{\LWR@origpagesty/l.Varay}{empty}
\renewcommand*{\ps@empty}{ }
\renewcommand*{\makepagemstyle}[1]{}
\renewcommand*{\emptyshook}{}
\renewcommand*{\empty@oddhead}{}
\renewcommand*{\empty@oddfoot}{}
\renewcommand*{\empty@evenhead}{}
\renewcommand*{\empty@evenfoot}{}
\renewcommand*{\a/l.Variaspagesty/l.Var}{empty}
\renewcommand*{\copypagesty}[2]{}
\renewcommand*{\makeevenhead}[4]{}
\renewcommand*{\makeoddhead}[4]{}
\renewcommand*{\makeevenfoot}[4]{}
\renewcommand*{\makeoddfoot}[4]{}
\renewcommand*{\makerunningwidth}[3]{}
\renewcommand*{\headwidth}{ }
\renewcommand*{\makeheadrule}[3]{}
\renewcommand*{\makefootrule}[3]{}
\renewcommand*{\makeheadfootruleprefix}[3]{}
\renewcommand*{\normalrulethickness}{ }
\setlength{\normalrulethickness}{.4pt}
\renewcommand*{\footruleheight}{ }
\renewcommand*{\footrulereskip}{ }
§ 519.9  **Paragraphs and lists**

```latex
\renewcommand{\hangfrom}[1][1]{\hanging{#1}}
\let\centerfloat\centering
\renewcommand{\raggedyright}[1][1]{}
\newlength{\ragparindent}
\renewcommand{\sourceatright}[2][2]{{\source\@atright[#2]}}
\let\memorigdbs\LWR@endofine
\let\memorigpar\par
\let\atcentercr\LWR@endofine
\renewcommand{\linenottooshort}[1][1]{}
\renewcommand{\russianpar}{}
\renewcommand{\lastlinerulefill}{}
\renewcommand{\lastlineparrule}{}
\renewcommand{\justlastraggedleft}{}
\renewcommand{\raggedrightthenleft}{}
\renewcommand{\leftcenterright}{}
\renewcommand{\leftspringright}[4][\begin{minipage}{#1}[t]{#2}[t]\begin{flushright}{#3}\end{flushright}\end{minipage}]
\renewenvironment{blockdescription}{\LWR@descriptionstart\LWR@origdescription}{\enddescription}
\renewcommand{\blockdescriptionlabel}[1]{\textbf{#1}}
\renewenvironment{labelled}[1]{{\begin{description}\label{#1}}}{\end{description}}
\renewenvironment{flexlabelled}[6]{{\begin{description}\label{#1}}}{\end{description}}
\renewcommand{\tightlists}{}
\renewcommand{\defaultlists}{}
\RenewDocumentCommand{\firmlists}[s]{}{\firmlists}
\renewcommand{\zerotrivseps}{}
```
\renewcommand*{\savetrivseps}{}
\renewcommand*{\restoretrivseps}{}

§ 519.10  Contents lists
\csletcs{tableofcontents*}{tableofcontents}
\csletcs{listoffigures*}{listoffigures}
\csletcs{listoftables*}{listoftables}
\renewenvironment{KeepFromToc}{}{}
\renewcommand*{\onecoltocetc}{}
\renewcommand*{\twocoltocetc}{}
\renewcommand*{\ensureencol}{}
\renewcommand*{\restorefromonecol}{}
\renewcommand*{\doccoltocetc}{}
\renewcommand*{\maxtocdepth}[1]{% tocvsec2
\renewcommand*{\settocdepth}[1]{% tocvsec2
\renewcommand{\tocheadstart}{}
\renewcommand{\printtoctitle}[1]{%  
\renewcommand{\tocmark}{}
\renewcommand{\aftertoctitle}{}
\renewcommand{\lofheadstart}{}
\renewcommand{\printloftitle}[1]{% 
\renewcommand{\lofmark}{}
\renewcommand{\afterloftitle}{}
\renewcommand{\lottmark}{}
\renewcommand{\afterlottitle}{}
\renewcommand*{\setpnumwidth}[1]{% 
\renewcommand*{\setrmarg}[1]{% 
\newlength{\cftbeforebookskip}
\newlength{\cftbookindent}
\newlength{\cftbooknumwidth}
\renewcommand*{\cftbookname}{}
\renewcommand*{\cftbookfont}{}
\renewcommand*{\cftbookpresnum}{}
\renewcommand*{\cftbookaftersnum}{}
\renewcommand*{\cftbookaftersnumb}{}
\renewcommand*{\cftbookdotsep}{1}
\renewcommand*{\cftbookpagefont}{}
\renewcommand*{\cftbookafterpnum}{%  
\renewcommand*{\cftbookformatpnum}[1]{% 
\renewcommand*{\cftbookformatpnumhook}[1]{% 
\Part is already defined by tocloft.
\newlength{\cftbeforechapterskip}
\newlength{\cftchapterindent}
\newlength{\cftbooknumwidth}
\renewcommand*{\cftbookfont}{}
\renewcommand*{\cftbookname}(){}
\renewcommand*{\cftbookdotsep}{1}
\renewcommand*{\cftsubsubsectionformatpnumhook}[1]{}
% \new/l.Varength{\cftbeforeparagraphskip}
% \new/l.Varength{\cftparagraphindent}
% \new/l.Varength{\cftparagraphnumwidth}
\renewcommand*{\cftparagraphfont}{}
\renewcommand*{\cftparagraphname}{}
\renewcommand*{\cftparagraphpresnum}{}
\renewcommand*{\cftparagraphaftersnum}{}
\renewcommand*{\cftparagraphaftersnumb}{}
\renewcommand*{\cftparagraph/l.Vareader}{}
\renewcommand*{\cftparagraphdotsep}{1}
\renewcommand*{\cftparagraphpagefont}{}
\renewcommand*{\cftparagraphafterpnum}{}
\renewcommand*{\cftparagraphformatpnum}[1]{}
\renewcommand*{\cftparagraphformatpnumhook}[1]{}
% \new/l.Varength{\cftbeforesubparagraphskip}
% \new/l.Varength{\cftsubparagraphindent}
% \new/l.Varength{\cftsubparagraphnumwidth}
\renewcommand*{\cftsubparagraphfont}{}
\renewcommand*{\cftsubparagraphname}{}
\renewcommand*{\cftsubparagraphpresnum}{}
\renewcommand*{\cftsubparagraphaftersnum}{}
\renewcommand*{\cftsubparagraphaftersnumb}{}
\renewcommand*{\cftsubparagraph/l.Vareader}{}
\renewcommand*{\cftsubparagraphtdotsep}{1}
\renewcommand*{\cftsubparagraphpagefont}{}
\renewcommand*{\cftsubparagraphafterpnum}{}
\renewcommand*{\cftsubparagraphformatpnum}[1]{}
\renewcommand*{\cftsubparagraphformatpnumhook}[1]{}
% \new/l.Varength{\cftbeforefigureskip}
% \new/l.Varength{\cftfigureindent}
% \new/l.Varength{\cftfigurenumwidth}
\renewcommand*{\cftfigurefont}{}
\renewcommand*{\cftfigurename}{}
\renewcommand*{\cftfigurepresnum}{}
\renewcommand*{\cftfigureaftersnum}{}
\renewcommand*{\cftfigureaftersnumb}{}
\renewcommand*{\cftfigure/l.Vareader}{}
\renewcommand*{\cftfiguredotsep}{1}
\renewcommand*{\cftfigurepagefont}{}
\renewcommand*{\cftfigureafterpnum}{}
\renewcommand*{\cftfigureformatpnum}[1]{}
\renewcommand*{\cftfigureformatpnumhook}[1]{}
% \new/l.Varength{\cftbeforesubfigureskip}
% \new/l.Varength{\cftsubfigureindent}
% \new/l.Varength{\cftsubfigurenumwidth}
\newcommand*{\cftsubfigurefont}{}
\newcommand*{\cftsubfigurename}{}
\newcommand*{\cftsubfigurepresnum}{}
\newcommand*{\cftsubfigureaftersnum}{}
\newcommand*{\cftsubfigureaftersnumb}{}
\newcommand*{\cftsubfigure/l.Vareader}{}
\newcommand*{\cftsubfiguredotsep}{1}
\newcommand*{\cftsubfigurepagefont}{}
\newcommand*{\cftsubfigureafterpnum}{}
\newcommand*{\cftsubfigureformatpnum}[1]{}
\newcommand*{\cftsubfigureformatpnumhook}[1]{}
% \new/l.Varength{\cftbeforetab/l.Varest}
% \new/l.Varength{\cfttab/l.Vareindent}
% \new/l.Varength{\cfttab/l.Varenumwidth}
\renewcommand*{\cfttab/l.Varefont}{}
\renewcommand*{\cfttab/l.Varename}{}
\renewcommand*{\cfttab/l.Varepresnum}{}
\renewcommand*{\cfttab/l.Vareaftersnum}{}
\renewcommand*{\cfttab/l.Vareaftersnumb}{}
\renewcommand*{\cfttab/l.Vare/l.Vareader}{}
\renewcommand*{\cfttab/l.Varedotsep}{1}
\renewcommand*{\cfttab/l.Varepagefont}{}
\renewcommand*{\cfttab/l.Vareafterpnum}{}
\renewcommand*{\cfttab/l.Vareformatpnum}[1]{}
\renewcommand*{\cfttab/l.Vareformatpnumhook}[1]{}
% \new/l.Varength{\cftbeforesubtab/l.Varest}
% \new/l.Varength{\cftsubtab/l.Vareindent}
% \new/l.Varength{\cftsubtab/l.Varenumwidth}
\newcommand*{\cftsubtab/l.Varefont}{}
\newcommand*{\cftsubtab/l.Varename}{}
\newcommand*{\cftsubtab/l.Varepresnum}{}
\newcommand*{\cftsubtab/l.Vareaftersnum}{}
\newcommand*{\cftsubtab/l.Vareaftersnumb}{}
\newcommand*{\cftsubtab/l.Vare/l.Vareader}{}
\newcommand*{\cftsubtab/l.Varedotsep}{1}
\newcommand*{\cftsubtab/l.Varepagefont}{}
\newcommand*{\cftsubtab/l.Vareafterpnum}{}
\newcommand*{\cftsubtab/l.Vareformatpnum}[1]{}
\newcommand*{\cftsubtab/l.Vareformatpnumhook}[1]{}
\renewcommand*{\booknumber/l.Varine}[1]{}
\renewcommand*{\partnumber/l.Varine}[1]{}
\renewcommand*{\chapternumber/l.Varine}[1]{}
\renewcommand*{\number/l.Varinehook}[1]{}
% \renewcommand*{\cftwhatismyname}{}%
\renewcommand*{\booknumber/l.Varinehook}[1]{}
\renewcommand*{\partnumber/l.Varinehook}[1]{}
\renewcommand*{\chapternumber/l.Varinehook}[1]{}
\renewcommand*{\cftinsertcode}[2]{}
% \new/l.Varength{\cftparfillskip}
\renewcommand*{\cftpagenumbersoff}[1]{}
\renewcommand*{\cftpagenumberson}[1]{}
\renewcommand*{\cftlocalchange}[3]{}
\renewcommand*{\cftaddtitlerline}[4]{}
\renewcommand*{\cftaddnumtitlerline}[4]{}
\renewcommand*{\cftinsertcode}[2]{}

Floats and captions

§ 519.11 Floats and captions
\newfloat

\newlistof

Emulated through the \newfloat mechanism. Note that memoir uses a different syntax than tocloff for the name.

Borrowed from the lwarp version of keyfonts:
\DeclareDocumentEnvironment{marginfigure}{o}
{\begin{KFLTmemoir@marginf}{figure}}
{\end{KFLTmemoir@marginf}}
\DeclareDocumentEnvironment{margintab}{o}
{\begin{KFLTmemoir@marginf}{tab}}
{\end{KFLTmemoir@marginf}}
\renewcommand{\setmarginfcaptionadjustment}[2]{}
\renewcommand{\setmpjustification}[2]{}
\renewcommand{\setfloatlocations}[2]{}
\DeclareDocumentCommand{\suppressfloats}{o}
\renewcommand{\captiontitle}[1]{%}
\renewcommand{\flegetable}{\tablename}
\renewcommand{\flegetfigure}{\figurename}
\renewcommand{\flegetocfigure}{}
\renewcommand{\flegetocfigure}{%}
\renewcommand{\subcaption}[2]{%}
\renewcommand{\contsubcaption}{\ContinuedFloat\subcaption}
\RenewDocumentEnvironment{sidecaption}{o m o}
{#1}{caption[#2]}{caption[#2]}%
\newlength{\sidecapwidth}
\newlength{\sidecapsep}
\renewcommand*{\setsidecaps}[2]{}
\renewcommand*{\sidecapmargin}[1]{}
\newif{\ifscapmargin}
\scapmarginfalse
\renewcommand*{\setsidecappos}[1]{}
\renewcommand*{\sidecapmargin}[1]{}
\RenewDocumentEnvironment{sidecontcaption}{m o}{\caption{#1}}{Without \@captype, the section is referred to instead.}{\IfVa{#2}{\cite{\@captype}{#2}}}
\sidenamedlegend does not appear to use the \toc argument.
\renewenvironment{sidelegend}[2][]{\begin{center}}{\end{center}}
\renewcommand*{\sidecapsty}[1]{%
\section*{Page notes}

\numberedsection{519.12}

\begin{verbatim}
\renewcommand*{\feetabovefloat}{}
\renewcommand*{\feetbelowfloat}{}
\renewcommand*{\feetatbottom}{}
\PackageError{lwp,memoir}{Verbatim footnotes are not yet supported by lwp.}{This may be improved some day.}
\renewcommand*{\verbfootnote}{[]}{\PackageError{lwp,memoir}{Memoir footnote series are not yet supported by lwp.}{This may be improved some day.}}
\renewcommand*{\plainfootnotes}{}
\renewcommand*{\twocolumnfootnotes}{}
\renewcommand*{\threecolumnfootnotes}{}
\renewcommand*{\paragraphfootnotes}{}
\renewcommand*{\footfootmark}{}
\renewcommand*{\footmarkstyle}{}
\renewcommand*{\foottextfont}{}
\renewcommand*{\marginparmargin}{}
\renewcommand*{\sideparmargin}{}
\renewcommand*{\sideparfont}{}
\renewcommand*{\sideparform}{}
\LWR@provide{\sideparvshift}
\renewcommand*{\parnopar}{}
\renewcommand*{\p{sidebar}}{\begin{quote}#1\end{quote}}
\renewcommand*{\sidebarmargin}{}
\renewcommand*{\sidebarfont}{}
\renewcommand*{\sidebarform}{}
\end{verbatim}
§ 519.13 Decorative text

§ 519.14 Poetry

\DeclareDocumentCommand{\PoemTitle}{s o o m}{% 
  \IfValueTF{#2}{% 
    \poemtitle[#2](#4)% 
    \poemtitle(#4)% 
  }% 
  }% 
  \renewcommand{\NumberPoemTitle}{}
§ 519.15 Boxes, verbatims and files

Boxes, verbatims and files

Boxes, verbatims and files
Cross referencing

\renewcommand*{\linenumberfont}{[]}
\renewcommand*{\lvnnumbersinside}{[]}
\renewcommand*{\lvnnumbersoutside}{[]}

§ 519.16

\renewcommand*{\fref}{[1]\cref{#1}}
\renewcommand*{\tref}{[1]\cref{#1}}
\renewcommand*{\pref}{[1]\cpageref{#1}}
\renewcommand*{\Aref}{[1]\cref{#1}}
\renewcommand*{\Bref}{[1]\cref{#1}}
\renewcommand*{\Pref}{[1]\cref{#1}}
\renewcommand*{\Sref}{[1]\cref{#1}}
\renewcommand*{\figurerefname}{Figure}
\renewcommand*{\tablerefname}{Tab.}
\renewcommand*{\pagerefname}{page}
\renewcommand*{\bookrefname}{Book}
\renewcommand*{\partrefname}{Part}
\renewcommand*{\chapterrefname}{Chapter}
\renewcommand*{\appendixrefname}{Appendix}
\renewcommand*{\headnameref}{\nameref{currenttit}
\renewcommand*{\tocnameref}{\nameref{currenttit}}
\providecounter{LWR@currenttit}
\renewcommand*{\theTit}{\addtocounter{LWR@autoindex}{1}\LWR@new@{LWRindex-
\renewcommand*{\currenttitle}{\label{currenttitle}\arabic{LWR@currenttit}}\nameref{currenttitle}\arabic{LWR@currenttit}}}
\renewcommand*{\an\theTit{[2]}}
\renewcommand*{\namerefon}{\renewcommand*{\namerefoff}{}}

§ 519.17

Back matter

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.
\specialindex behaves like a regular \index, pointing to where \specialindex is used. If \specialindex is used inside a figure or table after the \caption, then the hyperlink will be given the name of that particular figure or table.

\begin{verbatim}
def\@wrspxhyp#1{\%
  \addtocounter{LWR@autoindex}{1}\%
  \LWR@new@/l.Varabe/l.Var{LWRindex-\arabic{LWR@autoindex}}\%
  \ifshowindexmark\@showidx{#1}\fi\%
  \protected@write\@auxout{}{\%
    \string\@@wrindexm@m{\@idxfi/l.Vare}{#1}{\@nameuse{the\@sptheidx}}\%
    \string\@@wrindexm@m{\@idxfi/l.Vare}{#1}{\arabic{LWR@autoindex}}\%
  \}%\%
  \endgroup\%
\end{verbatim}

Patched to use _html filename and \BaseJobname:

\begin{verbatim}
catcode\_=12\%
\renewcommand*{\makeindex}[1][\BaseJobname]{\%
  \if@files\%
    \def\index{\@bsphack\@spindex}\%
    \makememindexhook\%
    \expandafter\newwrite\csname #1@idxfi/l.Vare\endcsname\%
    \expandafter\immediate\openout \csname #1@idxfi/l.Vare\endcsname #1_htm/l.Var.idx\re/l.Varax\%
    \typeout{Writing index fi/l.Vare #1_htm/l.Var.idx }\%
  \fi}\%
\catcode\_=8\%
\end{verbatim}

Patched to use _html filename and \BaseJobname. This will later be patched by the lwarp core.

\begin{verbatim}
catcode\_=12\%
\renewcommand{\printindex}[1][\BaseJobname]{\@input@{#1_htm/l.Var.ind}}\%
catcode\_=8\%
\DeclareDocumentCommand{\newblock}{}{}
\%
\renewcommand{\showindexmarks}{}
\renewcommand{\hideindexmarks}{}
\renewcommand{\xindyindex}{}
\end{verbatim}
§ 519.18  Miscellaneous

\renewcommand*{\changemarks}{}
\renewcommand*{\nochangemarks}{}
\renewcommand*{\added}[1]{}
\renewcommand*{\deleted}[1]{}
\renewcommand*{\changed}[1]{}
\renewcommand*{\showtrimsoff}{}
\renewcommand*{\showtrimson}{}
\renewcommand*{\trimXmarks}{}
\renewcommand*{\trimLmarks}{}
\renewcommand*{\trimFrame}{}
\renewcommand*{\trimNone}{}
\renewcommand*{\trimmarkscolor}{}
\renewcommand*{\trimmarks}{}
\renewcommand*{\tmarklt}{}
\renewcommand*{\tmarktr}{}
\renewcommand*{\tmarkbr}{}
\renewcommand*{\tmarkbl}{}
\renewcommand*{\tmarktm}{}
\renewcommand*{\tmarktm}{}
\renewcommand*{\tmarkbm}{}
\renewcommand*{\tmarkmt}{}
\renewcommand*{\trimmark}{}
\renewcommand*{\quarkmarks}{}
\renewcommand*{\registrationColour}[1]{}
\renewcommand*{\leavespergathering}[1]{}
\renewcommand*{\noprelistbreak}{}
\renewcommand*{\cleartorecto}{}
\renewcommand*{\clearto verso}{}
\renewenvironment{vplace}[1][1]{}

§ 519.19  caption emulation

\renewcommand*{\captiondelim}{}
\renewcommand*{\captionnamefont}[1]{}
\renewcommand*{\captiontitlefont}[1]{}
\renewcommand*{\flushleftright}{}
\renewcommand*{\centerlastline}{}
\renewcommand*{\captionstyle}[2]{}
\DeclareDocumentCommand{\captionwidth}{m}{\par}
\renewcommand*{\changecaptionwidth}{}
\renewcommand*{\normalcaptionwidth}{}
\renewenvironment{vplace}[1][1]{}
The extra `\` here forces a `<br>` in HTML when `\legend` is used in a `\marginpar`.

The extra `\` here forces a `<br>` in HTML when `\legend` is used in a `\marginpar`.

```latex
\renewcommand{\legend}[1]{\begin{center}#1\end{center}}
\renewcommand{\namedlegend}[2][2]{\begin{center}\@nameuse{f\@captype}\CaptionSeparator#2\end{center}\@nameuse{f\@gtoc\@captype}{#1}}
\renewcommand{\newfixedcaption}[3][\caption]{\renewcommand{#2}{\def\@captype{#3}#1}}
\renewcommand{\renewfixedcaption}[3][\caption]{\renewcommand{#2}{\def\@captype{#3}#1}}
\renewcommand{\providefixedcaption}[3][\caption]{\providecommand{#2}{\def\@captype{#3}#1}}
\renewcommand{\bitwonumcaption}[6][\caption]{\ifb\@ank{#2}{\caption{#3}}{\caption\[#2\]{#3}}\addtocounter{\@captype}{-1}\begingroup\csdef{\@captype name}{#4}\ifb\@ank{#5}{\caption{#6}}{\caption\[#5\]{#6}}\endgroup\ifb\@ank{#1}{}{\@be\@rv{#1}}}
\LetLtxMacro{\bionenumcaption}{\bitwonumcaption} todo
\renewcommand{\bicaption}[5][\caption]{\ifb\@ank{#2}{\caption{#3}}{\caption\[#2\]{#3}}\begingroup\csdef{\@captype name}{#4}\ifb\@ank{#5}{\caption{#6}}{\caption\[#5\]{#6}}\endgroup\ifb\@ank{#1}{}{\@be\@rv{#1}}
\renewcommand{\bicontcaption}[3]{\contcaption{#1}\begingroup\csdef{\@captype name}{#2}\contcaption{#3}}
```

\endgroup

% only in caption, not in memoir:
% \let\ltxmacro\longbitwonnmcaption\bitwonnmcaption
% \let\ltxmacro\longbionumcaption\bitwonnmcaption
% \let\ltxmacro\longbicaption\bicaption

\renewcommand{\subtop}{O() O() m}[% 
\subfloat[#1][#2](#3)% 
%]
\renewcommand{\subbottom}{O() O() m}[%
\subfloat[#1][#2](#3)% 
%]

\renewcommand{\contsubtop}{%
\ContinuedFloat\addtocounter{\@captype}{1}% 
\subtop}
\renewcommand{\contsubbottom}{%
\ContinuedFloat\addtocounter{\@captype}{1}% 
\subbottom}
\renewcommand{\subconc}{% 
\ltxmacro\subfigure\subbottom
\ltxmacro\subtable\subtop
\ltxmacro\contsubtable\contsubtop
\ltxmacro\contsubfigure\contsubbottom
}

\newcommand{\newfloatentry}{4}{\empty}{TODO: newfloatentry}
\newcommand{\newfloatlist}{5}{\empty}{TODO: newfloatlist}
\newcommand{\newfloatenv}{4}{\empty}{TODO: newfloatenv}
\DeclareRobustCommand{\newfloatpagesoff}[1]{% 
\DeclareRobustCommand{\newfloatpageson}[1]{% 
\newcommand{\setnewfloatindents}{3}{% 

§ 519.20  Final patchwork

\newlistof{tableofcontents}{toc}{\contentsname}
\newlistof{listoffigures}{lof}{\listfigurename}
\newlistof{listoftables}{lot}{\listtablename}
Change History

§ 520  Chg Hist

For the most recent changes, see page 1036.

v0.10
General: 2016/03/08 Initial version .... 1

v0.11
General: 2016/03/11 ................ 1
  Added section: Operating-System portability. ........ 213
  Added section: Selecting the operating system. ........ 122
  Test Suite: MS-WINDOWS in README.txt .............. 1
  Test Suite: Images and index in README.txt ........ 1

v0.12
\LWR@newhtmfile: Bugfix: toc with numbered files. ...... 357
General: 2016/03/14 ................. 1
  Global: Uses `p@{type}` in float captions ........ 1
  Test Suite: Sub-figures .............. 1

v0.13
\CaptionSeparator: Fix for newer babel package. ....... 477
\LWR@LwarpStart: \up and \fup .. 376
General: 2016/03/24 ................ 1
  Fix dollar-redefined bug for newer package. .......... 917
  Removed package: subfig ............. 1
  Test Suite: Ordinals, Subcaption ........ 1

v0.14
\LWR@htmlsectionfilename: Fix:
  Links to home page. ................ 319
General: 2016/03/31 ................ 1
floatrow: Added. ................ 709
Docs: Commands for a successful HTML conversion. .... 126
Docs: Commands into a warprint environment. .......... 124
Docs: Newclude limitations. ........ 169
Docs: Table: Cross-referencing data structures. ...... 462
Docs: Table: Float data structures. ................ 473
Docs: Trademarks section. ................ 193
Docs: Troubleshooting cross-references. ........... 188
Test Suite: Assigned cleveref name for Test Float. .... 1
Test Suite: Floatrow ................ 1

v0.15
General: 2016/04/06 ................. 1
  Added. ................................ 714
Ampersand (&): Fixed handling when passed as an argument. 409
Docs: Added warning icons for items needing special attention. 196
Docs: Clarify print/HTML output. ................ 123
Docs: Moved the supported features table to the introduction. 78
Files: lwarp_formal.css added. ................ 1
Fix: steps counter .................. 714
Fixed & handling. ................. 712
Test Suite: test_suite_formal.css file added. .......... 1

v0.16
General: 2016/04/11 ................. 1
\tit/l.Varingpage: Improved print-output spacing. .... 384
xfrac: Adjusted for the use of any font. ........... 973
Added XeLaTeX, LuaLaTeX support. ................ 197
Docs: Font and UTF-8 support. ........ 109
Docs: Moved location of usepackage{lwarp}. .......... 111
Docs: Text not converting. ............. 188
Lwarp no longer selects fonts. 109, 223
Removed package: suffix ............. 1
Test Suite: Improved titlingpage. .......... 384
Test Suite: Lwarp no longer selects fonts. .......... 1
Test Suite: XeLaTeX, LuaLaTeX .......... 1
Test Suite: Supported by XeLaTeX, LuaLaTeX. .......... 1

v0.17
\LWR@htmlsectionfilename: Fix:
  Links when entire doc is one HTML page. .......... 319
General: 2016/04/14 ................. 1
mdframed: Added. ................ 797
Test Suite: Fix: Print-version
front-matter page numbers .... 1
Test Suite: Mdframed .......... 1

v0.18
\LWR@includegraphicsb: Add: svgz
file extension. ................. 736
em, ex, %, px dimensions
preserved. .................... 736
Fix: \linewidth, \textwidth,
\textheight inside a minipage. 736
Improved HTML output
linebreaks. .................... 736
\LWR@mysorttoc: Reorganize
\HomeHTMLFilename logic. ...... 481
\LWR@newhtmlfile: sideroc after
title, improving responsive
design. ....................... 356
\LWR@requesttoc: Reorganize
\HomeHTMLFilename logic. ...... 481
\LWR@subhyperref: Improved HTML
output linebreaks. .............. 469
\LWR@subhyperrefclass: Improved
HTML output linebreaks. ......... 470
\LWR@sbinlineimage: Suppress extra
space. .......................... 471
\hspace: \hspace supported. ...... 568

General: 2016/05/19 .......... 1
File: lwarp.css: Improved toc
outline display. ............... 1
Files: lwarp.css and
lwarp_formal.css: Improved
responsive design. ........... 1
Microtype disabled during HTML
generation ................... 223
PDF Unicode input characters. 211
Test Suite: Verse package ....... 1
lateximage: pdfcrop: --hires added. 525
Reorganize \HomeHTMLFilename
logic. .......................... 525
Suppress extra space. ........ 525
verse: Supports verse, memoir
packages. ..................... 952
minipage: Fix: \linewidth,
\textheight, \textheight inside a
minipage. ................... 545

v0.19
\HTMLFilename: Docs: Escape
filename underscores. .......... 319
\HomeHTMLFilename: Docs: Escape
filename underscores. .......... 319
\LWR@warpStart: Enabled \newLine.
......................... 375
\LWR@doequation: MATHJAX support. 512
\LWR@doubleslashedollar: MATHJAX
support. .......................... 506
\LWR@Filestart: lwarp_mathjax.txt
loaded. .......................... 372

\LWR@minipagestartpars: Suppresses
paragraph tags between
minipages. ..................... 566
\LWR@subdoubledollar: MATHJAX
support. .......................... 500
\lateximagefontSizeName: Add:
User-adjustable math/lateximage
font size. .......................... 521
\hspace: Fix: \hspace length
computations. ................. 568
\minipagefullwidth: Added: No
width tag for the next minipage in
HTML. .......................... 545
\warpHTMLonly: Added. ........... 222
\warpprintonly: Replaces
\rowprintedonly. .............. 222
\xfracHTMLfontsize: Added. ...... 973

General: 2016/06/08 .......... 1
css for table note item. ....... 915
MATHJAX support added. 509, 515, 517
multirow: Added optional args. . 815
Adapts to tikz version. ......... 917
Avoids MATHJAX. .............. 499
cleveref: Loaded \AtEndPreamble. 540
Docs: Math options. ........... 111
Docs: Table: Cross-referencing data
structures, updated. .......... 462
File: lwarp.css: norefitemheader
added. .......................... 1
File: lwarp_mathjax.txt added. .. 1
Introduction: MATHJAX support
mentioned. .................... 75
Options: mathsvg and mathjax. 216
Supports colored \rule. ........ 964
titlesp: null \pagestyle and
\thispagestyle for HTML. ...... 918

v0.20
\BlockClassSingle: Renamed from
"LWR@htmldivclassline" .......... 332
\HTMLDescription: Added
\NewHTMLdescription. (Renamed
in v0.30.) .......................... 343
\HTMLFilename: No longer escape
underscores. ................... 319
\HomeHTMLFilename: No longer
escape underscores. .......... 319
\InlineClass: Renamed from
"inlineclass" .................... 332
\LWR@warpStart: Fix: math cross
references. .................... 376
\LWR@closeparagraph: \unskip extra
spaces. .......................... 336
No break tags in the start/end of a
tabular. .......................... 336
\LWR@endofline: Fix: \. ........ 566

1011
v0.22
\LWR@parseDcolumn: Added tabular D column. .................. 418
\LWR@parsebangcolumn: Added tabular \! column. ............... 414
\LWR@parsetablcols: Unknown table column types become 1. Added tabular D, \!, X columns. 419
\LWR@printacoldata: Added tabular D, \!, and X columns. .... 440
General: 2017/03/02 ............................ 1
abstract: Added. ................................ 581
changepage: Added. ................................ 634
dcolumn: Added. ................................ 672
ftnright: Added. ................................ 726
geometry: Nullified commands. 727
layout: Added. ................................ 771
lscape: Added. ................................ 786
mcaption: Added. ................................ 796
nameref: Added. ................................ 821
nextpage: Added. ................................ 823
parskip: Added. ................................ 843
showkeys: Added. ................................ 879
sidecap: Added. ................................ 880	abularx: Added. ................................ 902
varioref: Supported. ................................ 134
verse: Added. ................................ 952

v0.23
\LWR@parsetablcols: Fix for vert bar column type. ............ 419
\LWR@printacoldata: Fix for vert bar column type. ............ 440
General: 2017/03/02 ............................ 1

v0.24
\LWR@htmlfileren: Fix: Index links while \tracinglwarp. .... 464
\hspace: Add: \hspace \fill converts to \em. ................. 568
\hypertocfloat: List of floats responds to \lofdepth, \lottdepth. 487
General: 2017/03/15 ............................ 1
floatrow: Support for subfig. .......................... 709
subfig: Added. ................................ 895
tikz: For tikz v3.0.0 or later, auto-loads tikz babel library if necessary. ..................... 917
Docs: Filename underscore. 115, 128
Fix for inline images. ............................. 917
No longer preloads subcaption;
fractioned conflicted with subfig. ................. 225
picture: Fix for inline images. .......................... 543

v0.25
\LWR@loadnever: Added the ability to prevent conflicting packages. 199
\addcontentsline: Handles theorems. ......................... 479

General: 2016/03/22 ............................ 1
amsart: Added. ................................ 596
eccentics: Added. ................................ 678
emptypage: Added. ................................ 679
framed: Added. ................................ 723
lips: Added. ................................ 777
mdframed: Help avoid hyphenation. ..................... 798
nth: Added. ................................ 828
showidx: Added. ................................ 879
theorem: Added. ................................ 910
Basic \LaTeX\ theorems: improved \texttt{css}. .................. 394
Docs: Adds credits for patched code. ...................... 1
Docs: Testing \lwarp. ................................ 186
Fix: Allows \texttt{XLaTeX} and \texttt{LuaLaTeX} to preload graphics and graphicx. 201

v0.26
General: 2017/03/31 ............................ 1
lwarp.css: Improved responsive marginpar and marginblock. 253
cutwin: Added. ................................ 670
endnotes: Added. ................................ 681
floatfit: Added. ................................ 708
footmisc: Added. ................................ 719
footnotehyper: Added. ................................ 721
footnote: Added. ................................ 720
marginfix: Added. ................................ 794
margins: Added. ................................ 795
mparhack: Added. ................................ 812
pagenote: Supported as-is. ......................... 841

1013
sidenotes: Added. .............. 881
Docs: Improved MiKTeX install
instructions. ................... 89, 91
Dollar span avoided in a
lateximage. ............... 499
Footnotes now are LaTeX boxes
instead of pagination. .... 344
lateximage: Labels track page
counts of lateximages. .... 525
Print mode now uses a \minipage of
\linewidth. .............. 525
picture: Fix for \makebox in picture. 543

v0.27
\LWR@footnotetext: Fix for table
footnote par tags. .......... 345
General: 2017/04/04 .... 1
lettrine: Added. ............ 774
microtype: Fix with XeLaTeX,
LuaLaTeX ................... 809
soul: Added. ................ 888
ulem: Added. ............. 947
Docs: Installing utilities for MacOS. 92
Docs: Limitations of saveboxes. . 129
Page geometry modified to reduce
line overflow. ............ 224

v0.28
\ulem: Added. ......... 774
\microtype: Fix with XeLaTeX,
LuaLaTeX ................... 809
\soul: Added. .......... 888
\ulem: Added. ........ 947
Docs: Installing utilities for MacOS. 92
Docs: Limitations of saveboxes. . 129
Page geometry modified to reduce
line overflow. ........... 224

v0.29
\hyperindexref: Improved indexing. ... 489
\HTMLAuthor: Added \HTMLauthor.
(Renamed in v0.30.) ........ 342
\LWR@lwarpEnd: If FormatEPUB or
FormatWP, no bottom nav. ... 378
\LWR@lwarpStart:
FormatWordProcessor forces
single-file output. ........ 375
\LWR@Filestart: Adds HTML meta
author. ................... 372
\LWR@Forcenewpage: Forces new PDF
page before major environments. 323
\LWR@htmlcomment: Breaks ligatures in
HTML comments. .......... 329
\LWR@includegraphicsb: Adapts to
graphics syntax. .......... 736
\LWR@newhtmlfile: If FormatEPUB or
FormatWP: skips headers, footers,
nav. ........................ 356
\LWR@parsetablecols: Added L, C, R,
J column types. .......... 419
\LWR@startref: Removed space. ... 466
\chapter: If EPUB, prints footnotes
before each section. ...... 369
\hyperindexref: Improved indexing. 491
\textup: Fixed span class. .... 556
General: 2017/04/14 .......... 1
glossaries: Added. ........ 729
graphics: Added. .......... 731

v0.30
\CSSfilename: Renamed from
\NewCSS. .................. 341
\HTMLAuthor: Renamed from
\HTMLauthor. ............. 342
\HTMLDescription: Renamed from
\NewHTMLdescription. ..... 343
\HTMLFirstPageTop: Renamed from
\SetFirstPageTop. ......... 340
\HTMLLanguage: Renamed from
\MetaLanguage. .......... 371
\HTMLPageBottom: Renamed from
\SetPageBottom. ......... 340
\HTMLPageTop: Renamed from
\SetPageTop. ............. 340
General: 2017/04/29 .... 1
lwarp-newproject removed, and
combined with lwarp. ... 246
lwarp: Add: xdyfile
configuration option. .... 295
lwarp: Fix: xindy and texindy
adjusted for pdflatex, xelatex and
lualatex. .............. 295

1014
**lwarpmk**: Fix: *xindy* now used for print index generation with *latexmk*.

**lwarpmk**: Language now used for both index and glossary generation. 295

File: lwarp_html.xdy renamed to lwarp.xdy.

Fix: *_.css* files only written in print mode.

Fix: lwarp.xdy only written in print mode.

Fix: lwarp_mathjax.txt: Only written in print mode.

Option lwarpmklang changed to IndexLanguage.

Option OSWindows replaces macro \lwarpOSwindows.

Option xyDFilename added.... 217

Option *latexmk* replaces macro \UseLatexmk.

Options HomeHTMLFilename and HTMLFilename replace macros \HomeHTMLFilename and \HTMLFilename.

---

**v0.31**

General: 2017/05/15 ....... 1

keyfloat: Improved compatibility. 765

**v0.32**

\RequirePackage: Fix: Ignores blanks in package list. 229

General: 2016/06/09 ....... 1

glossaries: Prevent error with \g@name not defined. 491

lwarpmk: Fix: *io.lines()* changed to file:lines() due to lualatex changes. 295

**v0.33**

\HTMLAuthor: Fix: Provides empty default author if none given. 342

\LWR@loadbefore: Fix: No PackageError if already loaded. 199

\LWR@parseatcolum: Fix: Column alignment with leftmost @. 413

\LWR@tabledata: singlecolumntag: Fix: Macros in tabular could cause extra data cell. 427

\LWR@vspace: Add: \vspace nullified. 569

\StartDefiningTabulars: Add: Avoids error: Misplaced alignment tab character &. 316

General: 2017/07/10 ....... 1

amsmath: Removed fleqn option. 593

fancyhdr: Fix: Optional args for \head, etc. 695

Add: Tabular at and bang columns now have their own HTML columns. 403

cleveref: Fix: Loaded \AtEndPreamb.

Fix: Incorrectly-inline math environments. 517

New handling of & to localize catcode changes. 403

---

**v0.34**

\@fnsp@bol: Text symbols instead of math. 385

InlineClass: Moved optional argument in front of mandatory. 332

\LWR@htmldivclass: Moved optional argument in front of mandatory. 330

\LWR@htmltableclass: Moved optional argument in front of mandatory. 330

\LWR@htmltableclassline: Moved optional argument in front of mandatory. 330

\LWR@htmlspanclass: Moved optional argument in front of mandatory. 328

\LWR@nullfonts: Improved font control. 558

\LWR@restoreorigformatting: booktabs: Works inside \lateximage. 493

Improved font control. 493

\LWR@subhtmltableclass: Moved optional argument in front of mandatory. 329

\LWR@tabledata: singlecolumntag: booktabs: Works inside \lateximage. 452

\fboxBlock: Added. 552

\makebox: Fix: Handles parent arg. 550

General: 2017/08/08 ....... 1

babel-french: Adds fixed-width HTML spaces to punctuation. 325

balance: Added. 613

booktabs: Works inside \lateximage. 455, 623

boxedminipage2e: Added. 625
crop: Added. 667
enumrate: Added. 681
enumitem: Added, no longer required. 681
everyshi: Added. 689
fancybox: Added. 691
fancyvrb: Added, no longer required. 697
figcaps: Added. 703
filecontents: Required. Patched for
morewrites. .............................. 225
floatpag: Added. ...................... 709
flushend: Added. ...................... 715
fullpage: Added. ..................... 726
hyperxmp: Added. .................... 753
idxlayout: Added. .................... 754
marginfit: Added. .................... 794
mdframed: Improved mdtheorempatch. .......... 804
moreverb: Added. .................... 811
paralist: Added. ...................... 842
pdfescape: Added. .................... 844
pdfsync: Added. ...................... 848
prelim2e: Added. ..................... 853
rotfloat: Added. ...................... 866
savetrees: Added. .................... 867
shadow: Added. ....................... 879
syntonly: Added. ..................... 901
titleps: No longer required. ........... 918
titleref: Prevented. .................. 921
xmpincl: Added. ..................... 976
Added. ................................. 968
Docs: Misplaced alignment character. .......... 188
File: lwp_mathjax.txt: Version change. .......... 293
File: README.txt: updated. ............. 1
Fix: Added the e\marray environments. .......... 517
Improved font control. .................. 554
Lists refactored to remove enumitem requirement. ..... 395
Verbatim refactored to remove fancyverb requirement. ..... 391
tabular: booktabs: Works inside lateximage. .......... 457
lateximage: Fix: lateximage with minipage, \parbox, \makebox, \fbox, \framebox, \raisebox, \scalebox, \reflectbox. .......... 525
BlockClass: Moved optional argument in front of mandatory. 331
fminipage: Added. .................... 552
\lwr@nestspan: Fix: Minipages, BlocksClass, and lists inside a span. .......... 327
v0.35
General: 2017/08/08 .................. 1
Fix: \textbf and related. ................ 554
v0.36
\lwr@footnotetext: Extra HTML source space after paragraphs. 345
Force HTML superscripts. ................ 345
\lwr@HTMLsanitize: Fix for babel-french. .......... 522
\lwr@HTMLsanitizeexpand: Fix for babel-french. .......... 522
\lwr@closeparagraph: Extra HTML source space after paragraphs. 336
\lwr@currenttextcolor: Fix for \rule when xcolor not loaded. .......... 564
\lwr@nullfonts: Fix: Filenames while using MATHJAX. .......... 558
\lwr@restoreorigformatting:
siunitx: Improved super/subscripts in a lateximage. .......... 493
\lwr@section:
siunitx: Improved spacing. ..... 363
\lwr@stoppars: Extra HTML source space after paragraphs. .......... 338
\fbox: Fix: Uses \fboxrule and \fboxsep. .......... 551
\framebox: Fix: Handles width and horiz position. .......... 550
\makebox: Fix: Handles width and horiz position. .......... 550
General: 2017/08/17 .................. 1
babel-french: Adjustments for French variants, load order, footnotes, ellipses. .......... 325
footnote: Extra HTML source space after paragraphs. .......... 720
siunitx: Fix for babel-french. .......... 533
siunitx: Improved symbol support. .......... 883
transparent: Added. .................. 943
upref: Added. ......................... 951
xcolor: Added \fcolorboxBlock, \colorboxBlock. .......... 960
xcolor: Fix: Background none in print mode. .......... 960
xcolor: Refactored \lwr@colorstyle. .......... 964
xcolor: Uses \fboxrule and \fboxsep. .......... 960
xcolor: \fcolorbox etc. now work inside lateximage. .......... 960
Docs: Reorganized: Special cases and limitations. .......... 126
Source: Improved formatting. .......... 1
tabular: Fix for babel-french. .......... 457
lateximage: Footnotes appear in regular text instead of the lateximage minipage. .......... 525
\include: Maintains independent aux files for HTML. .......... 232
General: 2017/08/19 .................. 1
\l@rPY accents: Added. ................ 244
babel-french: Adjustment for load order. .................................. 325
color: Prevented. ...................... 664
comment: Maintains independent cutfiles for print, HTML ........ 222
siunitx: Improved symbol support. 883
textcomp: Improved support. ...... 906
\lwarpmk: Removes additional HTML aux files. .......... 295
File handles reorganized. ......... 232

v0.38
\seccntformat: Added for appendix. .................. 363
\ForceHTMLPage: Added. .................. 360
\ForceHTMLTOC: Added. .................. 361
\LWR@section:\part* starts a new HTML page, for appendix. 363
Modified spacing, uses
\numberline. ......................... 363
\numberline: Added trailing \quad. 485
\part: Fix with article class. ........ 369
General: 2017/08/27 ................. 1
appendix: Added. .................... 601
arabicfront: Added. ................ 603
chappg: Added. ...................... 637
color: Forces xcolor as well. .... 664
fix2col: Added. ...................... 704
fnycchap: Added. .................... 715
gffile: Added. ....................... 744
metalogo: Added. .................... 806
nonumonpart: Added. ............... 826
nopageno: Added. .................... 826
pagenote: Option page disabled. 841
realscripts: Added. ................. 860
relsize: Added. ..................... 862
romanbarpagenumber: Added. ...... 865
romanbar: Added. ................... 865
scalefnt: Added. .................... 867
siunitx: Removed from lwarp core. 883
textcomp: Removed from lwarp core. 906
tocbibind: Added. .................. 930
xtftra: Added. ...................... 975
\lwarpmk: Added \print1 and html1 actions. .......... 295
Added \markboth, \sloppy, etc. ... 323
Docs: Enhanced Supported Features
table. ............................. 78
Docs: Index, tocbibind. .......... 140
Docs: Starred sections. ............ 137

v0.39
\maketitle: Titling version. ........ 927
Native \LaTeX{} version. .......... 386
Removed minipages. ................. 386, 927

Supports authblk with <div>s of class oneauthor instead of tabular. .......... 386, 927
\AddSubtitlePublished: Added. .... 387
\LWRdomulticolumn: Add: Optional vpos and \# rows. ................. 443
\LWRrestoreorigformating: Appended with \appto instead of calling various macros. .......... 493
\LWR@tabulatedatumin: Don't start a data cell if see
TabularMacro. ........................ 452
\ResumeTabular: Added. ............ 451
\TabularMacro: Added. .............. 451
\multicolumnrow: Added. .......... 449, 817
\printauthor: Removed minipages. 383
Supports authblk with <div>s of class oneauthor instead of tabular. .......... 383
\thanksmarkseries: Removed minipage footnotes. .......... 929

General: 2017/09/05 ............... 1
a4wide: Added. ..................... 581
a4: Added. .......................... 580
a5comb: Added. ..................... 581
addlines: Added. ................... 588
anysize: Added. ..................... 601
authblk: Added. .................... 610
bigdelim: Added. .................... 619
bigstrut: Added. .................... 621
ebook: Added. ....................... 677
fullwidth: Added. .................. 726
midpage: Added. ..................... 810
multirow: Add: New optional vpos argument. ................. 815
multirow: Add: Supports left/right border for bigdelim. .......... 815
multirow: Fix: Long text argument. 815
supertabular: Added. ............... 900
textarea: Added. .................... 905
titling: Improved compatibility. .. 925
titling: Removed extraneous center environments. .......... 926
typearea: Added. .................... 946
xtabular: Added. ................... 977
zwpagelayout: Added. .............. 981
Docs: Reorganized tabular discussion. .......... 161
Titlepage \published and \subtitle removed.
\AddSubtitlePublished restores. 387
titlepage: Clear pending footnotes. 382
Removed minipages. ................. 382
titlingpage: Clear pending footnotes. .......... 925

1017
v0.40
\chapcntformat: Added for tocbibind, anonchap. .......... 363
\LWR@HTMLhline: Added. .......... 456
\LWR@includegraphicsb: Add: Full
\graphicspath support .......... 736
\LWR@nullfonts: Fix: Long arguments
for expandable command .......... 558
\LWR@restoreorigformatting:
Improved \LaTeX\ logos inside a
lateximage. .......... 493
Improved symbols inside a
lateximage. .......... 493
Nullified InlineClass, etc. inside
a lateximage. .......... 493
\LWR@tabulatedatascalumnntag: Fix for
bigdelim: \Idelim, \Rdelim ..... 452
\chapter: Added support for
quotchap. .......... 369
\multicoloutputrow: Fix: Adapts to older
\multirow and xparse. .......... 449
\simplechapterdelim: Added for
tocbibind, anonchap. .......... 363
\underline: Added. .......... 563

General: 2017/09/25 .......... 1
adjmulticol: Added. .......... 587
anonchap: Added. .......... 600
bigdelim: Improved
documentation. .......... 619
cuted: Added. .......... 670
dblfnote: Added. .......... 671
fnpos: Added. .......... 717
graphics: Moved out of the l\warp
core. .......... 731
graphics: Restores
\includetabulargraphs and
\DeclareGraphicsExtensions in
a lateximage. .......... 731
graphix: Moved out of the l\warp
core. .......... 743
griffile: Directly supported. .......... 744
midfloat: Added. .......... 810
\multirow: Improved bigdelim
borders. .......... 815
pfnote: Added. .......... 850
quotchap: Added. .......... 858
sectsty: Added. .......... 876
stabular: Added. .......... 892
tablis: Added. .......... 902
textcomp: Additional symbols,
improved \LaTeX\ and Lua\LaTeX
support. .......... 906
tocbibind: Improved for
\simplechapter. .......... 930
xfrac: No longer preloaded. .......... 226

\textcomp: Added for \showhyphens with
Xe\LaTeX. .......... 975

v0.41
\LWR@addcmidruletrim: Add:
\cmidrule trims. .......... 432
\LWR@clearcmidrule: Add:
\cmidrule trims. .......... 430
\LWR@closetabledatascalumnntag: Add:
\Mute > for \bottomrule. .......... 408
Fix: A/t bang column with
\multirow. .......... 408
Fix: Cancel < for \multicolumn. .......... 408
\LWR@dotheadmulticol: Add:
\cmidrule trims. .......... 443
Added vertical rules. .......... 444
\LWR@nullifyNoAutoSpacing: Fix:
\NoAutoSpacing in a tabular with
\babel-french. .......... 456
\LWR@parsebarcolumns: Added vertical
rules. .......... 415
\LWR@printatbang: Add: \cmidrule
trims. .......... 426
Add: \Mute at and bang columns for
\bottomrule. .......... 426
\LWR@printbtabg: Added vertical
rules. .......... 425
\LWR@subaddcmidruletrim: Added. .......... 432
\LWR@subcmidrule: Add: \cmidrule
trims. .......... 430
\LWR@tablertinsedcol: Added:
Add: \Mute < for \bottomrule. .......... 427
\LWR@tablualrfinishrow: Unfinished
\mcolurowcell: Added for
\multicolrow cells. .......... 455

General: 2017/10/07 .......... 1
\multirow: Add: \cmidrule trims. .......... 815
Added vertical rules. .......... 816
Fix: < spec. .......... 816
Improved rules. .......... 623
\tablualr: Fix: \NoAutoSpacing in a
\tablualr with \babel-french. .......... 457

v0.42
\ensuredmath: Improved
\ensuredmath. .......... 507
\textsubscript: Added. .......... 563
\textsuperscript: Added. .......... 563
\LWR@HTMLhline: If \FormatWP force
explicit border. .......... 456
\LWR@addformatwpalignment: If
\FormatWP add explicit style for cell
alignment. .......... 434
\LWR@add rulewidth: If \FormatWP
force explicit border. .......... 433
v0.43

\LWR@figcaption: If \FormatWP forces italic captions. ............... 478
\LWR@domulticolumn: Fix for vertical rules. .................. 444
  Fix: Multicolumn trim. ..... 443, 444
\LWR@maybeprintpendingfootnotes: Added \FootnoteDepth. .... 348
\LWR@nullfonts: Fix: Nullify dollar inside filenames. ........ 558
\LWR@parsetablecols: Ignore spaces in col spec. ............ 419
\LWR@printmcoltype: Added vertical rules. .................. 439
\LWR@section: Fix: Expansion in comparison. ................ 364
  Fix: Math in section name. ... 365, 367
  Fix: Nullify fonts inside HTML comment. .................. 365
\TabularMacro: \newcommand instead of \relax to fix supertabular and xtab. .......... 451
\href: Made robust. ................. 470
\nameref: Made robust. ........... 468
\noinkurl: Made robust. ............ 470
\url: Made robust. ................ 471
General: 2017/11/08 ................ 1
\LWR@currentautosec: Added. .......... 363
breakurl: Added. ................. 625
hyperref: Made robust. ... 748, 750, 752
hyperref: \Gauge added. .......... 752
luatodonotes: Added. ........... 789
todonotes: Added. ............. 940
  Added \FootnoteDepth. ....... 344
Docs: HTML settings table. ...... 115
Docs: Reorganized HTML customization. ......... 115
\addcontentsline: Automatic
  \LWR@newfloatanchor. .......... 479
\chapter: Add preamble for koma-script. ................. 369
\marginparBlock: Added. ........ 349
\nopagecolor: \xcolor: Fix for \nopagecolor. ........... 965
\part: Add preamble for koma-script. ................. 369
\title: Added \thetitle. ........... 342
General: 2017/11/22 .............. 1
algorithmic: Improved comment symbol. .......... 592
atbegshi: Added. ............. 607
cancel: Added. ....... 628
changepage: Additional options. 634
easy-todo: Added. .......... 676
fancyref: Added. ............ 696
fixmetodonotes: Added. ..... 706
fixme: Added. ............ 705
fontenc: Allowed after lwarp. ... 719
hang: Added. .......... 745
ifoddpage: Added. .......... 755
lxtable: Added. .......... 788
luatodonotes: Improved. .... 789
lwarp-patch-komascript: Added. 983
overpic: Fix: Groups for lateximages. .......... 840
pdfsync: Fixes. .......... 848
preview: Added. .......... 854
scrextend: Added. .......... 868
schack: Added. .......... 871
scrlayer-notecolumn: Added. .. 873
scrlayer-scrpage: Added. ...... 873
scrlayer: Added. .......... 871
section: Added. .......... 875
soulpos: Added. .......... 889
soultt8: Added. .......... 890
supertabular: Fix for caption. .... 901
tikz: Fix: Groups for lateximages. .... 917
tocbasic: Added. ........ 929
tocloft: Added \newlistentry. .... 938
tocloft: Improved \newlistof. .... 938
tocstyle: Added. .......... 939
todonotes: Improved. ...... 940
todo: Added. .......... 939
typearea: Added expert commands. ........ 946
watermark: Added. .......... 958
\xcolor: Added
  \LWR@currenttextcolorstyle. .... 963
\xcolor: Added \LWR@findcurrenttextcolor. .... 963
xtab: Fix for caption. .......... 978
Adjustment for koma-script. .... 209

v0.44
\currentlabelname: Adjustment for koma-script. ............... 462
\HTMLTitle: Added. ............. 342
\LWR@addformatpalign: Fix for multicolumn alignment if \FormatWP. .......... 434
\LWR@backgroundcolor: Added. ... 964
\LWR@filestart: Add \HTMLTitle. ...... 374
  Fix \HTMLAuthor. .......... 373
\LWR@listitem: Added list and trilist. ................. 398
\LWR@patchlists: Added list and trilist. ............... 400
\LWR@strresult: Fix: \providecommand. .......... 406
\LWR@textcurrentcolor: \xcolor: Added \LWR@textcurrentcolor. .... 963
AMS environments: Fix: Groups for lateximages. 594
If pdfLaTeX, require T1 and UTF-8 encoding. 210
picture: overpic: Fix: Groups for lateximages. 543
list: Added list and trivlist. 398
LWR@nestspan: Added list and trivlist. 327

v0.45
@currentHref: Added. 469
@donoparitem: Modified for HTML. 396
@item: Modified for HTML. 396
@mklab: Modified for HTML. 396
@CSSFile: Improved filenames with underscores. 341
LWR@L warpedstart: Fix: Lateximages on incorrect pages with Mathjax. 376
LWR@includegraphics: Improved URLs with underscores. 736
LWR@newautoidanchor: Fix: No anchor if frozen autoid. 476
LWR@notmemorialanchor: Added. 198
LWR@printpendingmpfootnotes: Added. 349
LWR@startref: Fix: Labels with underscores. 467
LWR@subhyperref: Improved URLs with underscores. 469
LWR@subhyperrefclass: Improved URLs with underscores. 470
LWR@sublabel: Fix: Labels with underscores. 465
LWR@tabledatacolumnTag: Fix: Empty line between rows. 454
chapter: Add optional heading title for memoir. 369
newpage: Added. 566
nolinenurl: Fix: Underscore in URL. 470
normalmarginpar: Added. 350
reversemarginpar: Added. 350
section: Add optional heading title for memoir. 370

v0.46
tableofcontents: Fix: Empty sidetoc. 482
Fix: Patch \AtBeginDocument. 482
url: Improved URLs with underscores. 471
General: 2018/01/14 1
array: Added. 603
babel-french: Robust commands. 325
backref: Added. 613
breakurl: Fix: Underscore in URL. 625
changebar: Added. 633
cite: Added. 663
continue: Added. 666
endfloat: Added. 679
epipage: Support for memoir. 683
fancyvrb: Improvements. 697–699
flafter: Added. 706
frtrace: Added. 714
footnpag: Added. 722
fwww: Added. 727
hanging: Added. 746
hyperref: Fix: Underscore in URL. 748, 749
lwarf-patch-memoir: Added. 985
memhfixx: Added. 806
memoir: Added. 577
natbib: Added. 821
pagesel: Added. 841
prettyref: Added. 854
subfigure: Added. 899
subfig: Fix for subcaption end tag. 898
subfig: Fix: Math in subcaptions. 896
textfit: Added. 909
titleref: Added. 921
turnthepage: Added. 945
Allows memoir's preloaded packages. 201
Docs: xparse warnings. 171
Docs: Fix for double hyphens. 92
Docs: Improved install instructions. 93
Docs: Improved MiKTeX install instructions. 89
Docs: Moved table so doesn't interfere with install docs. 88
File: lwarf_mathjax.txt: Allow MATHJAX inside tabbing. 293
File: lwarf_mathjax.txt: Allow MATHJAX inside verse. 293
Fix: Empty sidetoc. 482
Improved: Robust \, \, and \textellipsis commands. 565
Separate LWR@thisautoidWP for word processor <div>\,. 476
thebibliography: Patched to emphasize titles. 492
minipage: Fix: Improper \prevdepth. 546, 548

v0.46
LWR@closeparagraph: Fix: Tabular empty lines. 337
LWR@closeprevious: Fix: Stack unnesting. 323
LWR@forcenewpage: Fix: Improper \prevdepth. 323
LWR@lookforpackagename: Fix: Spaces in \usepackage. 229
LWR@includegraphics: Improved \, \, and

1021
Fix: Adapt to classes. ............... 565

v0.50
\ensuredmath: Fix: Use lateximage even if MathJax. ............... 507
Improved svg math alt tags. ... 507
\LWR@footnotetext: Robustify macros. ....................... 346
\LWR@atbeginverbatim: Improved column alignment. .......... 392
\LWR@doequation: Improved svg math display. ................. 512
\LWR@doubledollarr: Improved svg math alt tags. ............ 506
Improved svg math display. .... 506
\LWR@htmlrefsectionfilename: Fix: SVG math in a section name. .. 320
\LWR@nullfonts: Fix: \underline in sectioning file name. ....... 560
\LWR@overline: Added. ........................................ 564
\LWR@subsingledollar: Fix: Use lateximage even if MathJax. .... 500
Improved svg math alt tags. .... 500
MD5 hash avoids duplicate svg math. ...................... 504
\LWR@space: Robustify macros. ......................... 569
\newline: Robustify macros. .................................. 566
\textsubscript: Robustify macros. ............................. 563
\textsuperscript: Robustify macros. ............................ 563

General: 2018/03/03 .................. 1
lwpark.css: Improved svg display math centering. .............. 253
lwpark_one_limage.txt: Added. ... 292
amsmath: Fix: Upright tags for svgmath. ........................ 593
axodraw2: Added. ................. 612
bytefield: Added. .................. 628
dbfofloatfix: Added. .............. 671
diagbox: Added. ..................... 672
epstopdf: Added. ..................... 684
listings: Force flexible columns. .... 778
morefloats: Added. ................ 811
nonfloat: Added. .................... 825
\text: Fix: Not standard nor amsthm selected. ............ 834
pbox: Added. ....................... 843
phfplot: Added. ..................... 850
phqit: Added. ....................... 867
siunitx: Fix: Loads xcolor. ........ 883
siunitx: Improved svg math alt tags. .......................... 885
siunitx: Improved units. ... 534, 883, 886
xy: Added. ......................... 980

lwpark: Error if lateximages.txt does not exist. ............... 295
lwpark: Error if lwarp.conf points to lwarp. .................. 295
lwpark: Improved error messages. .............................. 295
lwpark: MD5 hash avoids duplicate svg math. .................. 295
lwpark: Multiprocess support making lateximages. .............. 295
AMS environments: Improved svg math display. ................. 594
Fix: Load fontspec if necessary. ...................... 223
Robustify macros. ...................... 561
lateximage: Fix: SVG math in a section name. ................. 528
MD5 hash avoids duplicate svg math. .......................... 527, 529
eqarray: Improved svg math display. ........................ 518

v0.51
\ensuredmath: Hashtes
\ensuredmath: Robustify macros. ..................... 504
\LWR@htmlsanitizeexpand: Fix: Escapes double quotes. ........ 522
\LWR@htmlsanitize: Fix: Escapes double quotes. ............... 522
\LWR@lwarpStart: MathJax: Nullifies \ensuredmath. ........... 377
\LWR@addbaselinemarker: Improved svg math baseline. ......... 499
\LWR@atbeginverbatim: Adds vertical offset. ................ 392
\LWR@customizeMathJax: MathJax: Nullifies \ensuredmath. ......... 355
\LWR@doequation: Fix:
\addcontentsline inside svg math. Provides an autoid anchor. 512
\LWR@doubledollarr: Fix:
\addcontentsline inside svg math. Provides an autoid anchor. 506
\LWR@findcurrenttextcolor: Added
\LWR@findcurrenttextcolor when no xcolor. ...................... 564
\LWR@newautoidanchor: Fix: No autoid is inside a lateximage. .. 476
\LWR@newhtmlfile: MathJax: Nullifies \ensuredmath. ............ 360
\LWR@subsingledollar: Fix:
\ensuredmath inside svg image. ..... 501
Fix: lateximage inside AM\S
\text. .................. 502
Fix: Honors text font around svg math. ....................... 502

1024
Fix: SVG math with enclosed

\lateximage. .......................... 501

Improved svg math baseline. .... 503

SVG math baseline improved with
invisible rule at corner. .......... 505

Typeset svg math only once during
measurement. ...................... 502

\LWR@textcurrentcolor: xcolor:

\LWR@textcurrentcolor if xcolor
not loaded. ...................... 564

\addcontentsline: Add missing
support for float mechanism if
necessary. ......................... 480

No anchor ID if inside svg image. 480

\displaymathnormal: Processing for
complicated display math. ....... 514

\displaymathother: Processing for
complicated display math. ....... 515

\textcolor: Fix: SVG math color .... 965

General: 2018/03/24 .................. 1

html entity used for text dollar. . 499

l warp_one_image.txt: pdfcairo
~noshrink added. .................. 292

afterpackage: No longer required. 224

chemfig: Added. .................... 637

chemformula: Added. .............. 639

chemgreek: Added. ................. 643

chemmacros: Added. ............... 644

chemnum: Added. ................... 661

epstopdf-base: Added. ............ 684

fancybox: Fix: Optional tag for
\item in a span. .................... 694

grid: Added. ....................... 744

listings: Forces cleared options. ... 779

\lxgrid: Added. .................... 787

\mhchem: Added. ................... 808

tkz: Fix for \tkz macro. .......... 917

tikz: Fix for \tikz with optional
argument. ......................... 917

\tikz: Fix for \thankx mark. ...... 927

l warp: pdfcrop: Restored hires
option. ......................... 295

l warp: pdfcrop: pdfcairo ~noshrink
added. ......................... 295

AMS environments: Fix:
\addcontentsline inside svg
math. Provides an autoid anchor. 594

Docs: tikz limitations. .......... 158

Docs: Multiple authors and
affiliations. .................... 136

Docs: Things to avoid. .......... 126

Docs: Updated Converting an
existing document. ............ 108

Fix: Remember original \# in case
is redefined. ................... 242

lateximage: Added additional
hashing option. .................. 525

Fix: lateximage inside AMS
\text. .......................... 526

Processing for complicated display
math. .......................... 528

alignat: Fix: Added. ................ 596

eqarray: Fix: Addcontentsline
inside svg math. Provides an
autoid anchor. .................. 518

LWR@displaymathother: Processing
for complicated display math. .... 509

LWR@equationother: Processing for
complicated display math. ....... 509

\v0.52

\ensuredmath: Improved hashing
expansion. ....................... 507

@mpfootnotetext: Fix: Paragraph
handling. ......................... 347

@customizeMathJax: Added. ....... 355

\LWR@footnotetext: Fix: Paragraph
handling. ......................... 346

\LWR@addbaselinemarker: Warnings
if l warp baseline_marker.png is
not present or if graphicx/s not
loaded. ......................... 499

\LWR@customizedMathJax: Added. .. 355

\LWR@doequation: Fix: equation*
now based on equation instead of
displaymath. ..................... 512

Fix: equation* with split. ....... 512

\LWR@filenametobasics: Fix:
\fileDepth with non-utf8
encoding. ....................... 354

\LWR@nullfonts: Fix:
texorpdfstring in section
names. ......................... 560

\LWR@section: Fix: Footnote
numbering: Limited HTML
comment if starred. ............. 365

Fix: Footnote numbering: Use short
toc entry for HTMLDebug
comments. ....................... 365

\LWR@subsigneldollar: Added
user-adjustable svg math font
scaling. ......................... 503

\lateximageFontScale: Added
user-adjustable svg math font
calcing. ......................... 503

\href: Fix: \%, \&, \_ in URL. .... 470

\nolinkurl: Fix: \%, \&, \_ in URL. ... 470

\theHTMLTitleSeparator: Fix:
\fileDepth with non-utf8
encoding. ....................... 371

\url: Fix: \%, \&, \_ in URL. .... 471

1025
General: 2018/04/01 .......................... 1
breakurl: Fix: #, %, & \_ in url. .......................... 625
endfloat: Updated for v2.6. .......................... 679
fancyvrb: Initial support for
\verbatimFootnotes. .......................... 691, 697
hyperref: Fix: #, %, & \_ in
url. .......................... 748–751
nicefrac: Added. .......................... 824
url: Added. .......................... 951
lwarpmk: Fix: Memory overflow
when spawning tasks. .......................... 295
lwarpmk: Fix: Skip image
generation if from page 0. .......................... 295
Changed FootnoteDepth default to
\subsection. .......................... 344
Docs: Improved install instructions. 90
Fix: MathJax script line wraps.
Reduced right margin. .......................... 224
If pdfLaTeX, allow other input
encoding. .......................... 210
pgfgraphics: Added defaults. 733, 734
pgfgraphics: Updated for v1.1a. 734
pgfgraphics: Updated for v1.1b. 734
Restore \kill in a lateximage. .......................... 786
tabbing: Fix to allow inside
lateximage. .......................... 393
lateximage: Fix for hash expansion. 527
v0.53
General: 2018/04/01 .......................... 1
lwarpmk: Added
lwarpmk cleanimages. .......................... 295
lwarpmk: Added warning for
corrupted images. .......................... 295
Docs: lwarpmk cleanimages. .......................... 106
Docs: lwarp mk pdftohtml. .......................... 106
v0.54
\LWR@afterendverbatim: Added
vspace argument. .......................... 393
\LWR@atbeginverbatim: Improved
column alignment. .......................... 392
\LWR@earlyloadnever: Added. .......................... 200
\LWR@endfloatalignment: Honor
\centering, etc. in floats. .......................... 476
\LWR@floatalignment: Honor
\centering, etc. in floats. .......................... 476
\LWR@floatbegin: Honor \centering,
etc. in floats. .......................... 474
\LWR@floatend: Honor \centering,
etc. in floats. .......................... 475
\lateximageFontSizeName: Defaults
to normalsize. .......................... 521
\centering: Added debug comment. 531
\raggedleft: Added debug
comment. .......................... 531
\raggedright: Added debug
comment. .......................... 531
General: 2018/04/22 .......................... 1
\*.lwarpmkconf: Option
IndexLanguage changed to
xindyLanguage. .......................... 253
\*.lwarpmkconf: Option
pdftotextEnc added. .......................... 253
\*.lwarpmkconf: Option
xdyfilename changed to
xindyStyle. .......................... 253
\*.lwarpmkconf: Option
xindyCodepage added. .......................... 253
lwarp.css: Fix:
Text-decoration-skip: auto. .......................... 253
lwarp.mk: Option
IndexLanguage changed to
xindyLanguage. .......................... 253
lwarp.mk: Option
pdftotextEnc added. .......................... 253
lwarp.mk: Option
xdyfilename changed to
xindyStyle. .......................... 253
lwarp.mk: Option
xindyCodepage added. .......................... 253
bibus: Added. .......................... 619
chngpage: Added. .......................... 662
forest: Added. .......................... 723
glossaries: Fix when not using
biber or polyglossia. .......................... 730
gridset: Added. .......................... 744
hyperref: Fix: \hyperref and
\hyperlink with special chars in
text. .......................... 750, 751
hyperref: Fix: \ref in \hyperref
and \hyperlink caused nested
link. .......................... 750, 751
lwarp-patch-memoir: Update for
v3.7g. .......................... 990
magaz: Added. .......................... 791
ragged2e: Fix: \centering, etc. 859
textcomp: Fix for
\textperthousand. .......................... 906
tikz: Fixes for \pgpicture,
minipages, fit, align, font. .......................... 917
lwarpmk: Added pdftotextenc. 295
lwarpmk: Added xindycodepage. 295
lwarpmk: Changed language to
xindylanguage. 295
lwarpmk: Changed xdyfile to
xindystyle. 295
lwarpmk: Improved error if
configuration file does not exist. 295
lwarpmk: Increased prominence for
error for an unknown command. 295
\textit{lwarpmk}: Verifies HTML version exists before lwarpmk images. \textbf{295}
\textit{lwarpmk}: Verifies image references before lwarpmk images. \textbf{295}
Add: pdftotextEnc. \textbf{218}
Add: xindyCodepage. \textbf{218}
Added early check for disallowed packages. \textbf{200}
Docs: BibTeX. \textbf{138}
Never load aecompl. \textbf{200}
Option IndexLanguage changed to xindyLanguage. \textbf{218}
Option xdyFilename changed to xindyStyle. \textbf{217}
\textbf{verse}: Fix: Line spacing. \textbf{390}
\vspace{0.55}
\texttt{\textbackslash LWR@LwarpStart}: Fix: Overfull boxes in lateximages. \textbf{375}
\texttt{\textbackslash LWR@floatbegin}: Fix: Float optional args. \textbf{474}
\texttt{\textbackslash LWR@nullfonts}: Removed extraneous space which appeared in file links. \textbf{560}
\texttt{\textbackslash phantomsection}: Fix:
\texttt{\textbackslash ForceHTMLTOC with \textbackslash phantomsection}. \textbf{572}
General: 2018/04/26. 1
\texttt{\textbackslash clrdblpg}: Added. \textbf{664}
Fix: \texttt{\textbackslash centering}, etc. for koma-script. \textbf{474}
Fix: QED symbols in lateximage. \textbf{599, 838}
\vspace{0.56}
\texttt{\textbackslash LWR@addcdashline: arydshln}:
Added. \textbf{434}
\texttt{\textbackslash LWR@addmulticolvertrulecolor}:
Adds support for dashed vertical rules. \textbf{442}
Adds support for double vertical rules. \textbf{442}
\texttt{\textbackslash LWR@addtabularvertrulecolor}:
Adds support for arydshln dashed rules. \textbf{435}
Adds support for double \texttt{\textbackslash \hspace{0.5cm}lines} and \texttt{\textbackslash \hspace{0.5cm}idrules}. \textbf{435}
\texttt{\textbackslash LWR@addtabularrulecolors}:
Adds support for dashed vertical rules. \textbf{436}
Adds support for double vertical rules. \textbf{436}
\texttt{\textbackslash LWR@closeparagraph}: Added support for parnotes. \textbf{337}
\texttt{\textbackslash LWR@domulticolumn}: Adds support for dashed vertical rules. \textbf{444}
\vspace{0.56}
Adds support for double vertical rules. \textbf{444}
\texttt{\textbackslash LWR@floatbegin}: Adds a \texttt{\textbackslash class} per float package style. \textbf{474}
\texttt{\textbackslash LWR@multicolpartext}: Fix:
\texttt{\textbackslash multicolumn} parameters. \textbf{439}
\texttt{\textbackslash LWR@openparagraph}: Added support for parnotes. \textbf{335}
\texttt{\textbackslash LWR@parsebarcolumn}: Adds support for double vertical rules. \textbf{415}
\texttt{\textbackslash LWR@parsecoloncolumn: arydshln}:
Added. \textbf{416}
\texttt{\textbackslash LWR@parsesemicoloncolumn: arydshln}:
Added. \textbf{417}
\texttt{\textbackslash LWR@parsestabcols}: Added array \texttt{\textbackslash \hspace{0.5cm}column}. \textbf{422}
\texttt{\textbackslash LWR@printmcoldata}: Added array \texttt{\textbackslash \hspace{0.5cm}column}. \textbf{441}
\texttt{\textbackslash LWR@printmcoltype}: Added array \texttt{\textbackslash \hspace{0.5cm}column}. \textbf{439}
Adds support for dashed vertical rules. \textbf{439}
Adds support for double vertical rules. \textbf{439}
\texttt{\textbackslash LWR@tabledatacolumn}: Fix:
\texttt{\textbackslash morecmidrules}. \textbf{453}
\texttt{\textbackslash LWR@textcurrentfont}: Added span. textbf, etc. \textbf{561}
General: 2018/05/12. 1
\texttt{\textbackslash \textbackslash .lwarpmkconf}: Records --shell-escape. \textbf{253}
warp.css: Added div. textbf, etc. \textbf{253}
warp.css: Added span. textbf, etc. \textbf{253}
warp.mk.conf: Records --shell-escape. \textbf{253}
arydshln: Added. \textbf{404, 604}
lua-check-hyphen: Added. \textbf{788}
parslist: Fixes for compactitem, compactitem, compactdesc. \textbf{842}
parnotes: Added. \textbf{842}
quoting: Added. \textbf{859}
tocenter: Added. \textbf{933}
underscore: Added. \textbf{949}
warpmk: Added lwarp mk pdftosvg. \textbf{295}
warpmk: Supports --shell-escape. \textbf{295}
Added \texttt{\textbackslash \hspace{0.5cm}ithnspaceto}. \textbf{565}
Docs: \texttt{\textbackslash LWR@blocktextcurrentfont}: Added div. textbf, etc. \textbf{561}
\BlockClassSingle: Improved print/HTML output selection. 332
\ItalicClass: Improved print/HTML output selection. 332
\LWR@customizeMathJaX: MathJax: Supports \footnote, \footnotemark. 355
\LWR@ref:\textbf{ignorestar: Fix: \subref} \footnote 468
\LWR@subhyperref: Fix: Text catcodes. 469
\LWR@subhyperref\textbf{text}: Fix: Text catcodes. 470
\LWR@subsingle\textbf{dollar: Fix: Dynamic inline math expressions. 501, 502, 504}
\LWR@vs\textbf{pace: Improved print/HTML output selection. 569}
\Start\textbf{DefiningMath: Added.} 316
\boxframe: \textbf{xcolor: Fix: Colored \boxframe.} 969
\colorbox: \textbf{xcolor: New system for switching print and HTML outputs.} 965
\colorbox\textbf{Block: xcolor: New system for switching print and HTML outputs.} 966
\framebox\textbf{Block: Improved print/HTML output selection.} 552
\textbf{fcolorbox: xcolor: New system for switching print and HTML outputs.} 966
\framebox\textbf{: Improved print/HTML output selection.} 550
\href: \textbf{Fix: Text catcodes.} 470
\linemath\textbf{other: Added.} 317
\listof: \textbf{Fix: Provide \\@name if not defined.} 484
\makebox\textbf{: Improved print/HTML output selection.} 550
\math\textbf{image name: Added.} 498
\margin\textbf{ed: Improved print/HTML output selection.} 549
\multicolumn\textbf{row: multirow: Improved print/HTML output selection.} 817
\textbf{Improved print/HTML output selection.} 449
\new\textbf{float: rotfloat: Added float styles.} 866
rot\textbf{float: Fix for listof sideways floats.} 866
\package\textbf{diagram name: Added.} 498
\par\textbf{box: Improved print/HTML output selection.} 549
\raisebox: \textbf{Improved print/HTML output selection.} 554
\reflectbox: \textbf{Improved print/HTML output selection.} 743
\resizebox: \textbf{Improved print/HTML output selection.} 743
\rotatebox: \textbf{Improved print/HTML output selection.} 741
\rule\textbf{: Fix: Colored rules.} 571
\scalebox: \textbf{Improved print/HTML output selection.} 742
\textcolor\textbf{xcolor: New system for switching print and HTML outputs.} 965

General: 2018/06/06 1
\lwarp\textbf{. css: Added ruled, boxed, boxruled floats.} 253
\lwarp\textbf{. css: Increased float vertical margins.} 253
\algorithm\textbf{2e: Added.} 588
\bigdelim\textbf{: Improved print/HTML output selection.} 619
\breakurl\textbf{: Fix: Text catcodes.} 625
\color\textbf{bl: New system for switching print and HTML outputs.} 665
\ellipsis\textbf{: Added \midword\ellipsis.} 678
\errata\textbf{: Added.} 686
\textbf{float: Added float styles.} 707
\textbf{float: Fix: Do not pre-define \\@name.} 707
\ltable\textbf{x: Added.} 786
\margin\textbf{note: Fix: Long optional argument.} 795
\mult\textbf{irow: Improved print/HTML output selection.} 815
\reg\textbf{ister: Added.} 861
\sub\textbf{caption: Fix: \subref.} 749
\trim\textbf{clip: Added.} 943
\vowel\textbf{: Added.} 955
\xell\textbf{ipsis: Added.} 971
\xfrac\textbf{: Improved print/HTML \scalebox control.} 973
\xTABLE\textbf{ar: Added.} 975
\xpiano\textbf{: Added.} 976
\lwarp\textbf{mk: Improved code factoring.} 295
\lwarp\textbf{mk: Improved code handling.} 295
Docs: Recompiling \lwarp\textbf{mk} or css files. 186
Docs: Recreating the index for \lwarp\textbf{ source.} 183
New system for switching print and HTML outputs. 237
minipage: Improved print/HTML
output selection. .................. 545
BlockClass: Improved print/HTML
output selection. .................. 331
fminipage: Improved print/HTML
output selection. .................. 552
\LWR@BlockClass\HP: Improved
print/HTML output selection. .... 332
\LWR@HTML@caption@begin: Improved
print/HTML output selection. .... 478
\LWR@HTML@caption@end: Improved
print/HTML output selection. ..... 479
\LWR@HTML@ref: Improved print/HTML
output selection. .................. 468
\LWR@doindexentry: Adds support for
\see, \seealso, \emph, \textbf, etc. ... 490
\LWR@hyperindexrefnullified: Adds
support for \see, \seealso, \emph, \textbf, etc. ... 490
\LWR@indexitem: Accepts optional arg
for repeatindex. .................. 489
\dotfill: Improved print/HTML
output selection. .................. 566
\hfill: Improved print/HTML output
selection. ........................ 566
\hrulefill: Improved print/HTML
output selection. .................. 566
\hyperindexref: Adds support for
\see, \seealso, \emph, \textbf, etc. ... 491
\printindex: Fix: Extra \newpage to
flush pending \index writes. ....... 791
General: 2018/07/07 ................ 1
  *.lwarpmkconf: Added option
    makeindexstyle. ................. 253
  *.lwarpmkconf: Added options
    makeindex and xindy. .......... 253
  *.lwarpmkconf: Generated
    \AtBeginDocument. ............. 253
lwarpmk: Requires
    makeindex.xdy. ................. 291
lwarpmk: Supports bold, italic. 291
lwarpmk.ist: Added. ............. 291
lwarpmk.conf: Added option
    makeindexstyle. ............... 253
lwarpmk.conf: Added options
    makeindex and xindy. .......... 253
lwarpmk.conf: Generated
    \AtBeginDocument. ............. 253
array: Improved print/HTML output
selection. ........................ 603
attachfile2: Added. .............. 608
attachfile: Added. ............... 607
cases: Added. ..................... 632
imakeidx: Added. .................. 756
index: Added. ...................... 759
intopdf: Added. ................... 761
lwarpmk-komascript: Modified
indexing. ........................ 983
lwarpmk-memoir: Fix for
  \specialindex. ................... 1006
lwarpmk-memoir: Fix for
  multiple indexes. ............... 1006
makeidx: Added. Moved from
lwarpcore. ........................ 791
memoir: Fix for \firsthline, \lasthline. ...... 450
memoir: Fix for booktabs. ....... 455
pdfpages: Added. ................. 845
pdfx: Added. ...................... 849
repeatindex: Added. .............. 864
splitidx: Added. .................. 891
textcomp: Improved print/HTML
output selection. .................. 906
lwarpmk: Added makeindex and
  xindy options. ................. 295
lwarpmk: Added -p option for
  project name. ................... 295
lwarpmk: Added optional list of
  names for lwarpmk printindex
  and /cmds/lwarpmk htmlindex. .. 295
lwarpmk: Glossary generation now
  uses makeglossaries. .......... 295
lwarpmk: lwarpmk clean removes
  all *.ind and *.idx files. ....... 295
Added makeindex option. ........ 219
Added xindy option. ............. 219
Added option makeindexStyle. .... 217
Docs: Index, makeindex,
    imakeidx. ...................... 140
Docs: Misplaced \omit. .......... 188
Fix: memoir and \caption. ...... 201
Improved print/HTML output
selection. ........................ 565
Replaced each \vspace with
  \nameuse to force error if
  undefined. ...................... 1

tabbing: Improved print/HTML
output selection. .................. 393
v0.59
  \LWR@addbslinemarker: Uses .eps
    if DVI latex. .................. 499
  \LWR@includegraphicsb: Fix: Expand
    filename. ...................... 737
    Now works with .pdf and .eps
    filename extensions. .......... 736
  \LWR@latexmcmd: Fix:
    --shell-escape with latexmk. 248
Fix: Filename expansion. ................. 738
Don't write configuration files if
processing pstoool image. .............. 246
Spaces redefined
\AtBeginDocument. ................. 565

v0.62
\@partcntformat: Added for ctex. .... 363
\@partnameformat: Added for ctex. .... 363
\InlineClass: Added optional
word-processing style. Replaces
\LWR@HTMLtextstyle. .............. 332
\LWR@PreloadedPackage: Added. .... 532
\LWR@ProvidesPackagePass: Fix:
Unknown option error. .......... 231
\LWR@endofline: Extra space if
optional arg. .................. 566
\LWR@filestart: Refactored. .......... 374
\LWR@includegraphicsb: Fix:
FormatWP. ...................... 737
Fix: Filename expansion. ............ 738
\LWR@isolate: Added. .............. 213

\LWR@textcurrentfont: Added print
version. ........................... 564
Tracks depth to avoid nesting
repeated font changes. .......... 561
\colorboxBlock: Fix: Horiz white
space. ............................. 966
\fcolorbox: Fix: No longer requires
xifthen. ........................... 537
\fcolorboxBlock: Fix: Horiz white
space. ............................ 967, 968
\l@chapter: Don't define if no
\chapter. Fix for algorithm2e. .... 488
\slshape: Added. .................. 562
\textup and related: Improved font
detection. ....................... 554
\lwrp@css: Added css for xfrac,
nicefrac. .......................... 253
\lwrp@css: Added css for \textup. 253
\lwrp@css: Reduced margins in
titlepage. ........................ 253
\lwrp@css: Added. ................ 892
\textcomp: Added. ................ 286
2in1: Added. ..................... 580
CJ\Kutf8: Prevented unless xeCDK. 663
CJ\K: Prevented unless xeCDK. .... 663
\asymptote: Improved \alt tags. .... 606
\bitpattern: Added. ............... 621
calc: Fix: Required for print
version. .......................... 224
\chngpage: Fix: Loads
\lwrp-chngpage. ................. 662
cortexpatch: Added patch. ........ 578
\flippdf: Added. ................. 706
\musicography: Added. .......... 818
\nicefrac: Improved font control
and css, honors nice, ugly. .... 824
\notepages: Added. .............. 827
octave: Added. .................. 839
\pdfcomment: Added. .......... 844
\pdfmarginpar: Added. .......... 844
\register: Updated to v1.8. .... 861
\rviewport: Added. .............. 867
\semantic-markup: Added. ...... 877
\textcomp: Fix conflict with
\unicode. .......................... 907
\tram: Added. .................... 942
twoup: Added. ................... 945
\ulem: Improved compatibility with
\ CJ\Kulem. ....................... 947
ulen: Now works in a lateximage. 947
unitsdef: Added. 950
units: Improved font control and
css, honors loose, tight. 949
xchangebar: Added. 971
xfrac: Improved css. 973
xunicode: Fix conflict with
textcomp. 979
Added early checks for CJK,
CJKutf8. 200
Docs: asymptote. 160
Docs: miktex-poppler-bin*. 93
Docs: MiKTeX Console 89
Docs: Improved MiKTeX install
instructions. 89
Docs: UTF-8 locale. 175
File: \warp\_mathjax.txt: Removed
inoperable siunitx extension. 293
Fix for \em. 557
Fix: Horiz white space. 968
Logos: CSS instead of <sup>,
<sub>. 573
Logos: Fix for X\eTeX\ logo if
graphics is not loaded. 573
Graphics: Improved CSS. 573
Logos: Made robust. 573
fcolorminipage: Fix: Horiz white
space. 968
Fix: No longer requires xifthen. 538
fminipage: Fix: Horiz white
space. 553, 554
v0.63
\LWR@HTMLLatexCmd: \utarticle and
related: Added. 252
\LWR@checkloadfilename: Prevented
bitfield, doublespace, newthm,
\rplain, \si. 227
\LWR@section: Support for
\utarticle and related. 366
\environ: Made robust. 567
\quad: Made robust. 567
\textsf{Newunicodechar}. 211
\LWR@BlockClassWp: Fix for \xetex. 332
\today. 577
v0.65
\LWR@warpEnd: Improved css for page layout. ................. 378
\LWR@warpStart: Improved css for page layout. ................. 377
\LWR@PreloadedPackage:
\AtBeginDocument to avoid option clashes. ................. 532
\LWR@hyperindexrefnu/l.Var/l.Varified
\LWR@Pre/l.VaroadedPackage
\LWR@nu/l.Var/l.Varfonts
\LWR@newhtm/l.Varfi/l.Vare
\utarticle
\ Added
\multicol
\multicolrule
\llttext
\gentombow
\footnoterange
\embrac
\bounddv: Added. ................. 624
\embrac: Added. ................. 678
\footnoterange: Added. ................. 722
\gentombow: Added. ................. 727
\geometry: Fix for bxjs* classes. ................. 224
\graphics: Added
\includegraphics alt
key. ................. 536, 732, 733, 735
\lltext: Added. ................. 782
\multicolrule: Added. ................. 814
\multicol: Added \docolaction. ................. 814
\playydshln: Added. ................. 852
\plextarydshln: Added. ................. 853
\plexcolorl: Added. ................. 853
\plext: Added. ................. 852
\paxatbegshi: Added. ................. 857
\pxeveryshi: Added. ................. 857
\pxfright: Added. ................. 857
\pxjahyper: Added. ................. 858
\tascmac: Added. ................. 903
\versionnotes: Added. ................. 954
\Added \sishape. ................. 243
\Added early checks for \article, \tarticle, and related. ................. 200
\Fix for \rensujii. ................. 577
\Fix space between class and id. ................. 333
\tabular: Added support for \plext. ................. 457
\Fix: \tabular*. ................. 457
\Fix: Rule color. ................. 458
\minipage: Refactored to later allow Japanese <t/y> argument. ................. 545
\LWR@figcaption: Uses <figurecaption> instead of <figcaption>. ................. 478
\v0.66
\@mpfootnotetext: Improved HTML formatting. ................. 347
\IgnoreMinipageWidths: Added. ................. 545
\LWR@Footnotetext: Improved HTML formatting. ................. 346
\LWR@warpStart: Fix: TOC, LOF, LOT links. ................. 377
\LWR@closeparagraph: Prevented \colortab, \epsf, \hyper, \picinpar, \pics, \sistyle, \ucs. ................. 227
\LWR@closeparagraph: Fix: Combined \span, \tabular, and \lateximage. ................. 337
\improved \html formatting. ................. 336
\LWR@closeparagraph@br: Factored. ................. 336
\LWR@boxstyle: Use current text color. ................. 551
\LWR@filenamemoblink: Fix: Section names detokenized. ................. 352
\Fix: Section names with macros. ................. 353
\Fix: Section names with percent. ................. 353
\improved \file name generation. ................. 352
\limits \filename length. ................. 354
\LWR@findcurrenttextcolor: Fix: Color if \xcolor not loaded. ................. 564
\LWR@htmlfileref: No longer use \zref. ................. 464
\LWR@htmlsectionfilename: Sanitize underscores. ................. 319
\LWR@includegraphics: \improved \html formatting. ................. 736
\LWR@indentHTML: Added. ................. 326
\LWR@lateximage-depthref: No longer use \zref. ................. 464
\LWR@lateximagnumberref: No longer use zref. 465
\LWR@lwarpheader: No longer use zref. 465
\LWR@nameandref: No longer use zref. 464
\LWR@nullfonts: Logos. 560
\LWR@openparagraph: Improved HTML formatting. 335
\LWR@section: Fix: TOC, LOF, LOT links. 367
\LWR@setpars: Improved HTML formatting. 367
\LWR@setexparray: Fix with \par. 315
\LWR@setref: No longer use zref. 464
\LWR@setxemptitle: Added. 351
\LWR@startref: No longer use zref. 466
\LWR@stoppars: Improved HTML formatting. 339
\LWR@subhtmlelementclass: Improved HTML formatting. 329
\LWR@subhyperrefclass: Improved HTML formatting. 470
\LWR@subinlinelineimage: Improved HTML formatting. 471
\LWR@writeconf: Added ImagesDirectory and ImagesName. 252
\LinkHome: Fix: Document cross-references. 321
\UseMinipageWidths: Added. 545
\bbox: Fix: Removed extra space. 551
\hyperindexref: Fix: Long index entries. 491
\minipagefullwidth: Made \global. 545
\rotatebox: Improved HTML formatting. 741
\rule: Improved HTML formatting. 571
\scalebox: Improved HTML formatting. 742
\textgreater: Made robust. 318
\textless: Made robust. 318
General: 2019/02/08 1
\LWR@currentautosec: Fix for LOF, LOT float in home page. 363
lwarp.css: Added niceframe. 253
lwarp.css: Improved css for definition lists. 253
lwarp_formal.css: Improved css for table notes. 286
lwarp_one_image.txt: Image directory and prefix. 292
acronym: Fix for acronym in caption. 586
acronym: No longer uses zref. 586
ar: Added. 602
caption: Fix for options clash. 231
ed: Added. 677
extramarks: Updated to v3.10. 689
fancyhdr: Updated to v3.10. 695
kotextxt: Patch for references. 579
memoir: Docs re: version numbers. 167
multicolrule: Updated for v1.2. 814
nameauth: Added. 820
register: Verified for v1.9. 861
subcaption: Added. 894
tocbasic: Updated to v3.26a. 929
tocplit: Added. 945
zref: No longer used. 226
lwarp: Added ImagesDirectory and ImagesName. 295
lwarp: Fix for \cleansimages. 295
Added early checks for colorltab, epsf, hyper, picinpar, picins,
sistyle, ucs. 200
Added option ImagesDirectory. 217
Added option ImagesName. 217
Added support for indentfirst. 340
Docs: Updated Converting an existing document. 108
Fix: Minipages inside multicols. 813
Improved HTML formatting. 692, 698
Package dates added where possible. 580
Sanitize filenames. 220
tabular: Fix: Minipages inside tabular. 460
lateximage: Adds \BaseJobname for multiple projects. 525
Improved HTML formatting. 527
minipage: Honor \LWR@forceminipagefullwidth. 547
v0.67
\FilenameNullify: Added. 561, 564
\FilenameSimplify: Added. 352, 356
\LWR@doequation: xfakebold: Added support. 513
\LWR@doubledollar: xfakebold: Added support. 506
\LWR@filenamenoblanks: Improved file name generation. 352
\LWR@lookforpackagename:
  easyReview: Supported. 229
\LWR@nullfonts: Add1 symbols. 558
\LWR@ simplifycustom: Added. 351
\LWR@sub singledollar: xfakebold: Added support. 501, 505
General: 2019/02/23 1
academicicons: Added. 583
bbding: Added. 613
changes: Added. 634

1034
If labels changed, require recompile before making images. 379
\framebox: Fix: Accept long arg. 550
\makebox: Fix: Accept long arg. 550
Fix: Ignore width of 0pt. 550
Fix: No width given. 550
General: 2019/04/03 1
\textcomp: For \textinterrobang 906
\textpos: Added optional arg to textblock. 909
\xunicode: Fix for \textinterrobang. 979
AMS environments: Refactored. 594
Ensure vector font. 211
File: l.Varwarp_mathjax.txt Loads autoload-all.js extension. 293
File: l.Varwarp_mathjax.txt Updated to MathJax v2.7.5. 293
Logos: Improved for metalogo, lateximages. 573
LWR@nestspan: Improved minipage, \parbox inside a span. 327
Index of Objects

This is an index of macros, environments, booleans, counters, lengths, packages, classes, options, keys, files, and various other programming objects. Each is listed by itself, and also by category. In some cases, they are further subdivided by [class].

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition.

<table>
<thead>
<tr>
<th>Symbols</th>
<th>@rowcolors</th>
<th>@rowc@lors</th>
<th>7548</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp;</td>
<td>@sectc@lors</td>
<td>@secntformat</td>
<td>6964</td>
</tr>
<tr>
<td>(</td>
<td>@starttoc</td>
<td>@textsubscript</td>
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</tr>
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<td>*</td>
<td>@textsuperscript</td>
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<td>11154</td>
</tr>
<tr>
<td>*.images.txt (file)</td>
<td></td>
<td></td>
<td>525</td>
</tr>
<tr>
<td>*.html.aux (file)</td>
<td>355, 462, 464, 525</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.html.lof (file)</td>
<td>477</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.html.lot (file)</td>
<td>477</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.html.tex (file)</td>
<td>246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>.</td>
<td>127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--shell-escape (option)</td>
<td>109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@@@setc@lager</td>
<td>10463</td>
<td></td>
<td></td>
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<td>@author</td>
<td>380</td>
<td></td>
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<tr>
<td>@begintheorem</td>
<td>6880</td>
<td></td>
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<tr>
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<td></td>
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<td>@chapc@lformat</td>
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<td></td>
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<td>380</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@doublefloat</td>
<td>8924</td>
<td></td>
<td></td>
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<tr>
<td>@donoparitem</td>
<td>6906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@endc@ltheorem</td>
<td>6892</td>
<td></td>
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<tr>
<td>@ensured@math</td>
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<td></td>
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<td>@footnotetext</td>
<td>5642</td>
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<tr>
<td>@include</td>
<td>1122</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>@make@f@ntext</td>
<td>5608</td>
<td></td>
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</tr>
<tr>
<td>@make@title</td>
<td>56</td>
<td>6692</td>
<td></td>
</tr>
<tr>
<td>@mk@lab</td>
<td>6900</td>
<td>align (environment)</td>
<td>65</td>
</tr>
<tr>
<td>@mpfootnotetext</td>
<td>5844</td>
<td>align* (environment)</td>
<td>68</td>
</tr>
<tr>
<td>@n@bitem</td>
<td>6986</td>
<td>alignat (environment)</td>
<td>77</td>
</tr>
<tr>
<td>@opargbegintheorem</td>
<td>6886</td>
<td>alignat* (environment)</td>
<td>80</td>
</tr>
<tr>
<td>@partc@lformat</td>
<td>6067</td>
<td>alltt (package)</td>
<td>583</td>
</tr>
<tr>
<td>@partc@lnameformat</td>
<td>6068</td>
<td>@ams</td>
<td>11481</td>
</tr>
</tbody>
</table>
\doublerulesepcolor \doublerulesepcolornexttoken dprogress (package) \draftcopy (package) \draftfigure (package) \draftwatermark (package) dvipdfm (option) dvipdfmx (option) dvips (option) \emph environments: environment: fminipage lateximage picture titlepage titlingpage warpprint warpright \flushleft flushright fminipage gather gather* itemize lateximage list longtable LWR@BlockClassWP LWR@blocktextcurrentfont LWR@displaymathnormal LWR@displaymathother LWR@equationother LWR@figcaption LWR@nestspan math minipage multiline multiline* picture quote tabbing tabular thebibliography theindex titlepage titlingpage verbatim verse warppall warpHTML warprint \emph environments: abstract align align* alignat alignat* BlockClass BVerbatim center description enumerate eqarray equation equation* errata eso-pic \et al character etoolbox eurosym everyhook everypage everyshi expl3 extramarks fcolorminipage  \fcrlign  \fcrlign* fancybox (package)
<table>
<thead>
<tr>
<th>Package</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>fancyhdr (package)</td>
<td>695</td>
</tr>
<tr>
<td>fancyref (package)</td>
<td>696</td>
</tr>
<tr>
<td>fancytabs (package)</td>
<td>697</td>
</tr>
<tr>
<td>fancyvrb (package)</td>
<td>697</td>
</tr>
<tr>
<td>\fbox</td>
<td>130, 10732</td>
</tr>
<tr>
<td>\fboxBlock</td>
<td>130, 10746</td>
</tr>
<tr>
<td>\colorbox</td>
<td>103, 10325</td>
</tr>
<tr>
<td>\colorboxBlock</td>
<td>126, 10362</td>
</tr>
<tr>
<td>fcolorminipage (environment)</td>
<td>166, 10364</td>
</tr>
<tr>
<td>figcaps (package)</td>
<td>703</td>
</tr>
<tr>
<td>figsize (package)</td>
<td>703</td>
</tr>
</tbody>
</table>

file:

```
*images.txt .................. 525
*_html.aux .............. 355, 462, 464, 525
*_html.1of .............. 477
*_html.1ot .................. 477
*_html.tex ............ 246
glyphtounicode.tex ........ 110
lwpbase.css ............ 122, 253
lwpbase.ist ............ 149, 291
lwp.1xdy ............... 150, 291
lwpbaseline_marker.1ps .... 499
lwpbaseline_marker.1png ... 499
lwp.1ormal.css .......... 286
lwp.1mathjax.1xt ....... 293
lwp.1one1image.1md ........ 292
lwp.1agejax1css ........ 282
lwp.1utorial.1xt ......... 94
lwp.1rmk.1conf ........... 253
lwp.1ua ............... 186
project.1css ........... 122
project.lwp.1mk.1conf ..... 253
sample_project.1css .... 122, 290
tutorial.1xt .......... 94
filecontents (package) ... 225
FileDepth (counter) ...... 117, 350
\Fileenamelimit ......... 118, 5752
\Fileenamenullify ...... 133, 11098, 11183
\Fileenamensimplify .... 133, 5773, 5912
FileSectionNames (boolean) | 118, 319
fitbox (package) ........ 704
fix2col (package) ........ 704
fixme (package) .......... 170, 704
fixmetodonotes (package) | 706
flafter (package) ........ 706
\flagverse ............. 953
flalign (environment) ... 71
flalign (environment) ... 74
flare (program) .......... 85
fliipdf (package) ........ 706
float (package) ........ 166, 707
floatflt (package) ....... 708
defloatpag (package) .... 709
floatrow (package) ....... 166, 709
flushbottom ............... 5073
flushend (package) ....... 715
flushleft (environment) .. 10233
flushright (environment) .. 10225
fminipage (environment) .. 130, 10764
fnbreak (package) ....... 715
fncchap (package) ....... 715
fnlineno (package) ....... 716
fpnpara (package) ....... 716
fnpos (package) .......... 717
fontawesome (package) ... 717
fontawesome5 (package) ... 718
fontenc (package) ....... 110, 719
fontspec (package) ...... 110
footmisc (package) ...... 719
footnote (package) ...... 720
footnotebackref (package) | 721
FootnoteDepth (counter) .. 118, 344
footnotehyper (package) .. 721
footnoterange (package) .. 722
footnoteret (counter) ... 344
footpag (package) ....... 722
\ForceHTMLPage ........... 137, 6017
\ForceHTMLTC ............ 137, 6023
foreign (package) ....... 722
forest (package) ....... 723
formatEPUB (boolean) .... 176, 239
formatWP (boolean) ...... 178, 239
\framebox ............... 10715
framed (package) ........ 723
FrameMaker (program) ..... 85
\frontmatter ............ 6039
frcap (package) .......... 725
frtng (package) .......... 726
fullminipage (package) .. 726
fullpage (package) ...... 726
fullwidth (package) ..... 726
\fup ..................... 11158
\fussy .................. 5075
\fwlwp (package) ....... 727
```
<table>
<thead>
<tr>
<th>Package</th>
<th>...</th>
<th>...</th>
</tr>
</thead>
<tbody>
<tr>
<td>graphics (package)</td>
<td>156</td>
<td>731</td>
</tr>
<tr>
<td>graphicx (package)</td>
<td>156</td>
<td>743</td>
</tr>
<tr>
<td>grffile (package)</td>
<td>158</td>
<td>743</td>
</tr>
<tr>
<td>grid (package)</td>
<td>744</td>
<td>744</td>
</tr>
<tr>
<td>grid-system (package)</td>
<td>744</td>
<td>744</td>
</tr>
<tr>
<td>gridset (package)</td>
<td>744</td>
<td>744</td>
</tr>
<tr>
<td>hang (package)</td>
<td>745</td>
<td>745</td>
</tr>
<tr>
<td>hanging (package)</td>
<td>746</td>
<td>746</td>
</tr>
<tr>
<td>Hevea (program)</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>\Hfill</td>
<td>112</td>
<td>29</td>
</tr>
<tr>
<td>\HomeHTMLFilename</td>
<td>493</td>
<td>77</td>
</tr>
<tr>
<td>HomeHTMLFilename (option)</td>
<td>111</td>
<td>216</td>
</tr>
<tr>
<td>\href</td>
<td>882</td>
<td>882</td>
</tr>
<tr>
<td>\hrulefill</td>
<td>112</td>
<td>31</td>
</tr>
<tr>
<td>\hskip</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>\hspace</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>htmlatex (program)</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>HTMLAuthor</td>
<td>119</td>
<td>126</td>
</tr>
<tr>
<td>HTMLDebugComments (boolean)</td>
<td>118</td>
<td>234</td>
</tr>
<tr>
<td>\HTMLDescription</td>
<td>119</td>
<td>125</td>
</tr>
<tr>
<td>\HTMLEntity</td>
<td>491</td>
<td>19</td>
</tr>
<tr>
<td>\HTMLFilename</td>
<td>493</td>
<td>6</td>
</tr>
<tr>
<td>HTMLFilename (option)</td>
<td>111</td>
<td>218</td>
</tr>
<tr>
<td>\HTMLFirstPageTop</td>
<td>119</td>
<td>55</td>
</tr>
<tr>
<td>\HTMLIndexCmd</td>
<td>139</td>
<td>728</td>
</tr>
<tr>
<td>HTMLIndexCmd (option)</td>
<td>113</td>
<td>219</td>
</tr>
<tr>
<td>HTMLLanguage</td>
<td>118</td>
<td>6338</td>
</tr>
<tr>
<td>HTMLLatexCmd (option)</td>
<td>111</td>
<td>219</td>
</tr>
<tr>
<td>HTMLleftmargint (length)</td>
<td>168</td>
<td>390</td>
</tr>
<tr>
<td>HTMLPageBottom</td>
<td>119</td>
<td>380</td>
</tr>
<tr>
<td>HTMLPageTop</td>
<td>119</td>
<td>545</td>
</tr>
<tr>
<td>HTMLTitle</td>
<td>118</td>
<td>125</td>
</tr>
<tr>
<td>HTMLTitleAfterSection</td>
<td>119</td>
<td>636</td>
</tr>
<tr>
<td>HTMLTitleBeforeSection</td>
<td>119</td>
<td>6356</td>
</tr>
<tr>
<td>HTMLUnicode</td>
<td>492</td>
<td>77</td>
</tr>
<tr>
<td>HTMLvleftskip (length)</td>
<td>168</td>
<td>390</td>
</tr>
<tr>
<td>hypcap (package)</td>
<td>747</td>
<td>747</td>
</tr>
<tr>
<td>hypdestopt (package)</td>
<td>747</td>
<td>747</td>
</tr>
<tr>
<td>hypindexref</td>
<td>931</td>
<td>931</td>
</tr>
<tr>
<td>hypernat (package)</td>
<td>748</td>
<td>748</td>
</tr>
<tr>
<td>hyperref (package)</td>
<td>135</td>
<td>469</td>
</tr>
<tr>
<td>hypertoc</td>
<td>918</td>
<td>918</td>
</tr>
<tr>
<td>hypertocfloat</td>
<td>921</td>
<td>921</td>
</tr>
<tr>
<td>hyperxmp (package)</td>
<td>753</td>
<td>753</td>
</tr>
<tr>
<td>hyphenat (package)</td>
<td>753</td>
<td>753</td>
</tr>
<tr>
<td>idxlayout (package)</td>
<td>754</td>
<td>754</td>
</tr>
<tr>
<td>@titlepage</td>
<td>656</td>
<td>77</td>
</tr>
<tr>
<td>ifoddpage (package)</td>
<td>755</td>
<td>755</td>
</tr>
<tr>
<td>ifplatform (package)</td>
<td>197</td>
<td>197</td>
</tr>
<tr>
<td>IgnoreMinipageWidths</td>
<td>129</td>
<td>544</td>
</tr>
<tr>
<td>ImagesDirectory (option)</td>
<td>217</td>
<td>217</td>
</tr>
<tr>
<td>ImagesName (option)</td>
<td>217</td>
<td>217</td>
</tr>
<tr>
<td>ImagesDir (option)</td>
<td>217</td>
<td>217</td>
</tr>
<tr>
<td>@leftmargin</td>
<td>168</td>
<td>390</td>
</tr>
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<td>@leftskip</td>
<td>168</td>
<td>390</td>
</tr>
<tr>
<td>Package</td>
<td>Page Numbers</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>numindex (option)</td>
<td>152, 930</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>839</td>
<td></td>
</tr>
<tr>
<td>octave (package)</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>OpenOffice (program)</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>option:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--shell-escape</td>
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</tr>
<tr>
<td>[lwarpmk]:</td>
<td></td>
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<tr>
<td>htmlglossary</td>
<td>139, 728</td>
<td></td>
</tr>
<tr>
<td>printglossary</td>
<td>139, 728</td>
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</tr>
<tr>
<td>[tocbibind]:</td>
<td></td>
<td></td>
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<tr>
<td>numindex</td>
<td>152, 930</td>
<td></td>
</tr>
<tr>
<td>[toclof]:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>titles</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>BaseJobname</td>
<td>114, 217</td>
<td></td>
</tr>
<tr>
<td>dvipdfm</td>
<td>111, 219</td>
<td></td>
</tr>
<tr>
<td>dvipdfmx</td>
<td>111, 220</td>
<td></td>
</tr>
<tr>
<td>dvips</td>
<td>111, 219</td>
<td></td>
</tr>
<tr>
<td>GlossaryCmd</td>
<td>114, 139, 219, 728</td>
<td></td>
</tr>
<tr>
<td>HomeHTMLFilename</td>
<td>111, 115, 218</td>
<td></td>
</tr>
<tr>
<td>HTMLFilename</td>
<td>111, 115, 218</td>
<td></td>
</tr>
<tr>
<td>HTMLIndexCmd</td>
<td>113, 219</td>
<td></td>
</tr>
<tr>
<td>HTMLlatexCmd</td>
<td>111, 172, 219</td>
<td></td>
</tr>
<tr>
<td>ImagesDirectory</td>
<td>217</td>
<td></td>
</tr>
<tr>
<td>ImagesName</td>
<td>217</td>
<td></td>
</tr>
<tr>
<td>latexmk</td>
<td>111, 115, 219</td>
<td></td>
</tr>
<tr>
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<td>113, 219</td>
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</tr>
<tr>
<td>sectsty</td>
<td>876</td>
</tr>
<tr>
<td>semantic-markup</td>
<td>877</td>
</tr>
<tr>
<td>setspace</td>
<td>878</td>
</tr>
<tr>
<td>shadow</td>
<td>879</td>
</tr>
<tr>
<td>showidx</td>
<td>879</td>
</tr>
<tr>
<td>showkeys</td>
<td>879</td>
</tr>
<tr>
<td>showtags</td>
<td>880</td>
</tr>
<tr>
<td>sidecap</td>
<td>880</td>
</tr>
<tr>
<td>sidenotes</td>
<td>881</td>
</tr>
<tr>
<td>Siunits</td>
<td>882</td>
</tr>
<tr>
<td>siunitx</td>
<td>156, 533, 883</td>
</tr>
<tr>
<td>soul</td>
<td>888</td>
</tr>
<tr>
<td>soulpos</td>
<td>889</td>
</tr>
<tr>
<td>soulfut8</td>
<td>890</td>
</tr>
<tr>
<td>splitidx</td>
<td>890</td>
</tr>
<tr>
<td>srcct</td>
<td>892</td>
</tr>
<tr>
<td>srcctx</td>
<td>892</td>
</tr>
<tr>
<td>stabular</td>
<td>892</td>
</tr>
<tr>
<td>stfloats</td>
<td>893</td>
</tr>
<tr>
<td>struktex</td>
<td>893</td>
</tr>
<tr>
<td>subcaption</td>
<td>166, 894</td>
</tr>
<tr>
<td>subfig</td>
<td>166, 895</td>
</tr>
<tr>
<td>subfigure</td>
<td>899</td>
</tr>
<tr>
<td>supertabular</td>
<td>164, 900</td>
</tr>
<tr>
<td>sympytext</td>
<td>174</td>
</tr>
<tr>
<td>syntonly</td>
<td>901</td>
</tr>
<tr>
<td>tablefootnote</td>
<td>902</td>
</tr>
<tr>
<td>tabs</td>
<td>902</td>
</tr>
<tr>
<td>tabularx</td>
<td>902</td>
</tr>
<tr>
<td>tabularly</td>
<td>903</td>
</tr>
<tr>
<td>tascmac</td>
<td>903</td>
</tr>
<tr>
<td>textarea</td>
<td>905</td>
</tr>
<tr>
<td>textcomp</td>
<td>110, 128, 905</td>
</tr>
<tr>
<td>textfit</td>
<td>909</td>
</tr>
<tr>
<td>textpos</td>
<td>909</td>
</tr>
<tr>
<td>theorem</td>
<td>910</td>
</tr>
<tr>
<td>thinsp</td>
<td>914</td>
</tr>
<tr>
<td>threadcol</td>
<td>914</td>
</tr>
<tr>
<td>threeparttable</td>
<td>914</td>
</tr>
<tr>
<td>threeparttablex</td>
<td>164, 915</td>
</tr>
<tr>
<td>Package</td>
<td>Page</td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
</tr>
<tr>
<td>thumb</td>
<td>916</td>
</tr>
<tr>
<td>thumbs</td>
<td>916</td>
</tr>
<tr>
<td>tikz</td>
<td>158, 917</td>
</tr>
<tr>
<td>titleps</td>
<td>918</td>
</tr>
<tr>
<td>titleref</td>
<td>921</td>
</tr>
<tr>
<td>titlesec</td>
<td>921</td>
</tr>
<tr>
<td>titletoc</td>
<td>923</td>
</tr>
<tr>
<td>titling</td>
<td>137, 925</td>
</tr>
<tr>
<td>tocbasic</td>
<td>929</td>
</tr>
<tr>
<td>tocbibind</td>
<td>151, 152, 930</td>
</tr>
<tr>
<td>todonotes</td>
<td>170, 940</td>
</tr>
<tr>
<td>topcap</td>
<td>942</td>
</tr>
<tr>
<td>tran</td>
<td>942</td>
</tr>
<tr>
<td>transparent</td>
<td>943</td>
</tr>
<tr>
<td>trimclip</td>
<td>943</td>
</tr>
<tr>
<td>trivfloat</td>
<td>166, 944</td>
</tr>
<tr>
<td>truncate</td>
<td>945</td>
</tr>
<tr>
<td>turnthepage</td>
<td>945</td>
</tr>
<tr>
<td>twoup</td>
<td>945</td>
</tr>
<tr>
<td>typearea</td>
<td>946</td>
</tr>
<tr>
<td>typicons</td>
<td>946</td>
</tr>
<tr>
<td>ulem</td>
<td>947</td>
</tr>
<tr>
<td>umoline</td>
<td>948</td>
</tr>
<tr>
<td>underscores</td>
<td>949</td>
</tr>
<tr>
<td>units</td>
<td>156, 949</td>
</tr>
<tr>
<td>unitsdef</td>
<td>950</td>
</tr>
<tr>
<td>upref</td>
<td>951</td>
</tr>
<tr>
<td>url</td>
<td>135, 951</td>
</tr>
<tr>
<td>uspace</td>
<td>952</td>
</tr>
<tr>
<td>varioref</td>
<td>134</td>
</tr>
<tr>
<td>varwidth</td>
<td>226</td>
</tr>
<tr>
<td>verbatim</td>
<td>225</td>
</tr>
<tr>
<td>verse</td>
<td>166, 952, 953</td>
</tr>
<tr>
<td>versionotes</td>
<td>954</td>
</tr>
<tr>
<td>vertbars</td>
<td>954</td>
</tr>
<tr>
<td>vmargin</td>
<td>954</td>
</tr>
<tr>
<td>vowel</td>
<td>955</td>
</tr>
<tr>
<td>vpe</td>
<td>955</td>
</tr>
<tr>
<td>vwcol</td>
<td>956</td>
</tr>
<tr>
<td>wallpaper</td>
<td>958</td>
</tr>
<tr>
<td>watermark</td>
<td>958</td>
</tr>
<tr>
<td>widows-and-orphans</td>
<td>959</td>
</tr>
<tr>
<td>wrapfig</td>
<td>959</td>
</tr>
<tr>
<td>xbmks</td>
<td>960</td>
</tr>
<tr>
<td>xcolor</td>
<td>158, 536, 960</td>
</tr>
<tr>
<td>xechangebar</td>
<td>971</td>
</tr>
<tr>
<td>xellipsis</td>
<td>971</td>
</tr>
<tr>
<td>xetexko-vertical</td>
<td>972</td>
</tr>
<tr>
<td>xfakebold</td>
<td>972</td>
</tr>
<tr>
<td>xfrac</td>
<td>973</td>
</tr>
<tr>
<td>xifthen</td>
<td>225</td>
</tr>
<tr>
<td>xltabular</td>
<td>975</td>
</tr>
<tr>
<td>xltxtra</td>
<td>975</td>
</tr>
<tr>
<td>xmpincl</td>
<td>976</td>
</tr>
<tr>
<td>xparse</td>
<td>171, 224</td>
</tr>
<tr>
<td>xpatch</td>
<td>197</td>
</tr>
<tr>
<td>xpiano</td>
<td>976</td>
</tr>
<tr>
<td>xpinyin</td>
<td>977</td>
</tr>
<tr>
<td>xstring</td>
<td>226</td>
</tr>
<tr>
<td>xtab</td>
<td>164, 977</td>
</tr>
<tr>
<td>xunicode</td>
<td>979</td>
</tr>
<tr>
<td>xurl</td>
<td>980</td>
</tr>
<tr>
<td>xy</td>
<td>980</td>
</tr>
<tr>
<td>zhlineskip</td>
<td>981</td>
</tr>
<tr>
<td>zwpage/layout</td>
<td>981</td>
</tr>
<tr>
<td>command</td>
<td>page</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------</td>
</tr>
<tr>
<td>phfqit (package)</td>
<td>850</td>
</tr>
<tr>
<td>picture (environment)</td>
<td>543, 10522</td>
</tr>
<tr>
<td>pifont (package)</td>
<td>851</td>
</tr>
<tr>
<td>placeins (package)</td>
<td>852</td>
</tr>
<tr>
<td>pldarydshln (package)</td>
<td>852</td>
</tr>
<tr>
<td>Plastex (program)</td>
<td>84</td>
</tr>
<tr>
<td>plex (package)</td>
<td>852</td>
</tr>
<tr>
<td>plexarydshln (package)</td>
<td>853</td>
</tr>
<tr>
<td>plexcolorbl (package)</td>
<td>853</td>
</tr>
<tr>
<td>\P@parnotes@aauto</td>
<td>5416</td>
</tr>
<tr>
<td>polyglossia (package)</td>
<td>769</td>
</tr>
<tr>
<td>\popclose</td>
<td>4845</td>
</tr>
<tr>
<td>\postchaptername</td>
<td>6239</td>
</tr>
<tr>
<td>\postpartname</td>
<td>6237</td>
</tr>
<tr>
<td>\postsectionname</td>
<td>6241</td>
</tr>
<tr>
<td>\prechaptername</td>
<td>6239</td>
</tr>
<tr>
<td>\prelim2e (package)</td>
<td>853</td>
</tr>
<tr>
<td>\prepartname</td>
<td>6237</td>
</tr>
<tr>
<td>\presessionname</td>
<td>6241</td>
</tr>
<tr>
<td>prettyref (package)</td>
<td>854</td>
</tr>
<tr>
<td>preview (package)</td>
<td>854</td>
</tr>
<tr>
<td>\printauthor</td>
<td>380, 6621, 6640</td>
</tr>
<tr>
<td>\printdate</td>
<td>380, 6632, 6642</td>
</tr>
<tr>
<td>\printglossary (option) [larpmpk]</td>
<td>139, 728</td>
</tr>
<tr>
<td>\printindex</td>
<td>2</td>
</tr>
<tr>
<td>PrintIndexCmd (option)</td>
<td>111, 219</td>
</tr>
<tr>
<td>PrintLatexCmd (option)</td>
<td>111, 172, 218</td>
</tr>
<tr>
<td>printlen (package)</td>
<td>226</td>
</tr>
<tr>
<td>\printthanks</td>
<td>380, 382</td>
</tr>
<tr>
<td>\printtitle</td>
<td>380, 6603, 6639</td>
</tr>
</tbody>
</table>

**program:**

[requirement]:

LuLaTeX 88
MathJax 88
pdfcrop 88
pdfLaTeX 88
pdfseparate 88, 93
pdf1cairo 88, 93
pdf1text 88, 93
perl 93
XeLaTeX 88
Adobe 85
AsciIDoc 85
AsciIDoctor 85
AsciIDoctor-LaTeX 85
epstopdf 157, 535
Flare 85
FrameMaker 85
GELLMU 84
GLadTeX 84
Hevea 84
htlatex 84
InDesign 85
LaTeX2HTML 84
latexmk 173
LaTeXXML 84
LibreOffice 85
Linux 122, 213
larpmpk 186, 295
larpmpk epstopdf 157, 535
larpmpk pdftosvg 157, 535
Mac OS 122, 213
Madcap 85
make 175
makeindex 149
MathJax 153, 154, 496
MS-Windows 122, 213
OpenOffice 85
Pandoc 85
pdft1cairo 157, 535
Plastex 84
TeX2page 84
TeX4ht 84
TeXMaths 180
TH 84
Unix 122, 213
Windows 122, 213
Word 85
xindy 150
\project.css (file) 122
\project.larpmpk.conf (file) 253
psfrag (package) 159, 854
psfragx (package) 855
ps-eps (package) 856
ps1tool (package) 160, 856
ps1tricks (package) 159, 857
\pushclose 4818
pxatbegshi (package) 857
pxeverysli (package) 857
pxftnright (package) 857
pxjahyper (package) 858
pythonex (package) 174

Q
\quad 567, 11258
\quad 567, 11253
quotchap (package) 858
quote (environment) 6781
quoting (package) 859

R
\ragged2e (package) 859
\raggedbottom 5072
\raggedleft 10247
\raggedright 10253
\raisebox 10825
\realscripts (package) 860
\ref 8764
\refcheck (package) 861
\refcount (package) 225
\reflectbox 366

1053
General Index

This is an index of instructions and concepts. Look here when wondering how to do something, and check the Troubleshooting Index when something goes wrong.

Symbols

\, ........................................ 127
~ ........................................ 127

A

accents
  in section & file names ............ 360
adapting
class ................................. 185
document ............................ 108
package ............................. 184
affiliation
  multiple authors ................. 136
algorithmicx
  with newfloat, trivfloat .......... 944
array
  mhchem ............................ 807
author
  HTML meta tag .................... 126, 342
  multiple .......................... 136

B

baseline
tabular ................................ 419
bibliography
  HTML page and TOC .............. 137
bitmapped fonts .................... 109
bugs ................................... 188

C

Calibre ............................... 176
chemistry
  Greek symbols ..................... 643
class
  modifying for lwarp ............ 185
code listings ....................... 127
compiling
custom .............................. 172
Computer Modern .................. 109
converting
class .............................. 185
document ........................... 108
package ............................ 184
CSS
  file selection ..................... 121
  lwarp.css .......................... 122

D

danger icon .......................... 196
document
  convert existing .................. 108
  converting ........................ 106
  convert existing .................. 108
  convert existing .................. 108
  DVI latexEX ....................... 104, 109
dynamic math ........................ 155
dynamic math expressions .......... 316
endnotes
  HTML page and TOC ............... 137
EPS image
  converting ........................ 106
  using ................................ 156, 534
EPUB
  conversion software .............. 176
  HTML conversion settings ........ 176, 239
error messages ........................ 188
export
to word processor ................. 178
FAQ ................................... 188
filename
  accent in .......................... 360
  hashed ............................ 500, 525
  international languages ........ 168
  length ................................ 118
  simplify ........................... 133
  underscore in ..................... 115, 128
  unique ............................. 118
font
  Computer Modern .................. 109
  Deja Vu ............................ 109

per HTML page ....................... 121
project-specific changes .......... 122
table ................................. 165
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>title page</td>
<td>124</td>
</tr>
<tr>
<td>shell escape</td>
<td>109</td>
</tr>
<tr>
<td>siunitx</td>
<td></td>
</tr>
<tr>
<td>with TeXMaths</td>
<td>180</td>
</tr>
<tr>
<td>space</td>
<td></td>
</tr>
<tr>
<td>horizontal</td>
<td>127</td>
</tr>
<tr>
<td>between minipages</td>
<td>566</td>
</tr>
<tr>
<td>stack depths</td>
<td>195</td>
</tr>
<tr>
<td>\subtitle</td>
<td>387</td>
</tr>
<tr>
<td>SVG</td>
<td></td>
</tr>
<tr>
<td>converting from PDF or EPS</td>
<td>106</td>
</tr>
<tr>
<td>dynamic math</td>
<td>316</td>
</tr>
<tr>
<td>image processing</td>
<td>295</td>
</tr>
<tr>
<td>math summary</td>
<td>153</td>
</tr>
<tr>
<td>mathsvg option</td>
<td>495</td>
</tr>
<tr>
<td><strong>T</strong></td>
<td></td>
</tr>
<tr>
<td>tabular</td>
<td></td>
</tr>
<tr>
<td>baseline</td>
<td>419</td>
</tr>
<tr>
<td>HTML columnn conversion</td>
<td>420</td>
</tr>
<tr>
<td>macros inside</td>
<td>161</td>
</tr>
<tr>
<td>\multicolumn with \multirow</td>
<td>163</td>
</tr>
<tr>
<td>\multicolumn \selectcell and \selectcell</td>
<td>163</td>
</tr>
<tr>
<td>tikz</td>
<td></td>
</tr>
<tr>
<td>catcodes</td>
<td>917</td>
</tr>
<tr>
<td>dollar redefined</td>
<td>917</td>
</tr>
<tr>
<td>title</td>
<td></td>
</tr>
<tr>
<td>HTML meta tag</td>
<td>125</td>
</tr>
<tr>
<td>titlepage</td>
<td>342</td>
</tr>
<tr>
<td>\subtitle and \published</td>
<td>387</td>
</tr>
<tr>
<td>tracing log</td>
<td>234</td>
</tr>
<tr>
<td>trivfloat</td>
<td></td>
</tr>
<tr>
<td>with newfloat, algorithmicx</td>
<td>944</td>
</tr>
<tr>
<td>troubleshooting</td>
<td>188</td>
</tr>
<tr>
<td>HTML debug comments</td>
<td>234</td>
</tr>
<tr>
<td>tracing log</td>
<td>234</td>
</tr>
<tr>
<td>type 1 vector fonts</td>
<td>109</td>
</tr>
<tr>
<td>type 3 bitmapped fonts</td>
<td>109</td>
</tr>
<tr>
<td><strong>U</strong></td>
<td></td>
</tr>
<tr>
<td>underscore</td>
<td></td>
</tr>
<tr>
<td>filename</td>
<td>115</td>
</tr>
<tr>
<td>128</td>
<td></td>
</tr>
<tr>
<td>Unicode</td>
<td></td>
</tr>
<tr>
<td>enhanced coverage</td>
<td>109</td>
</tr>
<tr>
<td>file &amp; section names</td>
<td>360</td>
</tr>
<tr>
<td>input characters</td>
<td>211</td>
</tr>
<tr>
<td>selection</td>
<td>109</td>
</tr>
<tr>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td>enhanced coverage</td>
<td>109</td>
</tr>
<tr>
<td>file &amp; section names</td>
<td>360</td>
</tr>
<tr>
<td>index</td>
<td>110</td>
</tr>
<tr>
<td>locale</td>
<td>175</td>
</tr>
<tr>
<td>selection</td>
<td>109</td>
</tr>
<tr>
<td>utility</td>
<td></td>
</tr>
<tr>
<td>programs</td>
<td>87</td>
</tr>
<tr>
<td><strong>V</strong></td>
<td></td>
</tr>
<tr>
<td>vector fonts</td>
<td>109</td>
</tr>
<tr>
<td>verbatim</td>
<td></td>
</tr>
<tr>
<td>code and HTML tags</td>
<td>127</td>
</tr>
<tr>
<td>viewport</td>
<td></td>
</tr>
<tr>
<td>HTML meta tag</td>
<td>373</td>
</tr>
<tr>
<td><strong>W</strong></td>
<td></td>
</tr>
<tr>
<td>warning icon</td>
<td>196</td>
</tr>
<tr>
<td>word processor</td>
<td></td>
</tr>
<tr>
<td>conversion recommendations</td>
<td>181</td>
</tr>
<tr>
<td>HTML conversion settings</td>
<td>178</td>
</tr>
<tr>
<td>239, 240</td>
<td></td>
</tr>
<tr>
<td>section headings</td>
<td>181</td>
</tr>
<tr>
<td><strong>X</strong></td>
<td></td>
</tr>
<tr>
<td>XeLaTeX</td>
<td></td>
</tr>
<tr>
<td>detection</td>
<td>197</td>
</tr>
<tr>
<td>file &amp; section names</td>
<td>360</td>
</tr>
<tr>
<td>xindy</td>
<td></td>
</tr>
<tr>
<td>and hyperref</td>
<td>140</td>
</tr>
<tr>
<td>customizing</td>
<td>150</td>
</tr>
<tr>
<td>xpars e</td>
<td></td>
</tr>
<tr>
<td>warnings</td>
<td>171</td>
</tr>
</tbody>
</table>
# Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

Entries with higher page numbers are often duplicates of entries with lower page numbers, as the same warning may occur within the user manual and again within the source code for a given package.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>abstract</td>
<td>babel</td>
<td>Calibre</td>
</tr>
<tr>
<td>missing toc</td>
<td>French</td>
<td>EPUB conversion</td>
</tr>
<tr>
<td>acronym</td>
<td>backref</td>
<td>caption</td>
</tr>
<tr>
<td>multiply-defined labels</td>
<td>bibliography</td>
<td>numbering</td>
</tr>
<tr>
<td>\AddSubtitlePublished</td>
<td>\etalchar</td>
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</table>

1061
<table>
<thead>
<tr>
<th>Optional Arguments</th>
<th>157, 535</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>108, 156, 534</td>
</tr>
<tr>
<td>Math</td>
<td>189</td>
</tr>
<tr>
<td>Appears as HTML code</td>
<td>100, 190</td>
</tr>
<tr>
<td>Chemformula</td>
<td>170</td>
</tr>
<tr>
<td>Custom Macros</td>
<td>189</td>
</tr>
<tr>
<td>Dynamic</td>
<td>316</td>
</tr>
<tr>
<td>Equation Numbering</td>
<td>156, 828</td>
</tr>
<tr>
<td>K</td>
<td>167, 765</td>
</tr>
<tr>
<td>Keyfloat</td>
<td>128, 395</td>
</tr>
<tr>
<td>L</td>
<td>190</td>
</tr>
<tr>
<td>Label</td>
<td>134, 189</td>
</tr>
<tr>
<td>\nameref empty</td>
<td>134, 189</td>
</tr>
<tr>
<td>Characters</td>
<td>134, 189</td>
</tr>
<tr>
<td>\LaTeXimageFontSizeName</td>
<td>521</td>
</tr>
<tr>
<td>Leaders not followed by proper glue</td>
<td>188</td>
</tr>
<tr>
<td>LibreOffice</td>
<td>178</td>
</tr>
<tr>
<td>Ligatures</td>
<td>110</td>
</tr>
<tr>
<td>Linux</td>
<td>122, 213</td>
</tr>
<tr>
<td>List empty item</td>
<td>128, 395</td>
</tr>
<tr>
<td>Lists</td>
<td>190</td>
</tr>
<tr>
<td>List empty item</td>
<td>128, 395</td>
</tr>
<tr>
<td>Label Formatting</td>
<td>395</td>
</tr>
<tr>
<td>Locale</td>
<td>175</td>
</tr>
<tr>
<td>Longtable</td>
<td>163</td>
</tr>
<tr>
<td>\endhead, etc.</td>
<td>129</td>
</tr>
<tr>
<td>\tbox</td>
<td>888</td>
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</tr>
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<td>788</td>
</tr>
<tr>
<td>LuaTEX</td>
<td>172</td>
</tr>
<tr>
<td>LWRbackslash</td>
<td>172</td>
</tr>
<tr>
<td>LWRdollar</td>
<td>172</td>
</tr>
<tr>
<td>LWRhash</td>
<td>172</td>
</tr>
<tr>
<td>LWRopquote</td>
<td>172</td>
</tr>
<tr>
<td>LWRopseq</td>
<td>172</td>
</tr>
<tr>
<td>LWRpercent</td>
<td>172</td>
</tr>
<tr>
<td>M</td>
<td>122, 213</td>
</tr>
<tr>
<td>Makeglossaries</td>
<td>122, 213</td>
</tr>
<tr>
<td>MakeLabel</td>
<td>395</td>
</tr>
<tr>
<td>Manyfoot</td>
<td>136, 792</td>
</tr>
<tr>
<td>Marginpar</td>
<td>128, 549</td>
</tr>
<tr>
<td>Minipage</td>
<td>130, 544</td>
</tr>
<tr>
<td>Alignment</td>
<td>130, 544</td>
</tr>
<tr>
<td>Horizontal space between</td>
<td>566</td>
</tr>
<tr>
<td>In a span</td>
<td>129, 544</td>
</tr>
<tr>
<td>Inline</td>
<td>129, 543</td>
</tr>
<tr>
<td>Multicols, width in</td>
<td>129, 544</td>
</tr>
<tr>
<td>Size</td>
<td>129, 544</td>
</tr>
<tr>
<td>Tabular, width in</td>
<td>129, 544</td>
</tr>
<tr>
<td>Misplaced \noalign</td>
<td>164, 784</td>
</tr>
<tr>
<td>Tabular</td>
<td>162, 403</td>
</tr>
<tr>
<td>Rules</td>
<td>162, 403</td>
</tr>
<tr>
<td>Misplaced \omit</td>
<td>237</td>
</tr>
<tr>
<td>Tabular</td>
<td>164, 767</td>
</tr>
<tr>
<td>Movebox</td>
<td>165, 667</td>
</tr>
<tr>
<td>Floatrow</td>
<td>166, 709</td>
</tr>
<tr>
<td>Frames</td>
<td>131</td>
</tr>
<tr>
<td>Supertabular</td>
<td>164, 900, 977</td>
</tr>
</tbody>
</table>
tabular macros ................................ 161, 316, 402
Missing $ inserted
  filename or URL ............................. 188
morewrites .................................. 188
morewrites ................................. 151
\mrowcell ................................. 163
MS-WINDOWS ................................ 122, 213
multiply-defined labels
  acronym ................................... 586
\multirow and \multicolumn ................. 163, 815
\multirow \mrowcell and \mcolrowcell .... 163
newinclude .................................. 169
newtxmath ................................... 156
nicefrac ...................................... 156
No room for a new \write ........................ 188
nomencl ...................................... 140
ntheorem ..................................... 828
font ........................................ 155, 828
numbering ................................... 156, 828
operating system ............................. 122, 213
options clash
  memoir ..................................... 167, 985
overpic ...................................... 160, 840
package
  version numbers with memoir ............... 167, 985
page
  inaccessible ................................ 117
page counter
  references .................................. 134
  SVG images ................................ 100, 190
page numbers ................................. 134, 190, 540
pdftex ....................................... 159, 848
perltex ...................................... 174
pnote
  numbering .................................. 136, 850
polyglossia
  Undefined control sequence ................. 169
poppler
  Syntax Warning (ligature) ................. 717
PrintIndexCmd ............................... 113
psfrag ...................................... 159
ps manipulate \psfrag ......................... 160, 856
pstricks .................................... 159, 857
pythontex ................................... 174
reference
  % character between arguments .......... 190
empty link .................................. 134, 189
incorrect link ................................ 190
label characters ............................. 134, 189
missing or incorrect ......................... 189
page number ................................ 134, 190, 540
repeatindex .................................. 863
\interface ................................... 175
\sample_projects.css
overwritten .................................. 122
\savebox .................................... 129
\sbox ....................................... 129
\scale \includegraphics option............... 108, 156, 534
sectioning
  accents .................................... 360
duplicate name ................................ 133
international language ....................... 168
macro in name ................................ 133, 189
math in name ................................ 108, 134, 152, 494
missing ....................................... 117
starred section ................................ 137
word processor import ....................... 181
\siunitx
  MathJAX .................................... 156, 533, 883
with TeXMaths ................................ 180
\siunitx .................................... 156, 533, 883
\s\math ................................. 154, 497
S column .................................... 162, 403
tabular S and s columns ....................... 156, 533, 883
\splitidx \\thepage and \AtWriteToIndex ..... 142, 890
subcaption
  numbering .................................. 166
\subfig
  options .................................... 166, 895
with floatrow ................................. 166, 709
SVG image
  appears as HTML code ........................ 100, 190
incorrect .................................... 100, 190
math incorrect ................................ 316
out of order .................................. 100, 190
sympytex .................................... 175
\Syntax Warning (ligature) .................. 717
\tabbing
  math ........................................ 160, 393
\table
  macro in name ................................ 189
  numbering .................................. 788
Table of Contents
missing ....................................... 119
\tabular
  * column specification .................... 161, 403
baselines ........................................ 419

corrupt rows .................................. 161, 402, 451
\endhead, \endfoot, \endlastfoot
............................................ 163, 783
inside an environment ....................... 161, 402, 451
\kill ........................................... 164, 784
macro inside .................................. 161, 402
Misplaced \noalign ......................... 162, 403
Misplaced alignment tab character & macros ........................................ 161, 402
rules ............................................ 316
\multicolumn with \multirow ................ 163
\multirow \mrowcell and \mcolrowcell
............................................ 163
\newcolumntype ............................ 162, 403
numbering ..................................... 975
row corruption .............................. 161, 402
rules ............................................ 162, 403
S column ....................................... 162, 403
texmaths ....................................... 180
txtcomp
\&, \<, \> ................................. 127, 554
\bftseries etc ................................ 127, 554
corrupted ..................................... 109
titling
\author and authblk ........................... 380, 381
\threeparttablex ............................. 164
tikz
\begin{tikzpicture} ......................... 155
matrices, & .................................. 158, 917
title
affiliation ................................... 381
newlines ...................................... 125
\thanks ....................................... 380
tocloft
\chaptertitles ............................... 138, 152, 600, 933
todonotes .................................... 170, 789, 940
\texttt{tracing\l warp} ....................... 191
\texttt{tram} ................................ 942
transparent ................................... 943
\texttt{Un} ................................. 943
Undef\c{e}ned control sequence
polyglossia ................................ 169
unicode
fonts .......................................... 109
\texttt{UTF-8 locale} ......................... 175
units .......................................... 156
unix .......................................... 122, 213
url
\texttt{Missing $ inserted} ................. 188
\texttt{usebox} ................................ 129
\texttt{UTF-8 locale} ......................... 175
verbatim
\texttt{footnote} .............................. 136
framed ........................................ 132, 690
\texttt{VerbatimFootnotes} ................. 136, 691, 697
verse
\texttt{spacing} ............................... 169, 390, 952
\texttt{version numbers} ................. 167, 985
word processor
\texttt{import} ............................... 178
sectioning headings ....................... 181
\texttt{warpall} ............................. 188
\texttt{warpHTML} ......................... 123, 188
\texttt{warpprint} ......................... 123, 188
windows ...................................... 122, 213
\texttt{XeLaTeX} ............................. 109
\texttt{xfakebold} ......................... 972
\texttt{xfractions} ......................... 973
\texttt{xindy}
\texttt{hyperref} ........................... 150
options
\texttt{HTMLIndexCmd} ....................... 113
\texttt{LaTeXIndexCmd} ..................... 113
\texttt{PrintIndexCmd} ..................... 113
\texttt{xtabular}
\texttt{numbering} ......................... 975
\texttt{xparsize} ........................... 171
\texttt{xstring} ............................. 226
xy .............................................. 980

1065
# Index of Indexes

<table>
<thead>
<tr>
<th>C</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change History</td>
<td>Index of Objects</td>
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<td>--------------------------------------</td>
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<td>1010</td>
<td>1037</td>
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</table>

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<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Index</td>
<td>Troubleshooting Index</td>
</tr>
<tr>
<td>........................................</td>
<td>........................................</td>
</tr>
<tr>
<td>1057</td>
<td>1061</td>
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</table>