The Serbian Latin Language in the babel system

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The Serbian Latin Language

The file serbian.dtx defines all the language definition macros for the Serbian language, typeset in a Latin script.

For this language the character " is made active. In table 1 an overview is given of its purpose. One of the reasons for this is that in the Serbian language some special characters are used.

"c  \v c, also implemented for the lowercase and uppercase s and z.
"d \dj, also implemented for "D.
"-  An explicit hyphen sign, allowing hyphenation in the rest of the word; inserts a hyphen which is repeated at the beginning of the next line (recommended to use for compound words with hyphen).
"!  Disables ligature at this position.
""  Similar to "- but prints no hyphen sign.
"~  Compound word mark without a breakpoint, prints hyphen prohibiting hyphenation at the point.
"=  A compound word mark with a breakpoint, prints hyphen allowing hyphenation in the composing words.
"'  German opening double quote (looks like ,,).
";  German closing double quote (looks like “)." " (if the quotes attribute is used) Closing double quote (looks like “)."<  French opening double quote (looks like <<).
">  French closing double quote (looks like >>).

Table 1: The extra definitions made by serbian.ldf

Macro \today prints the date in Serbian. Alternatively, if attribute đatei is used, \today prints the current date, but prints ‘juni’ and ‘juli’ for ‘June’ and ‘July’. If you prefer to use ‘juni’ and ‘juli’ instead of default ‘jun’ and ‘jul’, use the datei attribute. Also, the \today* macro prints the date without dot after the year (used when after the date is the punctuation mark, such as comma). Alternatively, the commands \todayRoman and \todayRoman* prints the current date using Roman numerals for months.

Apart from defining shorthands we need to make sure that the first paragraph of each section is indented. Furthermore the following new math operators are defined: \sh, \ch, \ctg, \arctg, \arcctg, \th, \cth, \arsh, \arch, \arth, \arch, \cosec, \Prob, \Expect, \Variance, \arcsec, \arccosec, \sech, \cosech, \arsech, \arcosech, \NZD, \nzd, \NZS, \nzs.

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By default, a ekavian spelling is enabled. For ijekavian spelling can be enabled by setting the attribute to ijekav. To set an attribute, put the \languageattribute macro within a document preamble after babel, for example,
\usepackage[english,serbian]{babel}
\languageattribute{serbian}{ijekav}

Setting the ijekav attribute changes the built-in strings (caption names). For example, the part will be entitled as ‘Deo’ by default and as ‘Dio’ if the Serbian language attribute is set to ijekav. Same result can be achieved using a modifier as follows:
\usepackage[english,serbian.ijekav]{babel}

Using a modifier in a package option is often better. A modifier is set after the language name, and is prefixed with a dot (only when the language is set as package option — neither global options nor the main key accept them). Also, it’s possible to use more than one attribute:
\usepackage[english,serbian.ijekav.datei.quotes]{babel}

The file serbian.ldf is designed to work both with legacy non-unicode (8-bit) and new Unicode encodings of the source document files (input encodings) and of the font files (font encodings).

The code
The macro \LdfInit takes care of preventing that this file is loaded more than once, checking the category code of the @ sign, etc.
\LdfInit{serbian}{captionsserbian}

First, we check if LuaLATEX or XeLATEX is running. If so, we set boolean key \if@srb@uni@ode to true.
\ifdefined\if@srb@uni@ode
\PackageError{babel}{if@srb@uni@ode already defined.}
\relax
\fi
\newif\if@srb@uni@ode
\ifdefined\luatexversion \@srb@uni@odetrue \else
\ifdefined\XeTeXrevision \@srb@uni@odetrue \fi\fi

Check if hyphenation patterns for the Serbian language have been loaded in language.dat. Namely, we check for the existence of \l@serbian. If it is not defined, we declare Serbian as dialect for the default language number 0 which almost for sure is English.
\ifx\l@serbian\@undefined
\@nopatterns{Serbian}
\adddialect\l@serbian0
\fi

For Serbian the " character is made active. This is done once, later on its definition may vary. Other languages in the same document may also use the " character for shorthands; we specify that the Serbian group of shorthands should be used. We save the original double quote character in the \dq macro to keep it available. The shorthand "- should be used in places where a word contains an explicit hyphenation character. According to the rules of the Serbian language, when a word break occurs at an explicit hyphen it must appear both at the end of the first line and at the beginning of the second line.
\initiate@active@char{"}
The macro \captionsserbian defines all strings used in the four standard document classes provided with \LaTeX.

\addto\captionsserbian{%
  \def\prefacename{Predgovor}%
  \def\refname{Literatura}%
  \def\abstractname{Sa\v zetak}%
  \def\chaptername{Glava}%
  \def\appendixname{Dodatak}%
  \def\contentsname{Sadr\v zaj}%
  \def\listfigurename{Spisak slika}%
  \def\listtablename{Spisak tabela}%
  \def\indexname{Indeks}%
  \def\figurename{Slika}%
  \def\tablename{Tabela}%
  \def\partname{Deo}%
  \def\enclname{Prilozi}%
  \def\ccname{Kopije}%
  \def\headtoname{Prima}%
  \def\pagename{strana}%
  \def\seename{vidi}%
  \def\alsoname{vidi tako\dj e}%
  \def\proofname{Dokaz}%
  \def\glossaryname{Re\vcnik}%
}\fi

\if@srb@uni@ode
\addto\captionsserbian{%
  \def\abstractname{Sažetak}%
  \def\contentsname{Sadržaj}%
  \def\alsoname{vidi takođe}%
  \def\glossaryname{Rečnik}%
}\fi

\let\captionsserbian@ijekav=\captionsserbian

\addto\captionsserbian@ijekav{%
  \def\partname{Dio}%
  \def\glossaryname{Rječnik}%
}\fi

\if@srb@uni@ode
\addto\captionsserbian@ijekav{%
  \def\glossaryname{Rje\vcnik}%
}\fi
The macro \dateserbian redefines the commands \today, \today*, \todayRoman and \todayRoman* to produce Serbian dates.

\def\dateserbian{%
    \def\month@serbian{\ifcase\month\or januar\or februar\or mart\or april\or maj\or jun\or jul\or avgust\or septembar\or oktobar\or novembar\or decembar\fi}%
    \def\today{\number\day.~\month@serbian\ \number\year\@ifstar{}{.}}%
    \def\todayRoman{\number\day.~\@Roman\month~\number\year\@ifstar{}{.}}}%

\let\dateserbian@datei=\dateserbian
\addto\dateserbian@datei{%
    \def\month@serbian@datei{\ifnum\month=6 juni\else\ifnum\month=7 juli\else\month@serbian\fi\fi}%
    \def\today{\number\day.~\month@serbian@datei\ \number\year\@ifstar{}{.}}}%
}

Serbian typesetting requires frenchspacing. So, we add commands to \extrasserbian and \noextrasserbian to turn it on and off, respectively.

\addto\extrasserbian{\bbl@frenchspacing}
\addto\noextrasserbian{\bbl@nonfrenchspacing}

In Serbian the first paragraph of each section should be indented.

\let\@aifORI\@afterindentfalse
\def\bbl@serbianindent{\let\@afterindentfalse\@afterindenttrue\@afterindenttrue}
\def\bbl@nonserbianindent{\let\@afterindentfalse\@aifORI\@afterindentfalse}
\addto\extrasserbian{\bbl@serbianindent}
\addto\noextrasserbian{\bbl@nonserbianindent}

An ijekav attribute changes default behavior and activates an alternative set of captions suitable for typesetting in ijekavian dialect. The quotes attribute changes the "'" shorthand to produce " as closing quote, instead the traditional “ ‘” quote of Serbian language. Also, the datei attribute will produce ‘juni’ and ‘juli’ instead ‘jun’ and ‘jul’ for date.

\bbl@declare@ttribute{serbian}{ijekav}{%
\PackageInfo{babel}{Serbian attribute set to ijekav}%
\let\captionsserbian=\captionsserbian@ijekav}%
\addto\captions{\captionsserbian}
\begin{document}

...
Some math functions in Serbian math books have other names: e.g. $\text{sinh}$ in Serbian is written as $\text{sh}$ etc. So we define a number of new math operators.

\begin{verbatim}
\def\sh{$\mathop{\operator@font sh}\nolimits$
\def\ch{$\mathop{\operator@font ch}\nolimits$
\def\tg{$\mathop{\operator@font tg}\nolimits$
\def\ctg{$\mathop{\operator@font ctg}\nolimits$
\def\arctg{$\mathop{\operator@font arctg}\nolimits$
\def\arcctg{$\mathop{\operator@font arcctg}\nolimits$
\def\th{$\text{th}$
\def\cosec{$\mathop{\operator@font cosec}\nolimits$
\def\arcsec{$\mathop{\operator@font arcsec}\nolimits$
\def\arccosec{$\mathop{\operator@font arccosec}\nolimits$
\def\sech{$\mathop{\operator@font sech}\nolimits$
\def\cosech{$\mathop{\operator@font cosech}\nolimits$
\def\arsech{$\mathop{\operator@font arsech}\nolimits$
\def\arcosech{$\mathop{\operator@font arcosech}\nolimits$
\def\Prob{$\mathop{\kern\z@\mathsf{P}}\nolimits$
\def\Expect{$\mathop{\kern\z@\mathsf{E}}\nolimits$
\def\Variance{$\mathop{\kern\z@\mathsf{D}}\nolimits$
\def\nzs{$\mathop{\operator@font nzs}\nolimits$
\def\nzd{$\mathop{\operator@font nzd}\nolimits$
\def\NZS{$\mathop{\operator@font NZS}\nolimits$
\def\NZD{$\mathop{\operator@font NZD}\nolimits$
\end{verbatim}

The macro \ldf@finish takes care of looking for a configuration file, setting the main language to be switched on at \begin{document} and resetting the category code of @ to its original value.

\ldf@finish{serbian}
\end{verbatim}