The syllogism package

release 1.2

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1 Introduction

The syllogism package provides a simple way for neatly typesetting syllogisms and syllogistic-like arguments, composed of two premisses and a conclusion. It is fully configurable, allowing the user to tweak the various distances, line widths, and other options.

2 Changelog

v. 1.2 (25/10/2008) Changed the typesetting engine of \syllog.
Fixed a problem with \texttt{syllogTAC}. (Thanks to Carlos Cortissoz for noticing this.)

\textbf{v. 1.1 (02/06/2008)} Added a syllogism counter (\texttt{c:syl}) and two new commands, \texttt{syllogC} and \texttt{syllogTAC}.

\section{How to use it}

You must set \texttt{\usepackage[options]{syllogism}} before the \texttt{\begin{document}} command. The available options are described in section §4. To install \texttt{syllogism}, just place it anywhere \LaTeX can find it (e.g., /texmf-local/tex/latex/syllogism).

\subsection{\texttt{syllog}}

The main command provided by the package is \texttt{syllog}, whose syntax is:

\begin{verbatim}
\texttt{syllog[pre-text]{first premiss}{second premiss}{conclusion}},
\end{verbatim}

in which the optional parameter \texttt{pre-text} is the text typeset to the left of the syllogism; \texttt{first premiss}, \texttt{second premiss} and \texttt{conclusion} correspond respectively to the the text of the first and second premisses and the conclusion.

For example, the following command

\begin{verbatim}
\texttt{syllog{Every man except Socrates is musician} \%
{Socrates is a man} \%
{Socrates is not a musician}},
\end{verbatim}

will produce this output:

```
Every man except Socrates is musician
Socrates is a man.
\hline Socrates is not a musician \therefore.
```

If you choose to use the optional parameter, as in:

\begin{verbatim}
\texttt{syllog[(S1)]{Every man except Socrates is musician} \%
{Socrates is a man} \%
{Socrates is not a musician}},
\end{verbatim}

you should get the following result:

```
(S1) Every man except Socrates is musician
Socrates is a man.
\hline Socrates is not a musician \therefore.
```
3.2 \texttt{\textbackslash syllogC}

The package also provides the command \texttt{\textbackslash syllogC} which includes an automatic numeration feature. The syntax for this command is similar to the previous one, but does not take the optional parameter.\footnote{The label for \texttt{\textbackslash syllogC} is defined internally through the following instruction: \texttt{\newcommand{\syl}{($\arabic{c:syl}$)\xspace}}. It may be thus redefined as usual in \LaTeX. For example, to remove the ‘S’ in the label, use the following: \texttt{\renewcommand{\syl}{($\arabic{c:syl}$)\xspace}}.}

\texttt{\textbackslash syllogC\{first premiss\}\{second premiss\}\{conclusion\}},

For example, the following code

\begin{verbatim}
\syllogC{Every man except Socrates is musician} \%
\{Socrates is a man\} \%
\{Socrates is not a musician\},
\end{verbatim}

will produce this output (provided that it has not been called elsewhere before):

\begin{verbatim}
(S1)
\begin{tabular}{c}
Every man except Socrates is musician \\
Socrates is a man. \\
Socrates is not a musician \\
\end{tabular}
\end{verbatim}

\[
\therefore
\]

The counter associated with \texttt{\textbackslash syllogC} is \texttt{c:syl}, which may be reset or stepped with in the usual ways.

3.3 \texttt{\textbackslash syllogTA}

The command \texttt{\textbackslash syllogTA} works almost exactly as \texttt{\textbackslash syllog}, the only difference being that it adds some text to the second premiss and the conclusion. Its syntax is:

\texttt{\textbackslash syllogTA\{pre-text\}\{first premiss\}\{second premiss\}\{conclusion\}},

As for today, \texttt{syllogism} supports three languages for this task: English, Spanish and Latin. The default language is English. (The language may be changed through a package option, see §4 below). The added text for each language is shown in Table 1, below.

For example, the following code:

\begin{verbatim}
\syllogTA{Every man except Socrates is musician} \%
\{Socrates is a man\} \%
\{Socrates is not a musician\},
\end{verbatim}

\[
\]

\[
\]

\[
\]

\[
\]

\[
\]
will be typeset thus:

\begin{itemize}
\item Every man except Socrates is musician; 
\item but Socrates is a man. 
\end{itemize}

Therefore Socrates is not a musician. ∴

Please note that the text may be defined through several commands provided also by \texttt{syllogism} (see below §5.2).

\subsection*{3.4 \texttt{syllogTAC}}

The command \texttt{syllogTAC}, which adds an automatic counter to \texttt{syllogTA}.\footnote{See note 1, above.}

Its syntax is:

\texttt{syllogTAC\{first premiss\}\{second premiss\}\{conclusion\}},

\section*{4 Package options}

The package options for \texttt{syllogism} are four, corresponding the language of the added text (used only with the commands \texttt{syllogTA} and \texttt{syllogTAC}):

\begin{itemize}
\item english
\item spanish
\item latin1
\item latin2
\end{itemize}

The option \texttt{english} is the default one. As stated previously, the text content selected by these options may be changed by one or more of several commands provided in the package (see below §5.2).
5 Additional commands

5.1 Length-related commands
\setpresyl Command for changing the horizontal space to the right of the syllogism (def=2em).
\setsylablabel Command for changing the horizontal space between the label and the syllogism (def=1em).
\setsylrhw Command for changing the ‘width’ of the rule (def=.3pt).
\setsylsepa Command for changing the vertical space before the syllogism (def=\baselineskip).
\setsylsepb Command for changing the vertical space after the syllogism (def=\baselineskip).
\setsylsep Command for changing the vertical space both before and after the syllogism to the same value.

5.2 Text-related commands
These commands change the default text used with \syllogTA and \syllogTAC. The defaults are set by the package options (see above §4).
\setsylsed Command for changing the text that begins the second premiss.
\setsylrgo Command for changing the text that begins the conclusion.
\setsylpuncpa Command for changing the punctuation after the first premiss (def=;).
\setsylpuncpb Command for changing the punctuation after the second premiss (def=.).
\setsylpuncc Command for changing the punctuation after the conclusion (def=.).
\setsylrgosign Command for changing the sign that goes after the conclusion text (def=\text{".}).

6 Future features
Future features depend on user feedback and requests. However, support for more languages and automatic language selection (through babel) is envisaged.
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