The ifmtarg package

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1 Documentation

The ifmtarg package provides an if–then–else programmer's command \@ifmtarg for testing for an empty macro argument. 'Empty' here refers to an argument of zero or more spaces only. The command is fully expandable; its syntax is:

\@ifmtarg{⟨arg⟩}{⟨Code for arg empty⟩}{⟨Code for arg not empty⟩}

A variation is provided, \@ifnotmtarg, to be used when only the 'false' branch is required. It is slightly more efficient when code is only required for a non-empty argument.

\@ifnotmtarg{⟨arg⟩}{⟨Code for not empty⟩}

2 Examples

\newcommand\isempty[1]{\@ifmtarg{#1}{YES}{NO}}
\isempty{} \rightarrow YES
\isempty{ } \rightarrow YES
\isempty{E} \rightarrow NO
\isempty{ E } \rightarrow NO

\newcommand\isnotempty[1]{\@ifnotmtarg{#1}{YES}}
\isnotempty{} \rightarrow \ YES
\isnotempty{ } \rightarrow \ YES
\isnotempty{E} \rightarrow \ NO
\isnotempty{ E } \rightarrow \ NO

3 History

(Peter's comments follow.) In an Email to me on 13 March 2000, Donald Arseneau pointed out some failings with my original definition of the \@ifmtarg command:

\newcommand{\@ifmtarg}[3]{% 
  \edef{\@mtarg{\zap@space#1 \@empty}}% 
  \ifx{\@empty}{\@mtarg}{\#2\else \#3\fi} 
}

It works most of the time correctly but Donald showed that it can give unexpected results under conditions that I had not thought of. He suggested the coding that now appears in the package above for the \@ifmtarg and \@ifnotmtarg commands. For a discussion on detecting empty arguments see CTAN/info/aro-bend/answer.002

Change History

v1.2a New maintainer (Will Robertson)
v1.2b Typo in documentation example code

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\footnotetext{If you need a command to test for emptiness that doesn't include spaces, use the \tl_if_empty:nTF conditional from the expl3 package. \@ifmtarg is equivalent to expl3's \tl_if_blank:nTF.}

\footnotetext{http://www.latex-project.org/lppl.txt}
4 Implementation

\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{ifmtarg}[2018/04/16 v1.2b check for an empty argument]
\begingroup
\catcode`\Q=3
\long\gdef\@ifmtarg#1{\@xifmtarg#1QQ\@secondoftwo\@firstoftwo\@nil}
\long\gdef\@xifmtarg#1#2Q#3#4#5\@nil{#4}
\long\gdef\@ifnotmtarg#1{\@xifmtarg#1QQ\@firstofone\@gobble\@nil}
\endgroup
\endinput