Custom Macro in LaTeX

Yohan Fajar Sidik
yohanfajarsidik@live.com

April 23, 2018

Contents

The package is stored in **yohan_sty.tex**.

1. Figure

1.1. One Figure

1.1.1. Code Listings

```
\newcommand{\fig}[4]{
\begin{figure}[#1]
\centering
\includegraphics[scale=#2]{figures/#3}
\caption{#4}
\label{fig:#3}
\end{figure}
}
```

1.1.2. Syntax

The figure call is

```
\fig{position}{scale}{filename.ext}{caption}
```

The syntax reference is

```
\fref{fig:filename.ext}
```

1.1.3. Example

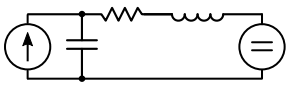


Fig. 1: ini contoh aja

Figure 1

1.2. Two Sub Figures

1.2.1. Code Listings

```
\makeatletter
\newcommand{\figs}[7]{
\begin{figure}[#1]
\centering
\hspace{1cm}
%\addtocounter{subfigure}{-1}
\vspace{0.5cm}
\subfloat[#4]{
\includegraphics[scale=#2]{figures/#3}
\label{fig:#3}
```

```
}
\subfloat[#6]{
\includegraphics[scale=#2]{figures/#5}
\label{fig:#5}
}
\caption{#7}
\label{fig:#3all}
\end{figure}
}
\makeatother
```

1.2.2. Syntax

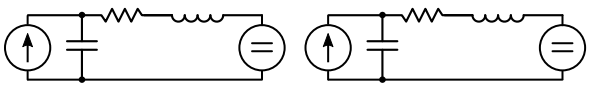
The figure call is

```
\fig{position}{scale}{filename1.ext}{caption1}
      {filename2.ext}{caption2}
      {general caption}
```

The syntax reference is

```
\fref{fig:filename1.ext}
\fref{fig:filename2.ext}
\fref{fig:filename1.extall}
```

1.2.3. Example



(a) contoh a (b) contoh b

Fig. 2: contoh 2 gambar

refers to fig a: Fig. 2a
refers to fig b: Fig. 2b
refers to all figures: Fig. 2

2. Equation

2.1. Code Listings

```
\newcommand{\eq}[1]{
\begin{equation}
\centering
\input{equations/#1}
\label{eq:#1}
```

```
\end{equation}
}
```

2.2. Syntax

The equation call is

```
\eq{filename}
```

The syntax reference is

```
\fref{eq:filename}
```

2.3. Example

$$v_{\mathrm{gd}} = L\frac{di_{\mathrm{Ld}}}{dt} + Ri_{\mathrm{Ld}} - \omega L i_{\mathrm{Lq}} + v_{\mathrm{md}} \tag{1}$$

The equation is given by equation (1)

3. Table

3.1. Code Listings

```
\newcommand{\tbl}[2]{
\begin{table}[tbh!]
\centering
\pgfplotstabletypeset[
every head row/.style={before row=\toprule,after row=\midrule},
every last row/.style={after row=\bottomrule},
display columns/0/.style={column type = {l}},
display columns/1/.style={column type = {l}},
display columns/2/.style={column type = {l}},
string type,
]{tables/#1}
\caption{#2}
\label{table:#1}
\end{table}
}
```

3.2. Syntax

The equation call is

```
\tbl{filename.ext}{caption}
```

The syntax reference is

```
\fref{table:filename.ext}
```

3.3. Example

Parameters	Values
Generator voltage v_{grid}	5000 kV
Generator voltage v_{grid}	5000 kV

Table 1: contoh tabel

please see Table 1

4. Mathematic Input

4.1. Code Listings

```
%% Differentialoperator                                                    1
\newcommand{\diff}{\mathrm{d}}              %% upright differential operator  2
\newcommand{\ddt}[1]{\ensuremath{\frac{{\rm d}#1}{{\rm d}t}}}    %% Ableitung  3
    nach der Zeit
\newcommand{\niceddt}[1]{\ensuremath{\nicefrac{{\rm d}#1}{{\rm d}t}}}  %%      4
    Ableitung nach der Zeit
                                                                             5
%% Formatting of vectors, matrices etc.                                     6
\newcommand{\cmplx}[1]{\underline{#1}}          %% Underline complex quantities 7
\newcommand{\matr}[1]{\mathbf{#1}}            %% Use bold type for matrix      8
    quantities
\newcommand{\vect}[1]{\text{\boldmath\ensuremath{#1}}}      %% Use bold and     9
    italic type for vectors
                                                                             10
%%= Indizes                                                                11
\newcommand{\lind}[1]{_{\mathrm{#1}}}          %% tiefgestellte Indizes nicht  12
    kursiv
\newcommand{\Lind}[1]{_{#1}}              %% tiefgestellte Indizes kursiv      13
\newcommand{\uind}[1]{^{\mathrm{#1}}}          %% hochgestellte Indizes nicht  14
    kursiv
\newcommand{\Uind}[1]{^{#1}}              %% hochgestellte Indizes kursiv      15
```

4.2. Syntax

```
$v \lind{grids}$                                                             1
```

4.3. Example

It printed as v_{grids}

5. Cross-Reference

5.1. Code Listings

```
\frefformat{\fancyrefdefaultformat}{\fancyreffiglabelprefix}{Fig.~#1}
\Frefformat{\fancyrefdefaultformat}{\fancyreffiglabelprefix}{Figure~#1} % at
    the beginning of a sentence, Figure is not abbreviated. Although some
    journals require Fig. (e.g. IAS)
\frefformat{\fancyrefdefaultformat}{\fancyreftablabelprefix}{Table~#1}
\frefformat{\fancyrefdefaultformat}{\fancyrefeqlabelprefix}{equation~(#1)}
\Frefformat{\fancyrefdefaultformat}{\fancyrefeqlabelprefix}{Equation~(#1)}
```

5.2. Syntax

please use `\fref` or `\Fref` instead of `\ref`