THIRTYSOMETHING

TSTemplate

Template for LaTeX dokuments

ThirtySomething

30.03.2022

Contents

Change history

Version	Date	Section	Description	Name
1.0.0	30.03.2022	–	• Initial revision	ThirtySomething

Table 1: Change history

1 License information

This template is published under the MIT license:

```
--------------------------------------------------------------------------
MIT License

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--------------------------------------------------------------------------
```

Figure 1: MIT Lizenz

2 Introduction

This is a template for use with LaTeX. An attempt has been made to make this template as simple as possible for the user.

3   Template

The template is divided into several files, which are listed here below:

File	Meaning
LICENSE	MIT license file.
README.md	Information about the template.
TSCommands.tex	The common predefined commands.
TSContent.tex	The content of the document.
TSCustomCommands.tex	The document specific commands.
TSGlossary.tex	The glossary of the document.
TSHistory.tex	Document history.
TSHyphenation.tex	Document-specific hyphenation.
TSMeta.tex	The metadata for the document.
TSTemplate.pdf	The result as a PDF file.
TSTemplate.tex	The framework document.
TSTitle.tex	The title page of the document.
Images/TSLogo.png	The logo used.

Table 2: Die Dateien des Templates

Custom commands and formatting have been defined for the template. They all have in common that they start with a *ts. . . . * This serves to distinguish them from the commands otherwise used in LaTeX. The available commands are explained in the Commands chapter.

4 Usage

As already described, the use of the template should be simple. So the user copies the template, that is, the entire directory with all files and sub-directories.

Normally the user adjusts the metadata (file *TSMeta.tex*, see Metadata) and the content in the file *TSContent.tex* according to his needs. The rest is controlled by the template.

It is recommended to rename the main template file *TSTemplate.tex* into a more more descriptive name.
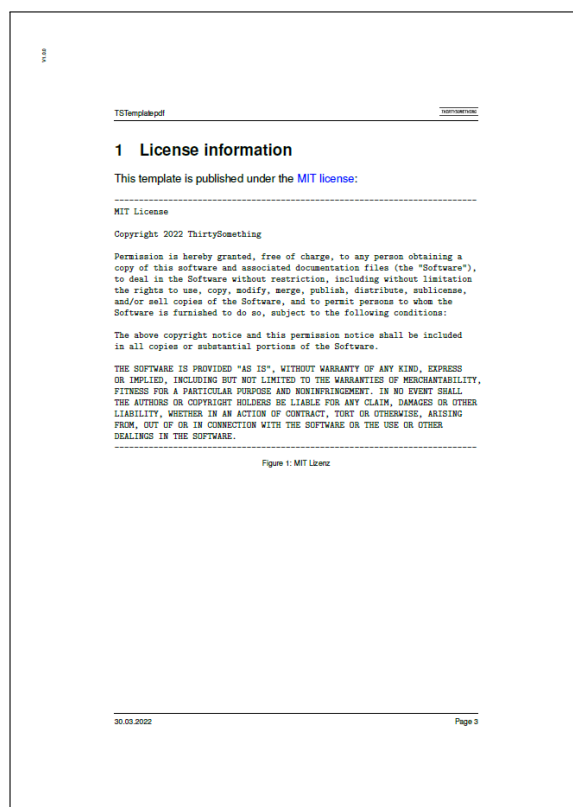
Figure 2: Document page

In principle, nothing needs to be changed in terms of content. Possibly a list of figures, a list of tables or a glossary is not desired. These are enabled in the framework document *TSTemplate.tex*. To disable them, place the comment character (%) in the corresponding lines. The places

are easy to find. Firstly, they are located quite at the end of the template and secondly, they are marked with appropriate comments:

```
% Print list of figures (lof)
\newpage
\listoffigures

% Print list of table (lot)
\newpage
\listoftables

% Print glossary
\newpage
\printglossaries
```

Figure 3: Indexes

If one (or more) of the options is disabled, it will be automatically removed from the table of contents.

4.1   Metadata

There is metadata for each document. This means the following definitions at the moment:

Metadefinition	Meaning
\tsAuthor{}	The author of the document.
\tsSubject{}	The subject of the document.
\tsTitle{}	The title of the document.
\tsURL{}	The url of the author.
\tsVersionMajor{}	The major version of the document.[1]
\tsVersionMinor{}	The minor version of the document.[1]
\tsVersionPatch{}	The patch number of the document.[1]
\tsVersionString{}	Complete version string.[1]

Table 3: Defined metadata

These metadata are referenced in various places in the template. For example, they are used in the title page of the document. The version number is based on semantic versioning[1].
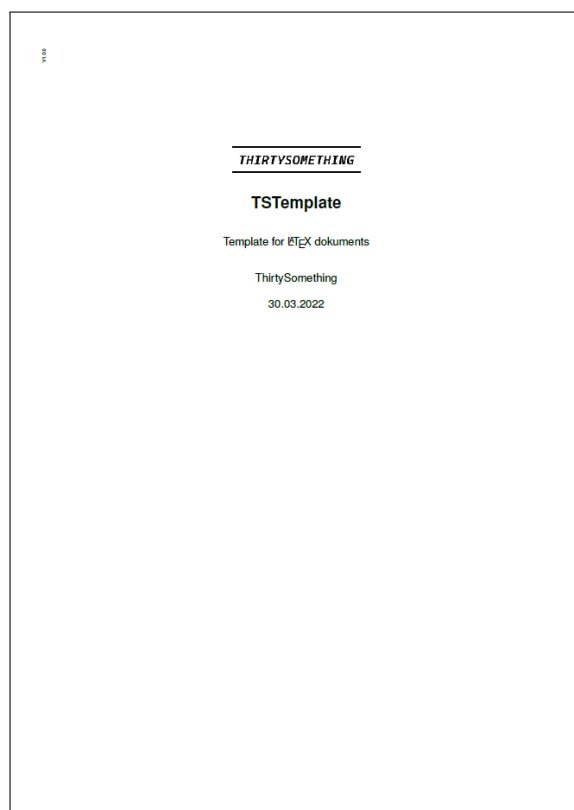
---

[1]See Semantic Versioning for more details.

Figure 4: Title page
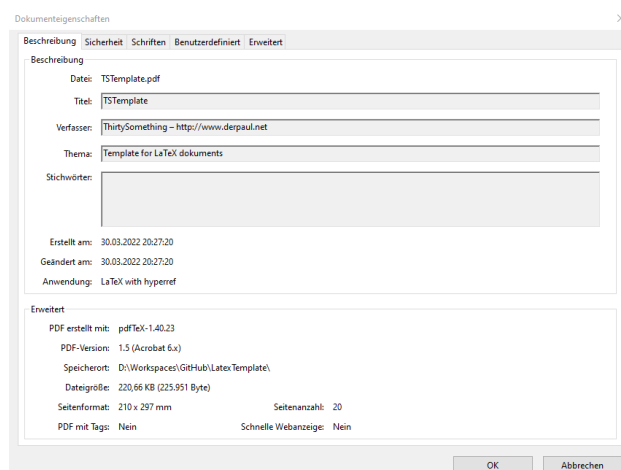
They are also used to set metadata in the generated PDF:

Figure 5: PDF properties

4.2 Document content

The document content is entered like a normal LATEX document. For this the file *TSContent.tex* is used, in which the user enters the text. The basic conditions such as the inclusion of packages are regulated in the file *TSTemplate.tex*.

4.3 Glossary

The user has the option of entering his own glossary. The entries for the glossary are made in the file *TSGlossary.tex*. ThirtySomething is entered here as an example. This looks like this:

```
\newglossaryentry{TS}{name={ThirtySomething},description={Ein Glossareintrag}}
```

Figure 6: Definition of a glossary entry

The values have the following correspondences:

- `TS` – This is the abbreviation used to reference the keyword in the document.

- `ThirtySomething` – This is the keyword listed in the glossary.

- `Ein Glossareintrag` – This is the description for the keyword listed in the glossary.

The glossary then lists the keyword, the description and the page number(s) where the keyword was used everywhere. A prerequisite for this is, of course, the use of the command `\gls{abbreviation}` with the existing abbreviation. In the above example, the usage looks like this:

```
\gls{TS}
```

Figure 7: Use of a glossary entry

4.4 Hyphenation

In some circumstances, hyphenation is not performed for some words. This may be because these words are very specific and LATEX does not know them and therefore cannot hyphenate them. The result may be overlong lines, which are clearly visible in most cases. In some cases this overlength is not immediately obvious. For this you can temporarily add the line

```
% To see the (page)frames used for hyphenation determination
% \usepackage{showframe}
```

Figure 8: Preamble – Package showframe

by removing the comment sign (%). This will display frames in the document indicating the text areas – and you can clearly see the overlong lines. The affected words at the end of the line can then be entered in the *TSHyphenation.tex* file. An entry there follows the following pattern:

```
\hyphenation{Thir-ty-Some-thing}
```

Figure 9: Exemplary content of TSHyphenation.tex

An entry corresponds to the word to be separated with a separator after each syllable. If necessary in the different cases, then the words are separated by a space. In addition, the following parameter can be changed in the document *TSTemplate.tex*:

```
% Setting tolerance for word wrap
% See also: https://texfaq.org/FAQ-overfull
\tolerance=3000
```

Figure 10: Influencing the hyphenation

The permissible values are in the range from 0 to 10000. setting, hyphenation is performed earlier or later.

5 Commands

To simplify things for newcomers, various commands have been defined. The use of the commands is optional. However, using them makes it clearer what the author wants to achieve with the corresponding command. It is recommended to end commands without parameters with {}, even if this is not necessary. However, it leads to the fact that, for example, after such a command there can also be a space character – otherwise this is removed by LaTeX when compiling.

Command definition	Meaning
\tsBackslash{}	With \tsBackslash{} a backslash is output. (\).
\tsBullet{}	With this command you can to insert a black dot. It looks like this: •.
\tsCaptionLabelFigure{text}	This command is usually used below a mapping. It not only adds a description, but also a so-called label. Thus the figure can be referenced via \ref{fig:Figure} or via \nameref{fig:Figure} in the text.
\tsCaptionLabelFormula{text}	This command is similar to \tsCaptionLabelFigure, but is referenced via \ref{for:Formula} or via \nameref{for:Formula}.
\tsCaptionLabelTable{text}	This command is similar to \tsCaptionLabelFigure, but is referenced via \ref{tab:Table} or via \nameref{tab:Table}.
\tsDegree{zahl}	Output of the degree sign with an optional number. Without number $^\circ$ or with number 715°!
\tsFontBold{text}	A text is output with bold font. **Bold!**
\tsFontCode{text}	A text is output with a monospaced font. `Code!`
\tsFontItalic{text}	A text is output with italic font. *Italic!*
\tsFontUnderline{text}	A text is underlined. <u>Underlined!</u>
\tsFootnoteDef{text}{ref}	Defines a footnote[2] with label, which can be referenced elsewhere with \tsFootnoteRef{ref}.

---

[2]I am a footnote.

\tsFootnoteRef{ref}	References a footnote[2] which was defined elsewhere with \tsFootnoteDef{text}{ref}.
\tsImage{filename}{description}{options}	With this, an image can be included - it then automatically gets a description. It is mandatory to specify three parameter brackets. The first parameter is the file name. The second parameter is the signature under the image. The third parameter, the options, are optional, that is, the brackets can be empty. These are the parameters that can be used with \includegraphics, e.g. `width=380px`.
\tsImageF{filename}{description}{options}	Like \tsImage, but with a frame.
\begin{tsLTItemize} \item Enum \end{tsLTItemize}	An enumeration environment for tables. • An enumeration list.
\tsTextQuoteF{}	Sets a text in French quotation marks. «Quoted!»
\tsTextQuoteG{}	Sets a text in German quotation marks. „Quoted!"
\tsTextLower{text}	Sets a text lower. Lower!
\tsTextUpper{text}	Sets a text raised. Upper!

Table 4: Available commands

A look into the source code of this document shows the usage of the commands.

5.1 Examples to images

```
% Insert image TSLogo.png
% File is in subdirectory Images
% Signature is 'Image without parameters'
% Optional parameters are empty
\tsImage{./Images/TSLogo.png}{Image without parameters}{}
```

Figure 11: Call image without parameters

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Figure 12: Image without parameters

```
% Insert image TSLogo.png
% File is in subdirectory Images
% Signature is 'Image with parameter'
% Parameter: width=0.5\textwidth => scale the image to half page width
\tsImage{./Images/TSLogo.png}{Image with parameter}{width=0.5\textwidth}
```

Figure 13: Call image with parameter

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Figure 14: Image with parameter

```
% Insert image TSLogo.png with frame
% File is in subdirectory Images
% Signature is 'Image without parameters, with frame'
% Optional parameters are empty
\tsImageF{./Images/TSLogo.png}{image without parameters, with frame}{}
```

Figure 15: Call Image without parameters, with frame

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Figure 16: Image without parameters, with frame

6 Font sizes

There may be a need to adjust the font size. For this purpose LATEX provides the following options:

Command	Example
\Huge{text}	Huge
\huge{text}	huge
\LARGE{text}	LARGE
\Large{text}	Large
\normalsize{text} (Default)	normalsize (Default)
\small{text}	small
\footnotesize{text}	footnotesize
\scriptsize{text}	scriptsize
\tiny{text}	tiny

Table 5: Font sizes

7 Tables

Font sizes play a role in the use of tables when it comes to distributing the content appropriately among the columns. Here is a sample code how to make a table.

```
\begin{footnotesize}
    \renewcommand*{\arraystretch}{3}
    \begin{longtable}{ | p{0.45\textwidth} | p{0.5\textwidth} | }
        \hline
        \tsFontBold{Command}        & \tsFontBold{Sample} \\
        \hline
        \tsBackslash{}Huge\{text\} & \Huge{Huge}          \\
        \hline
        \tsCaptionLabelTable{Font sizes}
    \end{longtable}
\end{footnotesize}
```

Figure 17: Tables

It is started with a block in one of the desired Font sizes. The first command within the font environment changes the spacing between the text lines. If you do not do this, the table content and the table grid will overlap or the spacing will be very tight. A good value is

$$\renewcommand*{\arraystretch}{1.5}$$

Figure 18: Row height in tables

The definition of the columns and their widths follows. The total width available to a text in a line is \textwidth. Due to the lines of the table, not quite 1.0 \textwidth is available. So the sum of all individual column widths should not exceed 0.9\textwidth.

To slightly separate column headings from the column contents, the \tsFontBold{column name} command can be used. Each column value is separated from the next column by a &. The end of the row is marked with a \\.

For horizontal lines, a \hline is inserted.

The data lines follow the same structure.

To give the table a referencable name, add a \tsCaptionLabelTable{Font sizes} at the end. How the whole thing looks then, you can look up in the chapter Font sizes in the source code or here in the document.

8   The verbatim environment

With the Verbatim environment text can be displayed in a kind of `Monospace` font. This is used to display source code.

```
\begin{figure}[H]
    \small
    \centering
    \begin{BVerbatim}
        Sample code of verbatim environment.
    \end{BVerbatim}
    \tsCaptionLabelFigure{Verbatim Environment Demo}
\end{figure}
```

Figure 19: Verbatim Environment Code

In order for the verbatim environment to get a signature, it is embedded in a figure environment. The `[H]` behind it makes sure that the environment stays in the desired place in the text and does not end up somewhere in the document.

The adjustment of the font size is done as needed. So is possible centering, which is achieved here using `\centering`. **Note:** If the verbatim environment is to be centered, the text that is between `\begin{BVerbatim}` and `\end{BVerbatim}` must be leftmost aligned in the source code of the document. Otherwise, the spaces will be included in the centering.

The example from above then produces this result:

```
Sample code of verbatim environment.
```

Figure 20: Verbatim Environment Demo

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List of Figures

List of Tables

Glossary

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