Introduction to LaTeX

A Beginner's Guide

This is a simple guide that shall serve as an introduction to LaTeX (ˈlɑːtɛk or ˈleɪtɛk). Test paper.

**Please note that …*

1. What is LaTeX?

Add text here.

2. Structure of a LaTeX-Document

A LaTeX-document consists of two main parts: 1.) the preamble and 2.) the body. The preamble is where the fundamentals of the document are set up, including the type of document, format and packages (see XXX). It may also contain metadata such as the the author, date or title. The preamble is initiated by the command *\documentclass{}* and ends with the beginning of the main body. The main body is where the actual text of the document is created through a combination of normal text and markup. It always begins with the *\begin{document}* command and ends with the *\end{document}* command. Every LaTeX document requires all three of the above command lines irregardless of the contents. Thus, the general structure of a LaTeX document can be described as:

```
\documentclass[options]{class}
    ...

\begin{document}
    ...

\end{document}
```

$\left.\begin{array}{l}\\\\\end{array}\right\}$ *preamble*

$\left.\begin{array}{l}\\\\\end{array}\right\}$ *body*

Ex. 1)

```
\documentclass{minimal}
\begin{document}
Hello world!
\end{document}
```

3. LaTeX-Syntax

In LaTeX special commands are used for typesetting a text or document. These commands are usually a combination of special characters and letters, do not allow

for any spaces and are case sensitive [1] . Similarly to the valency of a verb in language, LaTeX commands can be classified by the number of arguments they take. In general, they can be categorised into two major groups:

1.) Zero-Argument-Commands
2.) Non-Zero-Argument-Commands

3.1 Zero-Argument-Commands

"Zero-Argument-Commands" are commands that do not require any additional arguments - at least on the surface level - and that can be used intransitively (i.e. on their own). These commands generally consist of three components: 1.) a backslash, 2.) a simple word or phrase indicating the function of the command and 3.) (empty) curly brackets. They can be notated as:

\somecommand{}

Ex. 1)

\LaTeX{}	–	displays the "LaTeX" symbol (LaTeX)
\noindent{}	–	suppresses paragraph indentation
\bigskip{}	–	creates a vertical empty space

Since basic commands like this do not take on any specified arguments, the curly brackets (for more detail see 3.2) may be left out. While this normally does not entail any loss of function, it can lead to minor behavioural differences (such as inserting or deleting a space), especially when the command is a direct part of the text:

\LaTeX is cool	vs.	*\LaTeX{} is cool*
(= LaTeXis cool)		(= LaTeX is cool)

[1] Case sensitive means that upper- and lowercase are treated as distinct. For example, *command1* and *Command1* would be two different commands and not interchangeable. Case sensitivity is also a common source of error, as commands must be entered as intended (e.g. *\LaTeX{}* vs. ~~*\latex{}*~~).