

Introduction to \LaTeX for creating PPTs and Reports

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Overview

- 1 Installation
 - Introduction
 - Installation

- 2 Using LaTeX
 - Simple Document Creation
 - Inserting Image

- WYSIWIG ("what you see is what you get") word processors are Microsoft Word, LibreOffice Writer and Apple Pages.
- In LaTeX, the writer simply puts plain text in a given template adds formatting to the text similar to markup styles (like HTML)
- Mainly used by people in STEM (Science, Technology, Engineering and Mathematics) as Microsoft Word tend to be pretty bad at formatting equations.

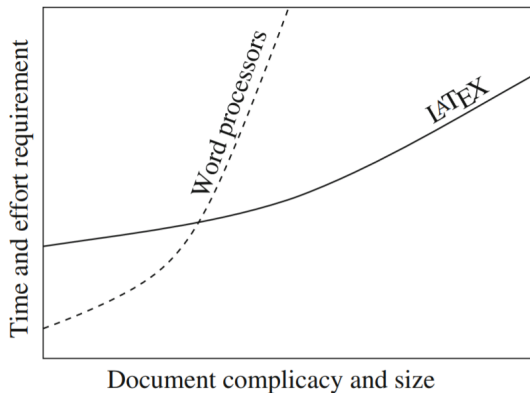
why \LaTeX

- LaTeX is the mathematical typesetting standard in all technical disciplines and in many Journals.
- LaTeX is free and looks beautiful.
- Start very small or use prebuilt templates and progress slowly
- <https://tex.stackexchange.com/> use this site whenever needed
- learn as you progress, for a first few times might be counter intuitive but as you get used to LaTeX it will save us lots of time

why L^AT_EX

- Table of contents is automatically generated including page number
- List of figures and List of tables automatically generated
- References are automatically generated
- Text is always formatted and clean with what you have given in header
- Images numberings, Tables numberings and Equation numberings are automatic and are beautiful to look at

LaTeX vs Word



LaTeX vs Word

Moving a picture in Microsoft Word



Latex decides where to put figures and tables for best fit automatically.

Backend and Frontend

- First we need to install MiKTeX backend for LaTeX.
- I prefer using TexWorks(Frontend) as its simple to use and faster to deploy.
- One can explore other IDEs for TeX formatting.
- MiKTeX can be downloaded from <https://miktex.org/download>.
- Installation Guide from <https://miktex.org/howto/install-miktex>.

Creating Documents and Presentations

For creating PPTs

Just initialise document class as beamer

For Creating Documents

Just initialise document class as a4paper and article

Using Prebuilt Templates

Search google for templates and start using them directly (easiest method)

Multiple Columns

Heading

- ① Statement
- ② Explanation
- ③ Example

Lorem ipsum dolor sit amet,
consectetur adipiscing elit.
Integer lectus nisl, ultricies in
feugiat rutrum, porttitor sit amet
augue. Aliquam ut tortor mauris.
Sed volutpat ante purus, quis
accumsan dolor.

Table

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table: Table caption

Theorem

Theorem (Mass–energy equivalence)

$$E = mc^2$$

First Latex Document

```
\documentclass[a4paper,12pt]{report}
\usepackage[left=35mm, right=25mm, top=25mm]{geometry}
\usepackage{setspace}
\linespread{1.5}
\usepackage{times}
\begin{document}
.
.
.
\end{document}
```

Figure

```
\usepackage{graphicx}%must be included in header
\begin{figure}
\includegraphics[width=0.8\linewidth]{test}
%image should in same folder as .tex files
\end{figure}
```

Citation

An example of the `\cite` command to cite within the presentation:

This statement requires citation [Smith, 2012].

References



John Smith (2012)

Title of the publication

Journal Name 12(3), 45 – 678.

The End