

Introduction to \LaTeX

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Who do we need to thank?

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What about \LaTeX ?

\LaTeX is a system of macros written for \TeX by L.Lamport,
 $\text{La} + \text{TeX} = \text{LaTeX}$.

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- \LaTeX is NOT an Excel type of program.

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- Create presentations quickly out of those documents.
- Create a thesis!

latex format

`\ documentclass{}`

$\left\{ \begin{array}{l} \textit{Packages} \\ \textit{Commands} \\ \textit{Shortcuts} \\ \textit{General format} \end{array} \right.$

In the first part of a latex document we define how our document will look like by choosing the document class (article, book, presentation etc). We list the packages we want to use, include the commands that we like (shortcuts) and tweak the format of the document.

`\ begin document`

$\left\{ \begin{array}{l} \textit{Text} \\ \textit{Theorems} \\ \textit{Equations} \end{array} \right.$

The text and equations starts after the command `\ begin document` and ends with `\ end document`. This is the main body of our document.

`\ end document`

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- You can insert a mathematical equation if you include it between `\[` and `\]`
- You can also use the command `\begin{equation}` and `\end{equation}`
- And there are a few more ...

Including formulas

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```
\documentclass{article}
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\begin{document}
```

The following is the most beautiful math equation:

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\[ e^{i\pi} + 1 = 0 \]
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\end{document}
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\end{document}
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Which gives the following:

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Example with a list

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\documentclass{article}
\begin{ document }
$\ LaTeX$ is a great program because:
\ begin { itemize }
\ item [ Alpha) ] It is free!
\ item [ Beta) ] It is very easy once you work on it a bit.
\ item [ Gamma) ] The math output looks great!
\ end { itemize }
\ end{ document }
```

And the result

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Beta) It is very easy once you work on it a bit.

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When we choose the class of our document we predefine the overall format settings, like the margins the width and height of the text, the distance between letters and words. Try a few different ones (article, amsart, book) to see the results.

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Still ...

... we can customize it even further and even change the format of a single page!

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<code>\ topmargin=17pt</code>	Sets the margin on the top of the page.
<code>\ textwidth=17cm</code>	Sets the width of the text.
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Honestly ...

You can change EVERYTHING about the format.

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- There is a way to add a variable to your new command.

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- Use the package `graphicx`
- Use the command `includegraphics`.

Links

`http://www.math.ufl.edu/gma/textalk`

`http://tobi.oetiker.ch/lshort/lshort.pdf`

The End ...

The End ...
... or maybe the beginning of \LaTeX for you?