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## Tartalomjegyzék


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# Latex

## Install

- Windows
  - First install MikTeX
  - Then install TeXMaker
- Mac
  - First install MacTeX
  - Then install TeXMaker
- Linux

```
sudo apt-get install texlive
```

- 
  - Then install TeXMaker

## First LaTeX file

- Copy the following code into an empty file! Save it as **template1.tex**! It's important to have the file in **utf-8** encoding, since we specify that it in the `\usepackage[utf8]{inputenc}` line.

```
\documentclass{article}

\usepackage[T1]{fontenc}     % internal encoding
\usepackage[utf8]{inputenc}  % input encoding
\usepackage[english]{babel}  % language
\usepackage{lmodern}         % font, even if you use the default one

\usepackage{amsmath,amssymb} % math packages
\usepackage{amsthm}          % theorem-like environments
\usepackage{graphicx}        % for embedding pictures

\title{}
\author{}
\date{}                      % this can be left empty

\begin{document}
```

```
\maketitle

\tableofcontents

\section{}

\subsection{}

\end{document}
```

- Duplicate the **template1.tex** into another file named **latex1.tex** and in this new one fill the empty blocks (Lorem Ipsum, if you have no inspiration), compile the code, and then view it with the following command:

```
pdflatex latex1.tex
xpdf latex1.pdf &
```

### TexMaker

- We highly recommend using a latex editor from now on. TexMaker is a platform independent editor, you can compile the edited file with the F1 button.

- If everything went smoothly up until this point, then put a few errors in the code and then try to compile it again. (You'll see red error messages at the bottom of TexMaker.)

- Try to write a few formulas, you can use the help here, it's in hungarian, but the formulas are universal.

- Reproduce your current or last week's homework in latex.

## LaTeX practice

Start with this syllabus (you have to compile it yourself).

- Try the different font styles (texttt, textsf, uppercase, textbf, textit, emph, textsl, etc.)! Change the size of the text: tiny, normalsize, large etc.!
- Create lists (enumerate, itemize, description, nested)! Change the numbering of enumerate to roman numerals!
- Create a table with the tabular environment. Try to aligh the text left/right/center! Use the \hline and \vline commands!
- Math environments:
    - Try inline and display style environments as well
    - Fractions, roots, superscripts, subscripts (\left és \right)
    - Equations (equation, eqnarray, align)
    - Theorem, definition, lemma (numbering, reference)
- References

## Help yourself

- https://rpi.edu/dept/arc/training/latex/LaTeX_symbols.pdf
- http://detexify.kirelabs.org/classify.html
- https://tex.stackexchange.com/
- Hungarian demo
- Differential d symbol:

```
\def\dd{\,mathrm{d}}
```

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