

An introduction to Latex

Professional skills and
group Study

Why LaTex?

- Use to write your reports (Professional skills and group study, second-year project, Final year project etc.)
- Scientists created it for scientists
 - a large community - guides and forums
 - packages and templates available
- It makes documents of high typographical quality
 - I especially scientific

Benefit of Latex

- QUALITY: THE OUTPUT IS FAR MORE PROFESSIONAL THAN WITH ANY OTHER WORD PROCESSOR
- VERSATILITY: LATEX HAS A WIDE SELECTION OF PACKAGES TO EXTEND ITS POTENTIAL
 - BIBTEX, AMSMATH, GRAPHICX, TIKZ
- SEPARATION OF CONTENT AND STYLE: LATEX USES A DOCUMENT STYLE, HENCE YOU DO NOT NEED TO APPLY FORMATTING
- SCALABILITY: YOU CAN SPLIT UP LARGE DOCUMENTS INTO SMALLER ONES
- STABILITY: IT DOES NOT CRASH AND THERE IS NO RISK OF YOU LOOSING THE ORIGINAL TEXT

How does it work

- You write the document in plain text with special commands
- You can process the text and commands to obtain a beautifully formatted document.

And much more

Formal letters

02/150 Espco

Welcome to XYZ Programme

Dear Teemu,

This is the first paragraph of this sample letter. To learn some more, do visit <http://www.demosite.com>.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis non lectus est. Ut hendrerit imperdiet massa at rutrum. Nulla ligula nibh, rutrum euismod eu, euismod eu. Proin euismod, euismod eu. Proin euismod, euismod eu. Auctor viverra, mi eros tristique justo, quis incidentib; lectus id tortor. Aliquam in odio mi, et egosim augue. Quisque a justo a risus blandii feugiat eget non leo. Nam sit amet velit diam, et tincidunt lectus. Aliquam enim euismod, euismod eu. Sed ac tincidunt aliquam, diam enim tristique nisi, et porttitor nisl ligula ut leo.

Aenean id tacet nulla, et amet molestie mi. Viammet et arco nec lectus egosim gravida. Duis tempore lobortis pugnare. Nullam quis sollicitudin. Aenean aliquip interdum tortor vel gravida. Viammus sollicitudin, ligula quis consequat, congue, urna ell dignissim mauris, a drescent ell aliquip eu. Pellentesque arcu diam, rhoncus in ultrices at amet, sollicitudin nec facilis. Sed ac: magna lectus, ac tristique odio. Aliquam euismod vehicula porta.

Nulla facilisi. Aenean ac est egesti nibh, sollicitudin aliquam. Duis pulvinar, lectus id bibendum ultrices, sapien metus blandit ipsum, eu eleifend tellus du quis leo. Donec vitae dolor ut leo rutrum viverra et ac augue. Sed vel metus dui, in consequat arcu. Pellentesque vel risus vel velit sollicitudin, euismod eu. Proin euismod, euismod eu. Proin euismod, euismod eu. Perpetibus et magna dis parturient montes, nascetur ridiculus mus. Nunc vehicula auctor semper. Donec bibendum rutrum elementum. Phasellus bibendum eros quam, a viverra vel.

—
“Tunc unicus tempus nichil, a portaria nam maximauste consule. Cum sociis neque perambulabat et magis pars patrum moneta, raverer ridiculus mus. Cita nec nuba ac tellus natus condonatur. Iullen placet, osor a ulicias blandi, neque et tingula ambo. Tunc unicus tempus nichil, a portaria nam maximauste consule. Nonne deus Iusa, Iuda et meldeus id, adipiscere ac matre. Integer id tamen pro-

Presentations

Full Presentation Title

Full Presentation Subtitle

Jane Doe
personal-id@mail.muni.cz
September 13, 2017



Résumé/CV

YOUR NAME HERE

Your Position or Tagline Here

professional student teacher researcher business government

location: country state/province city/town neighborhood

gender: male female



MY LIFE PHILOSOPHY

“Something smart or beautiful, preferably in one sentence.”

MOST PROUD OF

Family Achievement

Another achievement

More details about it?

Family

Another achievement

More details about it?

STRENGTHS

Hard working Eye for detail

Motivated & Leader

C++ Embedded Systems

Technical abilities

LANGUAGES

English *****

Spanish ****

German ***

EDUCATION

Ph.D. In Your Discipline

Noname University

Fall 2012 – June 2016

Thesis title: Wonderful Research

Teach 2013 – June 2013

M.Sc. In Your Discipline

Standard University

Fall 2010 – June 2012

Outcomes

At the end of the 2 weeks, you should be able to know how to do:

- Headings
- Cross references
- Bibliography
- Next list
- Figure
- Tables
- Equations and Maths formulas
- Theorem and Lemma Environment

Install latex

Download software.

- <https://www.latex-project.org/get/>

LaTex online

- <https://www.overleaf.com/>
- <https://latexbase.com/>
- *Please do not use the university email when you use Overleaf if you want to use it. It does not comply with GDPR University regulations.*

1st Latex document

- Start the document with `\documentclass` – type of document.
- Content between `\begin{document}` and `\end{document}`

```
\documentclass[]{article}
\begin{document}
This is my first document
\end{document}
```



This is my first document



Latex Special characters

- *Latex uses the following characters as commands*
- *% percent sign*
- *# hash (pound / sharp) sign*
- *& ampersand*
- *\$ dollar sign*
- To write these characters as the text `\$%\&\#!`

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INSTRUCTIONS

Go to your BLACKBOARD >> Professional Skills and Group Study
>> Content >> Week3-Latex

1. Download the all-les.zip folder
2. save the content in a new folder LATEX on your computer.

Example1: simple document

- Go to week 3/Latex in class exercise/

Instructions:

- Save 1first.tex as my1first.tex. Open 1first-r.pdf. Write over my1first to make output my1first.pdf similar to 1first-r.pdf

Example1: first-r.pdf looks like:

Intro

This is all about me. Me-me-me. Me. me. mini-me.

1 How I spent last summer

1.1 June

Exams, examinations, more exams, examinations.

Then more exams. (Note: new paragraph.)

1.2 July

Hot or not.

2 How summer ended

It became less hot.

Exercise 2:

- Save 2second.tex as my2second.tex.
- Open 2second-r.pdf.
- Write over my2second.tex to make the output my2second.dvi/pdf as in (similar to) 2second-r.pdf ('reverse engineering')
- Use labels! Not 'manually' numbers for sections;
- Use \cite commands, not simply type [1], [2]. Build.

Exercise 3: Mathematical formulae

- Open 3third.tex.
- Read about formulae. Build and view the result
- Save 3third.tex as my3third.tex.
- Open 3third-r.pdf.
- Reverse-write an input file by writing over my3third.

Exercise 4: environments

- Open 4fourth.tex.
- Build and view the result.
- Save 4fourth.tex. as my4fourth.tex.
- Open 4fourth-r.pdf
- Reverse-write an input file by writing over my4fourth.

Exercise 5: tables

- Open 5fifth.tex.
- Build and view the result.
- Save 5fifth.tex as my5fifth.tex
- Open 5fifth-r.pdf
- Reverse-write an input file by writing over my5fifth.

Exercise 6: lists

- Open 6sixth.tex.
- Build and view the result.
- Save 6sixth.tex as my6sixth.tex
- Open **6sixth-r.pdf**
- Reverse-write an input file by writing over my6sixth.
- Use environments, not ‘manual’ numbers!

Exercise 7: figures

- Open 7seventh.tex.
- Build and view the result.
- Save 7seventh.tex as my7seventh.tex.
- Open **7seven-r.pdf**.
- Reverse-write an input file by writing over my7seventh.

Document Structure

- Start the document with `\documentclass` – type of document.
- Metadata `\title` or `\autor` and package in the preamble.
- Content between `\begin{document}` and `\end{document}`
- `\maketitle` command creates the title.
- `\section` created the numbered sections.