

Exercises LaTeX workshop

TeXnicie

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Remember the slides are available on <https://texnicie.nl>. Also, make sure you have at least these lines in your preamble:

```
\usepackage[a4paper,margin=2.54cm]{geometry}
\usepackage{amsmath,amssymb,amsthm}
\usepackage{graphicx}
```

Part 1: Text document

- ☐ **Oefening 1** (first document). Create a document with a title and a first line of text. Set the author to be your name. Change the paper size to a5paper, and set the margins to 1cm.
- ☐ **Oefening 2** (emphasize). Emphasize some text by using `\emph{your text}`. Put some another word or phrase in bold.
- ☐ **Oefening 3** (flushright). Find out what the `\flushright` command does.
- ☐ **Oefening 4** (headings). Create headings (section, subsection etc.), and create a table of contents for it. The table of contents should be on its own page.
- ☐ **Oefening 5** (spacing). Let's make your document very spacious. First, add the following lines to your preamble:

```
\usepackage{parskip}

\setlength{\parskip}{20pt}
\renewcommand{\baselinestretch}{1.5}
```

Check if this increases paragraph spacing and line spacing.

Next, change the vertical margins to be 4 cm. Refer to the manual of the geometry package, or try what the following package options for geometry do: `top=`, `bottom=`, `vmargin=`.

- ☐ **Oefening 6** (hyphenation). LaTeX can hyphenate words automatically. For this it needs the `babel` package, with package option `english` (i.e. `\usepackage[english]{babel}`). Try to produce such hyphenation in your document.

Hint: if you are having difficulty, increase the horizontal margin size, and change the paper size to A5 if you haven't already.

- ☐ **Oefening 7** (special characters). Reproduce the following text:

When I woke up this morning, the temperature in my room was 13°C with 75% humidity. I wrote down this data on my "C:\ " drive, in a file called temp_room.txt. That morning the dollar-to-euro exchange rate was \$1.00 is €0.84.¹

Hints:

- You can use `\textdegree` instead of pasting in a degree symbol, if you use `\usepackage{gensymb}`.
- Look at the slide of typing special characters literally.
- Use `\usepackage{lmodern}` for a nicer euro symbol. (You can enter a euro symbol directly in the code)

¹This exchange rate was real in February 2021. How times have changed. You don't have to reproduce this footnote, however you could with `\footnote {}`. Or just insert a superscript 1, if you really want that.

- For special characters it is often advisable to use `\usepackage[utf8]{inputenc}` (which Overleaf includes by default). Then more characters can be typed in directly in code.
- **Oefening 8** (parskip). Add two paragraphs to your document, and observe the difference with `\usepackage{parskip}` and without it. Which style do you prefer?
- **Oefening 9** (manual spacing). Find out what the following commands do: `\quad`, `\qqquad`, `\hspace{2cm}`, `\;`, `\!`, `\vspace{2cm}`, `\bigskip`.
- **Oefening 10** (colors). Add package `\usepackage{xcolor}`, produce the following text in red and orange colors: **Hi, I like the color red.**

Part 2: Formulas and figures

- **Oefening 11.** ... add exercises about formulas ...
- **Oefening 12** (basic image). Find an image of your favourite animal species, and upload the image into your Overleaf document. First, use a direct `\includegraphics{...}` with ... the name of the image. If this works, wrap a proper figure environment around it as seen in the slides.
- **Oefening 13** (reference). Add a reference to a numbered equation and a figure in your text. Use the proper L^AT_EX way of doing this, i.e. with `\label{fig:cuteanimal}` and `\ref{fig:cuteanimal}`. This ensures the numbers will stay correct.
- **Oefening 14** (image trimming). You can crop an image from within L^AT_EX using this command:

```
\includegraphics[width=0.9\linewidth,trim=10pt 10pt 10pt 10pt,clip]{example-image-a}
```

Observe how changing the 4 numbers in the trim option (corresponding to left, bottom, right, top respectively) affects the cropping. Make sure you have added `\usepackage{graphicx}` to your preamble!

Exercises were created by members of the TeXnxCie:

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