LaTeX-workshop (Manual)

TeXniCie
a A–Eskwadraat Committee

November 17, 2014

Contents

1 Introduction

This is the manual belonging to the LaTeX course of A–Eskwadraat. Start with looking through the manual, including the bron code. There you will find most of the answers on the exercises and it gives you a look at how LaTeX-code looks like. Then start with the exercises. It is the idea that you use the broncode of this file and perhaps also the internet. Probably you will make some small mistakes which will lead to errors when generating your pdf-file. This will happen many times when you are working with LaTeX, so here you will learn how to handle this kind of problems. Then, last but not least, just like with a lot of things, there is not just one way to make a layout, but many more. After some time you will know what you like best.

2 Math-mode

- Using LaTeX it is quite easy to type mathematical formulas. Hereby, the signs _ (subscript) and ^ (superscript)play an important role. For example, we can write the row $a_1, a_2, \ldots$ or the rule: $a^b \cdot a^c = a^{b+c}$.
  Fractions we can type like: $\frac{teller}{noemer}$. There are different ways (' environments') in which you can write mathematical formulas.

- You could type between double \$-signs to center your mathematical formula. But actually this is not proper LaTeXcode, because not all versions will support this. It is better to use `\begin{equation}` and `\end{equation}`. This will also place a number next to your equation, to which you can referee (1)[1]:

$$\int_{-\infty}^{\infty} \frac{\cos x}{x^2 + 1} = \frac{\pi}{e} \tag{1}$$

- All signs can be found on the internet. Most of them are really logically.

- When you want to solve an equation, it is neater to place all the =-signs precisely below each other:

$$\begin{aligned}
\sin x &= \cos x \\
\sin x &= \sin(x + \tfrac{1}{2}\pi) \\
2x &= \tfrac{1}{2}\pi + 2\pi k, \qquad k \in \mathbb{Z} \\
x &= \tfrac{1}{4}\pi + \pi k
\end{aligned}$$

3 Matrices and Tables

To make a matrix, you can use arrays:

$$\begin{pmatrix} a^2 + b^2 & \frac{d}{c} & k \\ f & g + h + i & l \end{pmatrix}$$

---

[1]How to make referees we will discuss next week.

You could also place a matrix between text $\begin{pmatrix} a^2 + b^2 & \frac{d}{c} \\ f & g + h + i \end{pmatrix}$ by using single \$-signs. You could also use arrays to place all the =-signs neatly below each other without an equation number.

3.1 Tables

To make a table you can use tabular. You can change a lot in the table: no vertical line, one or even a double vertical line, an horizontal line etc. You can even say what column width you want to make sure the text does not leave the page.

Measurement	Length (m)	Time (s)	g (m/s^2)	Remarks
1	2.0	2.8	10	During this measurment the airconditioning was working so much, that the rope could not hang without motion.
2	1.5	2.5	9.6	During this measurment we have switched off the airconditioning.
3	1.0	2.0	9.9	Halfway the measurement the stopwatch collapsed.

Table 1: This is the caption of the table and gives important information about the table.