Exercises for the 1$^{\text{st}}$ Advanced LaTeX-course

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6th February 2007

Exercise 1

Today you will make your own package, which will be expanded every course. Name the package after yourself and save it someplace you can remember. You also have to test your package, for this purpose, make a LaTeX-document in the same directory and let it use your package.

Exercise 2

Make a new command `\pder` that shows a partial derivative. It takes two arguments, one for the ∂ in the numerator and one for the ∂ in the denominator. Thus the command `\pder{x}{t}` has the result: $\frac{\partial x}{\partial t}$.

If that works, give the command an optional parameter such that you can set the order of differentiation, for example `\pder[2]{x}{t}` gives $\frac{\partial^2 x}{\partial t^2}$

Exercise 3

Make a new command `exercise` that gives — just like as in this exercise sheet — a subheading that always starts with "Exercise ". The only argument should be the exercise number. So `\exercise{3}` should give:

Exercise 3

Exercise 4

Make a `comment`-environment, such as on slides 11 and 12. This slide should have two arguments, being:

1. An optional argument with the counter of the comment. This number should be shown after 'Comment:'. By default this should be empty;

2. The name of the person whose quote its is. This name should be under the quote, and right-aligned.

Exercise 5

In this exercise we will make a command first with a required argument, and then an optional argument. For this, we can't use normal LaTeX commands, but we have to resort to plain TeX.

With TeX a command is defined with \def #1#2[#3](#4){definition}. Where the number, order and brackets around the arguments is arbitrary. In order to define optional arguments, it is customary to define two commands, where one is called from the other, with different arguments depending on whether or not there is a [after the required part or not. Try to define a command this way.