Own environments, new commands and definitions in latex

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Latex makes your life really easy when writing the thesis and your can adjust a lot of things as you like. Here we show how to define your own environments and commands for mathematical notations.

1 Own environments

Theorem-like latex environments are useful when you want to separate certain numbered elements from the main text, like theorems, lemmas, definitions, or examples. If your latex template doesn't offer environments you would need, you can define them yourself. See how command \newtheorem is used in the latex source of this file).

Example 1 (Example caption, optional)**.** *This is an example of the example environment. You can put here anything you want, text, figures or tables like Table 1.*

Table 1: Felines and their weights (kg).

animal	weight
female lion	120
male lion	175
domestic cat	5
female Bengal tiger	140
male Bengal tiger	235

The first example finishes here.

After special environments, the font type is changed back to normal, as you can see here.

2 Own commands for mathematical notations

One problem is thesis to decide what symbols to use so that one there is just one notation for one thing and the styles of notations would be systematic.

When beginning writing, you may not yet know if you would prefer to write vectors as $\vec{x}$, $\overline{x}$ or $\mathbf{x}$. Here is what to do: determine you own command, like \vecI, using \newcommand (see the latex source). First, you may decide to use $\vec{x}$ and you define your own command \vecI{x} accordingly. You use your own command whenever you use vectors. If you later change your mind, you can just change the command definition, and it will correct all your vector notations automatically.

Own commands are also useful, when you want to write variable or function names neatly without repeating each time \mathit. For example, if you need function called "diff" and write it n the math mode, it looks $diff(x, y)$, as if the two f's were separate. With \mathit, it looks better, $\mathit{diff}(x, y)$. To save time and typing you can define your own command \diff to output diff (see the latex source).