A Mini LaTeX Primer

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ABSTRACT
This file shows some basic latex features you might need for the seminar.

1. INTRODUCTION
This is a section. You can add a label to a lot of document elements to reference them later in the text. In the code of this document, we distribute each sentence over several lines. This is because having very long lines make it difficult to find the differences between two revisions of your document when you use a version control system such as Git.

If you want to start a new paragraph, do it by inserting a blank line. Never ever try to start new paragraphs by inserting a simple
line break.

2. EXAMPLE SECTION
And this is another section, just like section 1. This one even has subsections, see for example subsection 2.1.

2.1 A subsection example
Now this is an example of a subsection.

2.2 Another subsection example
And this is an example of another subsection. All hail to this subsection! However, you should try to get by with sections and subsections. If you start reaching for subsubsections, reconsider your document structure.

3. SOME HELPFUL FEATURES
You might want to itemize things. For example, this is a good burger:

- a fresh bun,
- sappy, grilled minced meat,
- cheese,
- onions, and
- barbecue sauce.

Or even enumerate them. There are only five things I want my burger to consist of:

1. a fresh bun,
2. sappy, grilled minced meat,
3. cheese,
4. onions, and
5. barbecue sauce.

Or you might even need a description:

bun The bun has to be fresh and crispy.
meat The minced meat should be grilled on real fire.
cheese A quarter pounder with cheese is best with cheese in it.
onions They are the only vegetables I need on a burger.
barbecue sauce Is better than mayonnaise.

There are two lines in the header of this file that help to keep things compact around here. If you do not mind spending more vertical space, you can comment them out. In general, only use lists if necessary. If you simply want to enumerate a bunch of words, terms, expressions, or phrases, just include them directly into your text.

4. GRAPHICS
If you want to illustrate your text with some graphics (which is a good idea), please add a subfolder to your repository folder, give it a name like `images` or `graphics` and store your pictures there in pdf- and original Format. Prefer vector-graphics over bitmaps since they scale and look better in the final paper. To find an example of how to include your pictures, take a look at this document's source.

The caption is the text that will appear under your picture. By changing the scale you can adjust the size of your picture—if you have any labels or text in your picture, the smallest font be nearly the same size as the caption font size. Of course, you will want to reference your picture in the text. See, for example, Figure 1.

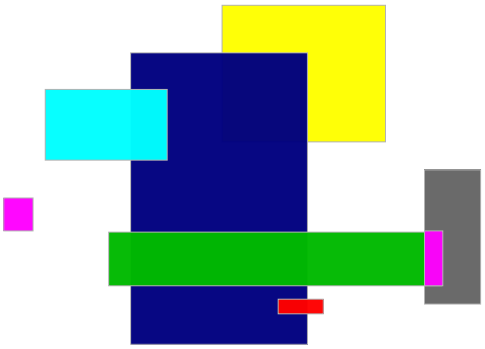
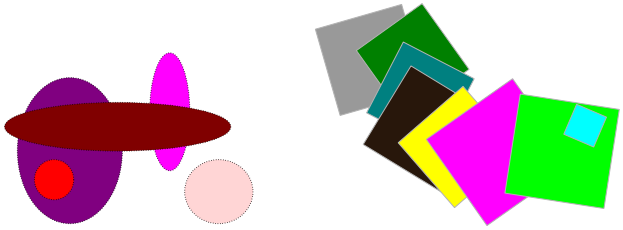


Figure 1: This is an example figure.



(a) (b)

Figure 2: This is a figure with two subfloats in it, (a) and (b).

If you have some pictures that you want to discuss in combination, you might use subfigure as we do in Figure 2. You can also reference each subfigure separately in your text. Note that the subfig package and the hyperref package are not the best friends, if that matters to you, consider using the subcaption package.

5. REFERRING TO THE WORK OF OTHERS

If you want to cite a paper, edit your bibliography database file `myrefs.bib` and insert the bibtex information of the paper you want to cite. You can then refer to the paper like this: As Lee has stated, threads can be problematic [1].

6. INCLUDING CODE SAMPLES

Here is a very basic C code example. To customize how the code appears in the final document, see the start of the source file of this document.

```
#include <stdio.h>

  int main(void)
  {
    printf("Hello, World\n");
    return 0;
  }
```

7. TYPESETTING EQUATIONS

You can include formulas and equations, such as $M = \{x \in \mathbb{N} \mid x < 10\}$, in your running text. If you want the formula to be on its own line, that's possible as well:

$$\sum_{i=0}^{k} \frac{y}{x_i}.$$

If you want to label equations to refer to them in the text, use the `equation` environment and define a label for the equation:

$$\sum_{i=0}^{k} \frac{y}{x_i}. \tag{1}$$

See Equation 1 for an example. There are a lot of LaTeX equation editors on the web which can help you write your equations.

8. GOING FURTHER

LaTeX is a powerful typesetting system that, while perhaps a bit cumbersome to use for small documents, will usually produce better results than the popular office packages. It thus pays to learn how to use it—even more so since chances are you will typeset your Bachelor's or Master's thesis using LaTeX.

The web is full of documentation. A good starting point is the Wikibook on LaTeX.[1]

9. REFERENCES

[1] E. Lee. The problem with threads. *Computer*, 39(5):33–42, 2006.

[1] `http://en.wikibooks.org/wiki/LaTeX`