Assignment name, number and/or title

Template version 1.4 – March 12, 2020

PA1234: Course name

September 21, 2023

Group name/ID	Group name or ID, in case this is a group exercise
Title	Title of the answer/ solution
Supervisor(s)	Supervisor name(s), if applicable

Student 1	Name	Full name as given in Ladok
	E-Mail	...@student.bth.se
	Program	Program you are registered in
	Contribution	Contribution of student 1 to this assignment (if there are several students)
Student 2	Name	
	E-Mail	
	Program	
	Contribution	

Please add/delete table rows, if necessary. You can leave the rows for group name/ID and/or supervisors empty or delete them, if there are no groups or specific supervisors for the assignment. Don't forget to delete the blue comment-boxes before submission by uncommenting the row `\togglefalse{todos}` at the top of the LaTeX source code.

If you use some other text processing software (e.g., Word), please make sure to follow the formatting used in this document as closely as possible.

Submission/change history (latest entry on top)	
Date	**Changes made**
2019-04-01	Complemented due to FX. Changes made: ...
2019-03-22	Initial submission.

In the table above, you should briefly describe the revision history of your submission.

1 Introduction to the template

This document describes in generic terms how a typical assignment submission should look like with respect to formatting and contents. There are many types and purposes of assignments. This document can therefore only cover general rules and guidelines. Please make sure to carefully read the assignment description for your particular assignment, since it might describe additional or more specific requirements.

2 Sections and subsections

All assignment submissions should have a Section *Introduction* where you describe the overall purpose of the assignment, introduce key concepts or terms and give a very brief overview over your approach or solution. The remainder of your submission should be structured into sections and subsections that are appropriate for the current assignment. The structure should provide a good high-level overview over your submission, so that it is easy to navigate through the contents and find specific parts. A single *Main*-section will be insufficient, except for very short assignments. Which sections and/or subsections are required or suitable will differ from assignment to assignment. Examples of sections or subsections for assignments are Prerequisites, Assumptions, Related work, Results, Analysis, Design, Implementation, Limitations, Evaluation, Discussion, Summary, and Conclusions.

The formatting of sections and subsections is exemplified below. Please note that regular paragraphs in sections, subsections, and sub-subsections are not indented. Paragraphs start at the left margin of the page and are aligned left and right, i.e. as in the paragraphs in this document. There is no space between paragraphs. However, the first line of a paragraph is indented, except for the first paragraph in each section, subsection, and sub-subsection.

2.1 Example subsection header

2.1.1 Example sub-subsection header

Normally, you should not use subsections on levels deeper than three. If you need more structure below level three or if you want to structure your text without numbered headers, you can for example use lists or named paragraphs. You can have bullet-lists, numbered lists, etc. Some examples are shown below. After the example lists, you can also see an example of a named paragraph.

- A list item.
- Another list item.
    1. Lists can be nested. The text for a single list item may span several lines and should be indented as shown in this example.
        (a) You should not nest them too deeply, though.
        (b) There are more types of lists, but the ones here should do for a start.
    2. You can also change the numbering scheme, but the standard settings shown here should do for a start.

Named paragraph. Note that named paragraphs are not numbered.

3 Tables, figures and references

In your assignments, you can use tables, figures and references. The entries in the reference list should be sorted alphabetically. Examples of tables and figures are shown below. Their numbering is automatic. Please note that table captions are on top of the tables, whereas figure captions are below the figures. Please do also note that figures and tables are placed automatically and do not always end up where intended.

Table 1: An example of a table.

Items	**Number**	**Comment**
Books	25	We categorized everything longer than 50 pages as a book.
Reports	8	Blablabla...
Etc.		

Creating tables and figures can be difficult, since LaTeX is no "what you see is what you get" environment. For simple tables, you can use generators, like the one on `https://www.tablesgenerator.com` for help. For figures, it is easiest to provide them in separate files and import them using LaTeX's `\includegraphics` command. The included files can have various formats, like, for example, JPG or PDF. Using command `\ref`, you can insert cross-references to other places in your document, for example sections (e.g., Section 1), tables (e.g., Table 1), figures (e.g., Figure 2), listings (e.g., Listing 2)), equations (e.g., Equation 1), etc. Note that you can only reference places that have a corresponding `\ref` command in the LaTeX code. This command you need to place there manually. For references to literature (citations), there is a special command (`\cite`). You can find examples for that in the next section.

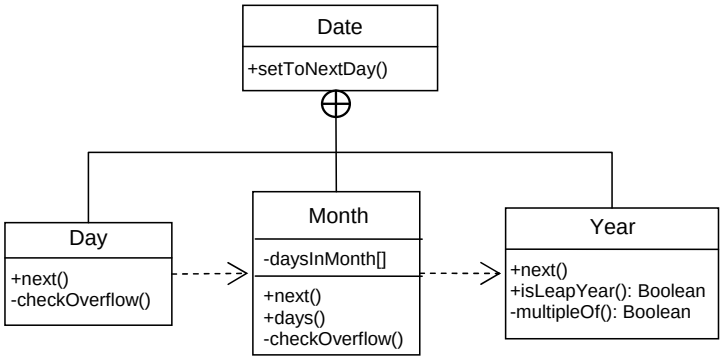

Figure 1: An example graph.

4 Source code and equations

Source code can be printed nicely using the `lstlisting`-environment, as in the example below. There are many parameters for the listings and code can also be loaded from a file. Please check the documentation of package `listings` for details.

Figure 2: An example figure.

Listing 1: Example of a code-listing.

```
# Python3 example for printing a constant string
print("Hello World!"!)
```

Listing 2: Another example of a code-listing.

```
# Python3 example for adding two numbers
number1 = 15
number2 = 27

# Add the two numbers
sum = number1 + number2

# Print values and result
print("The sum of {0} and {1} is {2}" .format(number1, number2, sum))
```

Equations can be typeset and numbered using the `equation`-environment, as in equation 1 below.

$$f(x) = (\frac{1}{\sqrt{x}})^2 \tag{1}$$

5 More information

For more details on report writing, please refer to *Rapportskrivning för ingenjörer* [1] (Swedish only), which can be downloaded from the library's Writing Guide (Skrivguiden)[1]. There are also of resources for learning LaTeX on `https://www.overleaf.com/learn`. There are also numerous free guides for learning LaTeX on the Internet (e.g., [2]).

[1] `http://skrivguiden.se/resurser/bth-resurser/` (Swedish) or `http://writingguide.se/resources/bth-resources/` (English)

References

[1] G. Å. Nilsson, "Rapportskrivning för ingenjörer," Blekinge Institute of Technology, Karlskrona, Sweden, Tech. Rep., 2018.

[2] T. Oetiker, H. Partl, I. Hyna, and E. Schlegl, "The not so short introduction to latex 2ε," 2016, https://tobi.oetiker.ch/lshort/lshort.pdf, accessed 2019-09-02.