Thesis / Paper Title
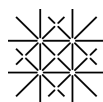## Thesis / Paper Subtitle

Firstname Lastname

2024-08-01

Abstract

This is the LaTeX template from the DH Lab of the University of Basel. It is suitable for Seminar Papers and Master's / PhD theses, but can be adapted to fit a variety of use cases. It was created by Stefan Freitag and is derived from the Quarto template, which is also available from the DH Lab.

The abstract of your paper / thesis goes right here. It will appear on the cover sheet (very first page) of the PDF, together with the title, subtitle, author name and date.

If you do not want your document to have an abstract, you can also simple delete the 'abstract' part (or comment it out) with all its content and the final document will be created without it.

University of Basel
Digital Humanities Lab
Switzerland

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1   The Basics

What is LaTeX? You may have not heard of it before, but you have almost certainly seen it used somewhere, even without knowing. LaTeX is, in short, a language that describes both content **and** layout of a text, as opposed to regular word processors like *Microsoft Word*. It is a very powerful tool for scientific publication and, when used correctly, gives you almost infinite control over the layout of your document and makes it look very professional.

Note: This is **not** a guide on how to write a paper / thesis. If you need guidance on those topics, check the appropriate DH Lab resources or ask a supervisor.

Instead, this template is meant to introduce you to what LaTeX can do and give you a starting point to use it on your own. While it is of course possible to install LaTeX locally and use it this way, it is recommended to use it via Overleaf, an online LaTeX editor that requires no installation and runs completely in the browser. This has multiple benefits over a local install: It works regardless of your device, your document and its associated files are always up to date and secure. All in all, it is clearly the most convenient and easy way to use LaTeX. This of course requires an internet connection to be used, which might be a downside to you.

If you have questions that are not addressed within this template, Overleaf offers tutorials on nearly everything as well as a comprehensive guide to understand LaTeX in 30 minutes. If all else fails, you can also ask ChatGPT. From experience, it is very adept at writing and correcting LaTeX-code. As you can already see in this chapter, you can put clickable links in your document.

2   Structure of a document

The most important file when using LaTeX is your `.tex` file. This is the file in which you write the text for your paper / thesis, while also describing its layout.

Each file starts with a preamble, in which you can change metadata and other settings of the document and also import and set up packages you want to use. In this template, the preamble is deliberately kept as short and concise as possible, but can of course be extended by you. Images, links, references, code etc. can be embedded within the document and will be rendered when the document is compiled. Pages are auto-numbered, starting after the table of contents.

The basic structure of a `.tex` file looks like this:

```
-----


This is the document preamble
\usepackage{example}


-----


\begin{document}


This is my Master's Thesis.


\end{document}
```

Segmenting your document into sections and subsections works like this:

3   This is a section

3.1   This is a sub-section

3.1.1   This is a sub-sub-section

This is a paragraph

This is a sub-paragraph   Up to 5 sublevels are possible, as you can see. By default, the sections are automatically numbered while the (sub)-paragraphs are not. This of course can be changed by you. The table of contents will be automatically generated (including said numbering and page numbers) upon compiling your document. **You do not need to write it yourself.**

See this part of the tutorial for more information about sections and chapters.

4   Formatting your document

LaTeX supports a variety of formatting options:

You can write in italics.

Or bold.

Or both at the same time.

You can also superscript$^{\text{text}}$ or subscript$_{\text{text}}$.

You can also write lists (unordered or ordered):

- Example list
- This one is unordered in the form of bullet points

1. This
2. is
3. an
4. ordered
5. list

and use tables (with various formatting options, this is just an example):

Col1	Col2	Col3
1	2	3
2	3	4
3	4	5
4	5	6
5	6	7

Table 1: Example table

This is a more complex table, but it shows what is theoretically possible. As you can see, the tables are automatically numbered as well, as long as you give them a caption.

It is possible to automatically generate a list of tables at any point of the document. To do this, use the command `\listoftables`:

List of Tables

You can also insert page breaks like this:

These are only some examples, please see the respective sections in the tutorial for more: text formatting, lists and tables.

5 Using images

With LaTeX, images are embedded within the text with a caption and a path to the image. This requires the images to be a part of your project and uploaded to Overleaf. In this template, all images go into the `assets` folder.

This is how an image is inserted into the document:

Figure 1: Logo of the DH Lab

You can also resize images:

Figure 2: Logo of the DH Lab, but smaller

As you can see, images with captions are numbered automatically. Like with tables, it is possible to generate a list of figures at any point of the document. To do this, use the command `\listoffigures`:

List of Figures

Once again, check the corresponding tutorial section for further information!

6 Using code

When writing a paper or thesis in the field of Digital Humanities, it is likely that you will need to also use code within your document. This is possible with LaTeX, if you are working with a lot of code however and / or want it to be executable within the document file, it is recommended to use the Quarto template of the DH Lab instead. This also enables you to easily include the output of your code in a document. It is, however, more complex to set up, get running and work with.

In order to properly display code including syntax highlighting, this template employs the `minted` package, which works like this:

```
# This is a code cell written and highlighted with the minted package


for n in range(3):
    print('This is an example for a Python code cell')
```

There are many ways to customize how the code is displayed, refer to this section of the Overleaf tutorial for further information. There, you will also see how to include code written in a separate file.

Keep in mind that you need to manually include the output of the code in the document, should this be important to you. The LaTeX compile process does **not** run the code in any way.

7 Citations and References

Citations and references to literature and other things work like this:

Authors X and Y say a lot of things about many topics (Abdullah Lajam and Ahmed Helmy, 2021).

These guys also talk about interesting stuff on certain pages (Alniamy and Taylor, 2020, pp. 136-139).

This style of citation (footnotes) is also possible[1].

The same without further text in the footnote[2].

You can also reference other (sub) chapters from your document[3]. This goes backwards

---

[1]This guy (Gauthier, 2019) also talks about stuff
[2]Gauthier, 2019
[3]See for example Using Images

and forwards, so you can reference chapters after the current one, like this[4]. For this to work, the sections that are referenced must be labeled correctly, like this:

```
\section{Using images}\label{using-images}
```

If you simply create the section without the label, referencing it this way within the document will not work.

The way references are formatted in the final document depends on the chosen style in the document preamble. As you can see there, `style=apa` is used in this template.

Citations and references using literature are handled by the `.bib` (bibliography) file within the `assets` folder. It contains all your literature (in BibTeX format), which can then be referenced within the text.

It is also possible to link your Overleaf account to *Zotero* and organise your bibliography this way. See here for further details. Keep in mind that this is unfortunately a premium function and therefore requires an Overleaf subscription.

The `References` section in the document is generated automatically, when called with the `\printbibliography` command. By default, it only includes literature that is actually referenced within the text. However, in this template, this default behavior is changed to include every entry of the used bibliography, even those that are never referenced during the course of the document. This behaviour can be changed by you, should you wish to do so.

For more information about citations and references using `biblatex` (as shown in this section), see this part of the tutorial.

8   Exporting your document

Exporting your final document with Overleaf is really easy: Simply compile it one final time to get the most up-to-date version and click the PDF download button. Just like that, your document is on your device and ready to be handed in.

For further information on exporting your document, have a look at this part of the tutorial.

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[4]Exporting your document

References

Abdullah Lajam, O., & Ahmed Helmy, T. (2021). Performance Evaluation of IPFS in Private Networks. *2021 4th International Conference on Data Storage and Data Engineering*, 77–84. https://doi.org/10.1145/3456146.3456159

Alniamy, A., & Taylor, B. D. (2020). Attribute-based Access Control of Data Sharing Based on Hyperledger Blockchain. *Proceedings of the 2020 The 2nd International Conference on Blockchain Technology*, 135–139. https://doi.org/10.1145/3390566.3391688

Gauthier, F. (2019, September 30). *Religion, Modernity, Globalisation: Nation-State to Market*. Routledge.