Author : Yann Bellanger
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Writing your thesis using LaTeX

To write your thesis here at the lab, you are provided with a template which is written in LaTeX. In order to generate a .pdf from this template, we need to install a LaTeX distribution and use an editor to write some LaTeX.

For editor choice, it is up to your preference. If you choose not to pick VS Code as an editor, which provides an extension to automate things, you'll have to have access to the ***make*** package in order to launch the build for the .pdf. Other editors probably have extensions to do LaTeX more easily too but we won't cover that in this document. For windows I always recommend to have access to basic bash commands, using cygwin as a shell for instance.

Cloning the template repository

If you haven't used git before, you should check a tutorial online to understand version control first, like this one.

If you don't have one already, make a github.com account. Look for their student program if you want, to have unlimited private repositories !

Once you have one, go on this page, and 

the repo to make a new one on your account.
To install git on **windows** i won't go into too much detail but here is a link to how to do it.
To install git on **linux**, if not present already, open up a terminal and use ***sudo apt-get install git***

Once you have cloned the repo to your account on github website, you can use ***git pull*** with the url provided by the github repo page to get your **local copy** of the template, in the directory you want.

Windows Users

Installing VS Code

https://code.visualstudio.com/Download
Download the appropriate version for your operating system, here Windows, most likely 64 bits. Execute the installer, and go through the install wizard using recommended options, it will work fine.

Installing TexLive

https://www.tug.org/texlive/
Go to this URL, download the installer, execute it, go through all the steps using standard options and you will have texlive installed ready to be used by VS Code to compile your .pdf.

Note that the windows installer will make sure the path to texlive distribution is in the system path variable so you shouldn't worry about that at all.

Linux Users

Installing VS Code

https://code.visualstudio.com/Download
Download the appropriate version for your operating system, here Linux, either debian package type or rpm, depends on your distro (most common distro is **Ubuntu 18.04**, use that to get more support here, the commands that follow are for ubuntu).
Open the package and install it using the GUI, it is very simple, even for non linux users.

Installing TexLive

Open up a terminal and type the following command (make sure you have a proper internet connection and enough battery, texlive is heavy and it takes time).

sudo apt-get install texlive-full

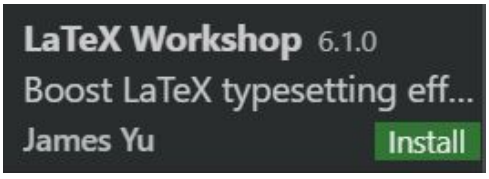
Accept any prompt using “Y”, and wait for it to finish. To check if the installation went fine you can do a ***man pdflatex*** in the terminal as well, which will display manual pages for the build command of LaTeX (even though it’s not 100% sure it will work in the end but that is a good indication nothing went horribly wrong).

Installing LaTeX Workshop

There is an extension available for VS Code (on any OS, which will work provided you have texlive installed and present in your path), that will allow you to have a simple editor for LaTeX, which looks like this :

insert capture

To install it, go on the extension tab () on the left of the screen of VS Code, type LaTeX in the search bar and click install under LaTeX Workshop as shown.



Using LaTeX Workshop

After the installation, reload VS Code and open the folder where your thesis template, previously cloned and pulled from github.

You will have a new icon on the toolbar on the left : 
If you click on it you will have a list of options, amongst which the Show PDF will be. Click on that line and the pdf viewer will appear, showing your thesis.

Using **ctrl+s** will save your current document and if any changes have been made, LaTeX Workshop will recompile the document for you and show you the latest version of the pdf in the viewer.