Installation of requirements

For this course, we require the installation of Python. We use Python using Anaconda distributions. We use Miniconda due to it is a lightweight distribution of Python. In this distribution, we install everything we need from zero.

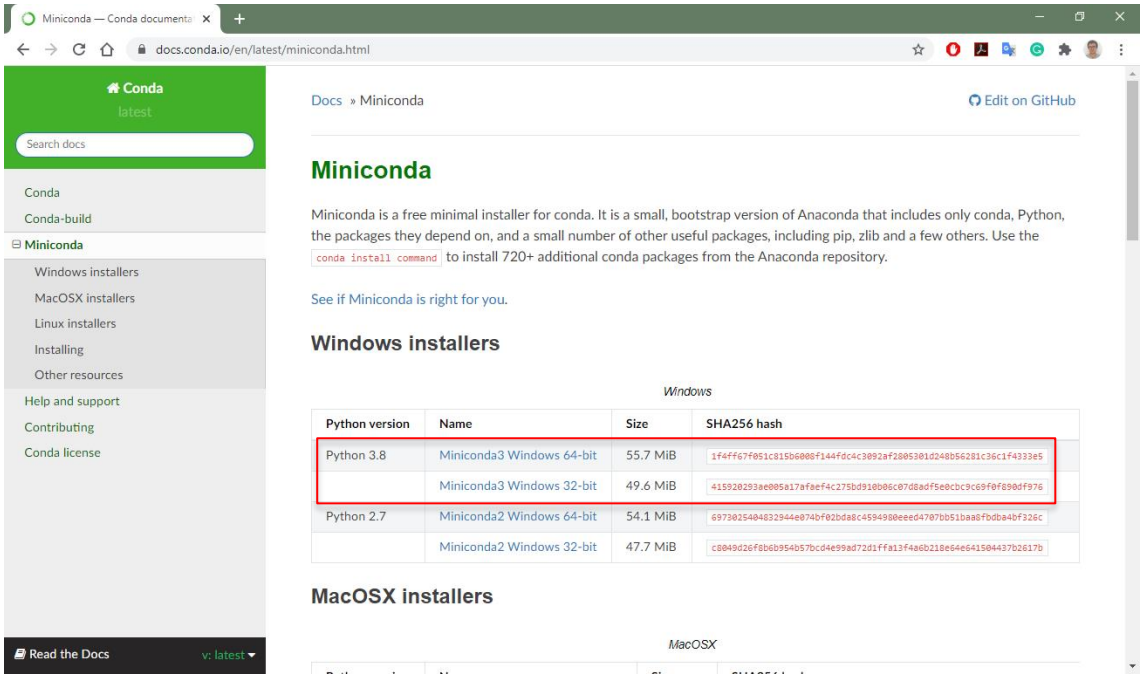
Miniconda

To start, download Miniconda; as we mentioned in the introduction, the advantage of using Miniconda against the full Anaconda version is that this distribution is light; moreover, we have the advantage of installing just what we need instead of thousands of Python packages that we would not use.

To download, go to the following link:

https://docs.conda.io/en/latest/miniconda.html

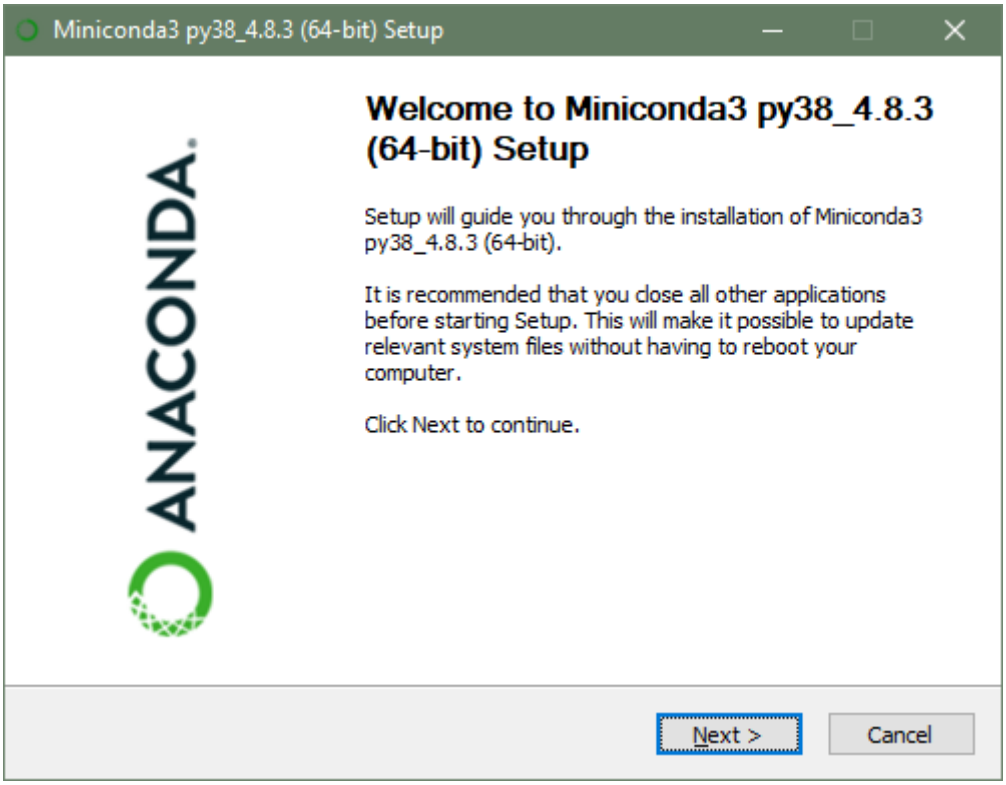
Inside the previous link, you could see first the Windows installers, download the corresponding installer with your version, either 64 or 32 bits



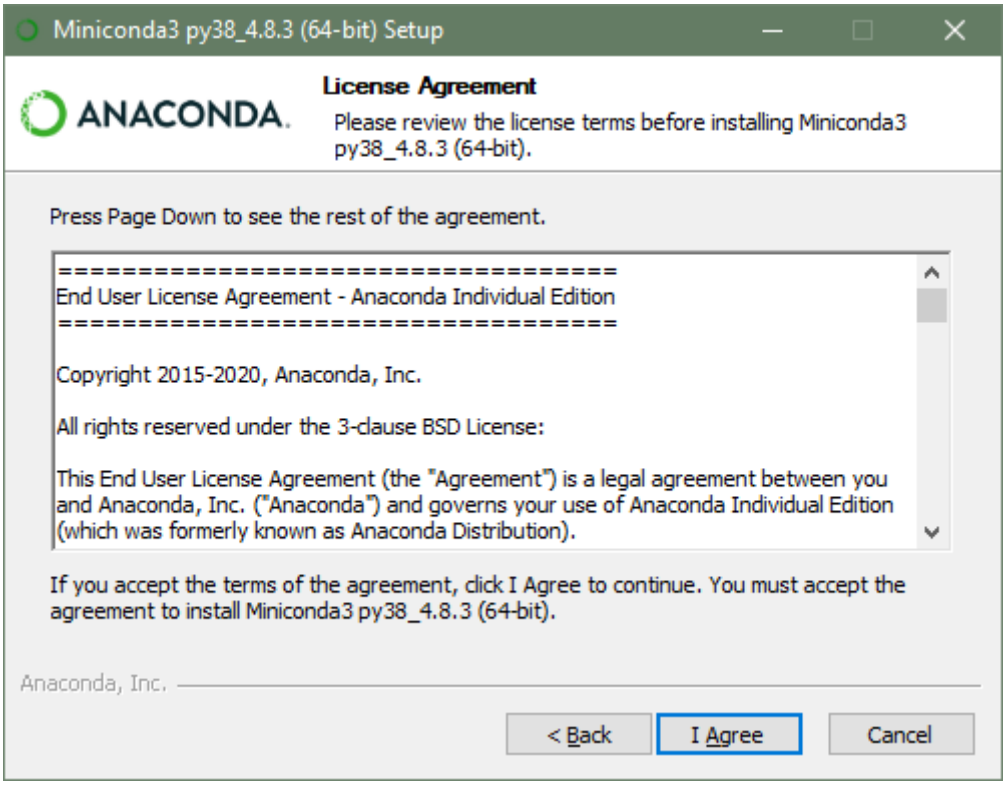
Once you download the installer you would have the following file:

Miniconda3-latest-Windows-x86_64.exe

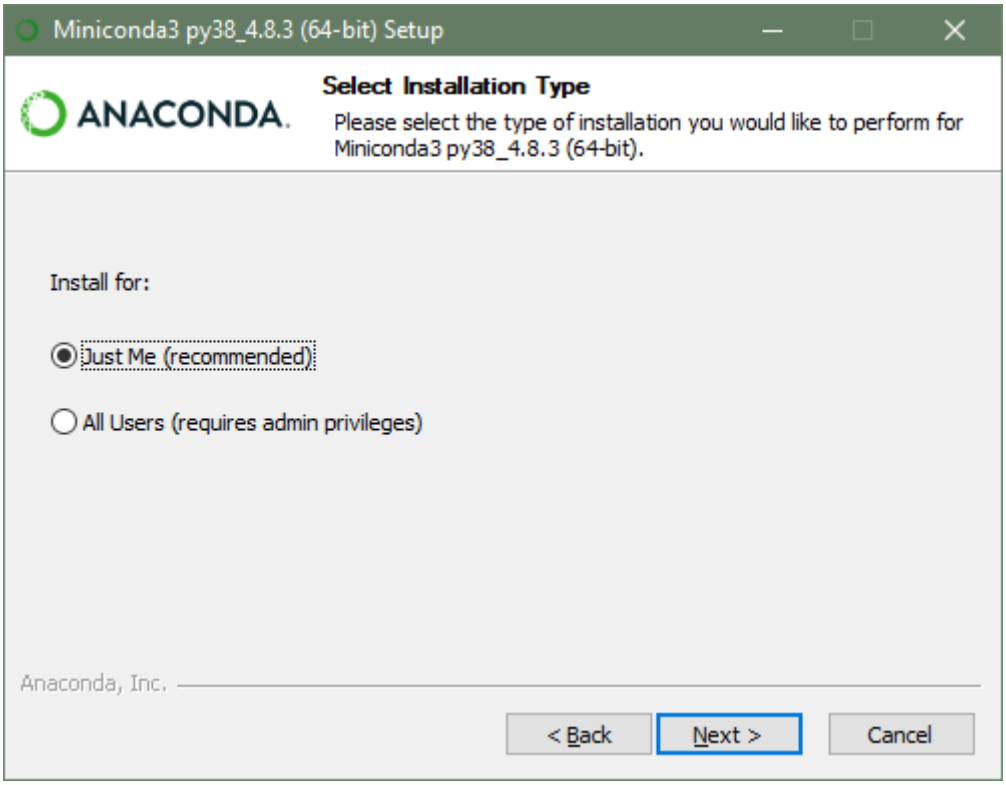
Open the installer with double click, click on "Next" to start the installation



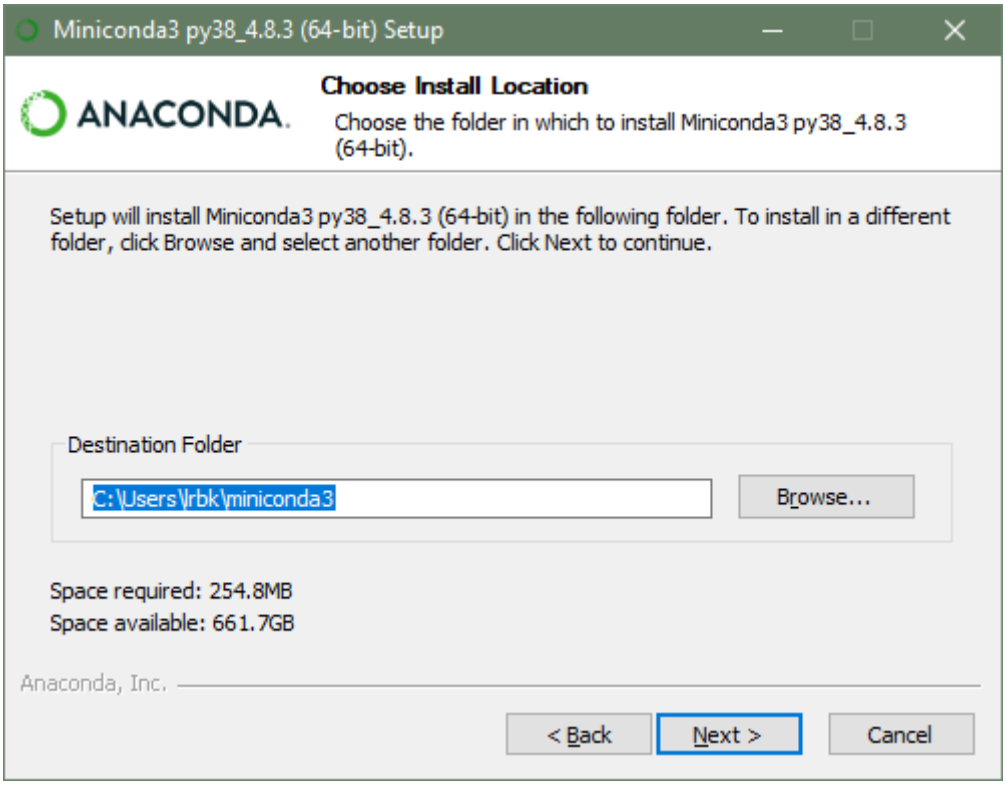
Click on "Agree" to accept the therms and conditions



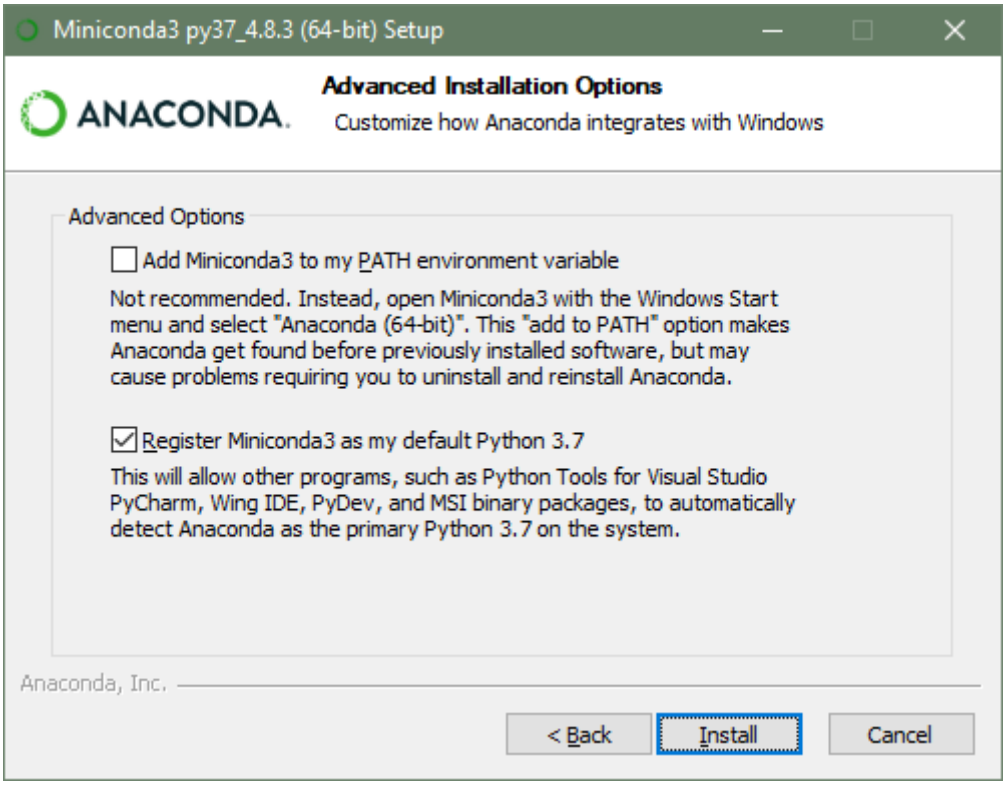
Leave by default the kind of installation and click on “Next.”



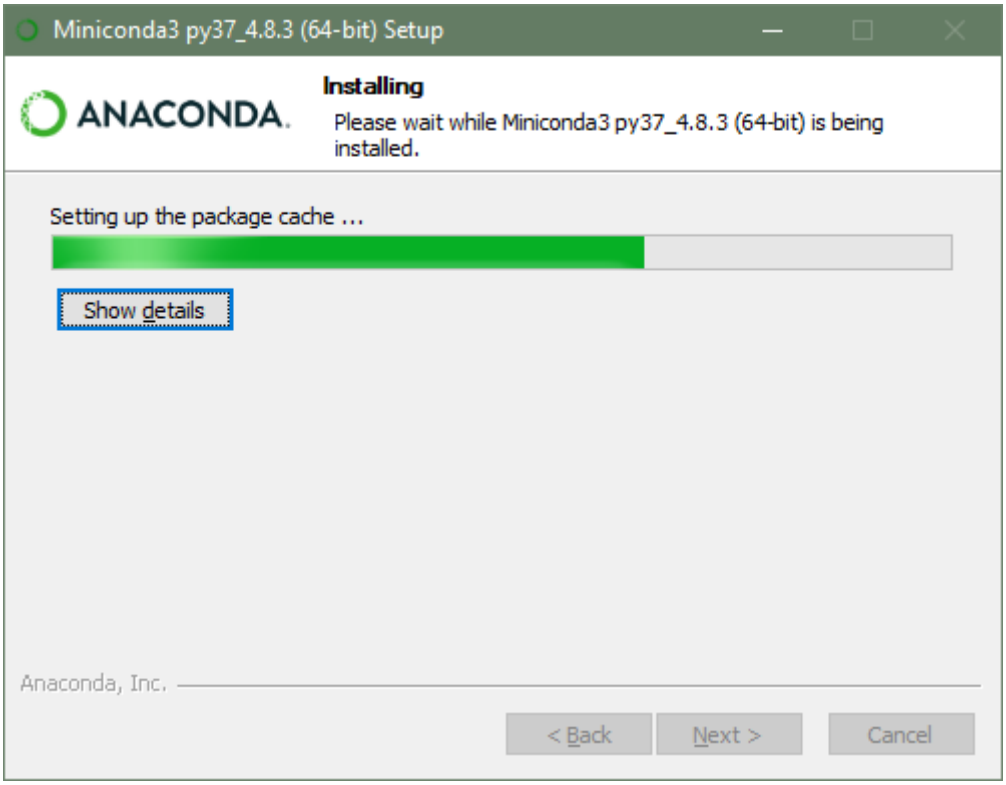
Leave as default the installation path and click on “Next”



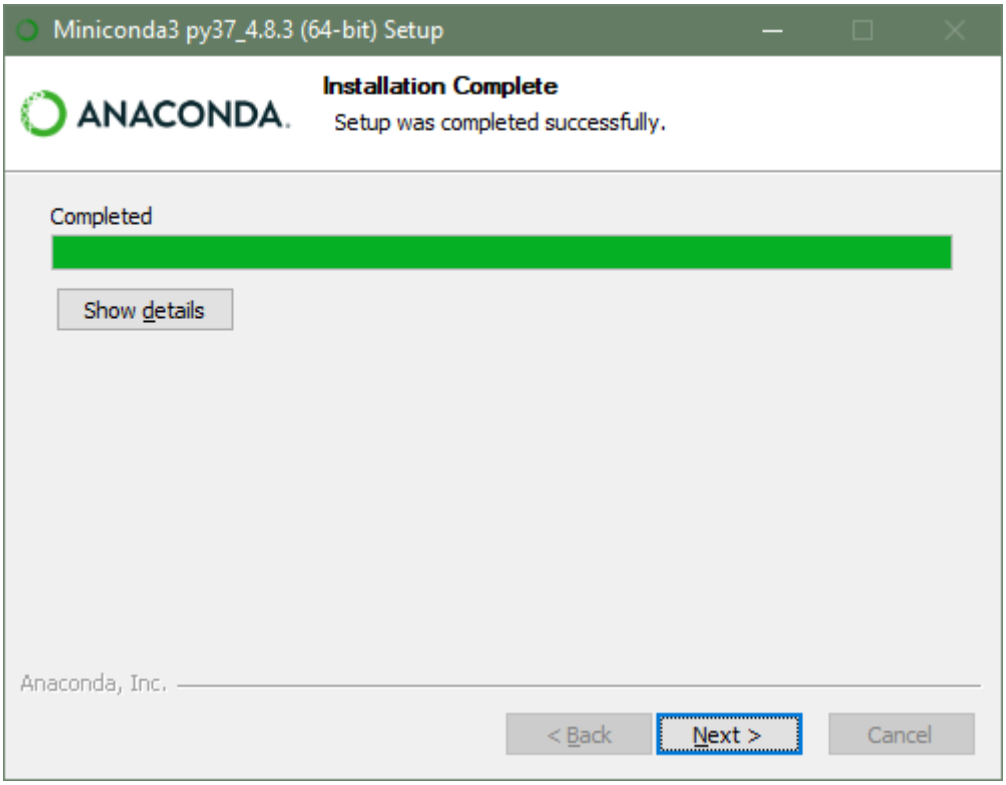
Finally, click on “Install”



The installation can take some minutes to finish

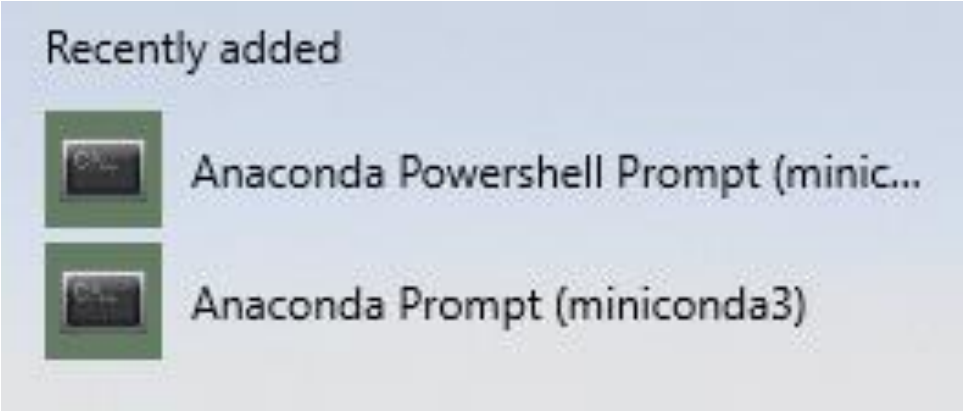


Once the installation is complete, click on "Next"

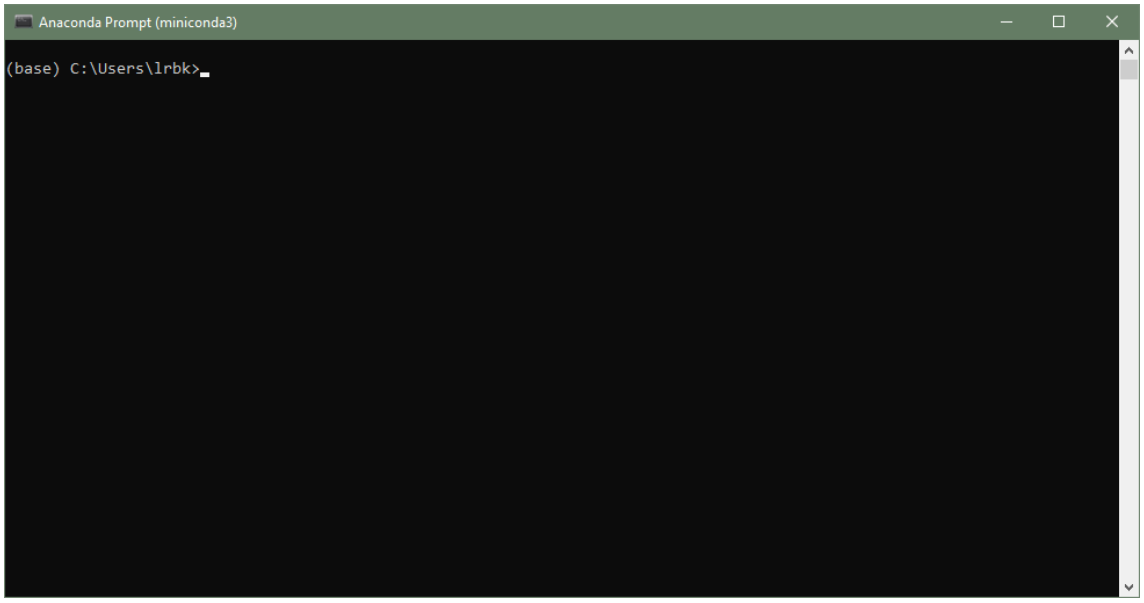


To finish the installation process, click on “Finish”

To open Miniconda, press the "Windows" button in your keyboard, and you could see that Miniconda is added to the Recently added part



Open the one that says "**Anaconda Prompt (miniconda3)"**, a window like the following will prompt.

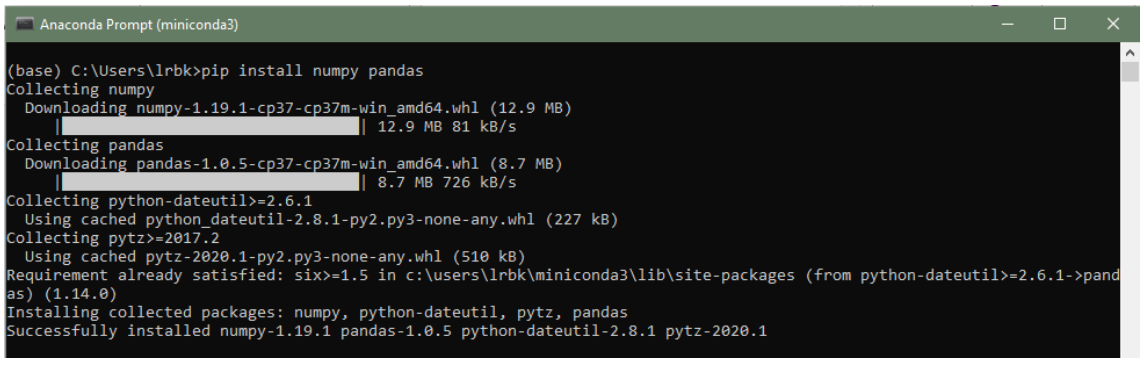


Now that we have Python3 installed install the libraries we want or that are going to be useful

First, install "numpy" and "pandas"

```
pip install numpy pandas
```

The installation process finishes by its own



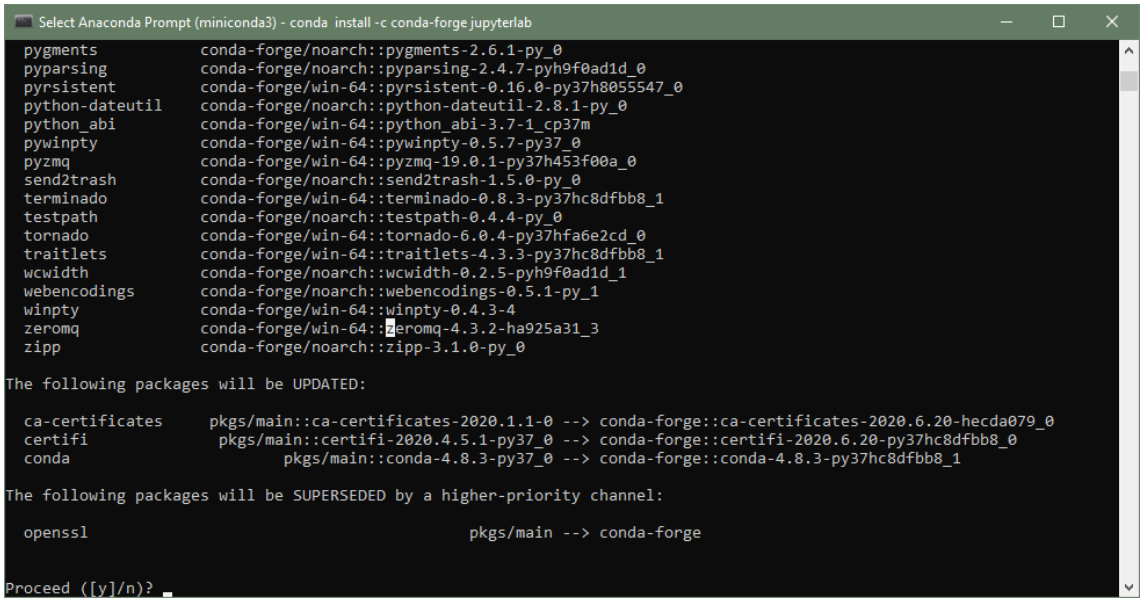
Finally, we add the libraries "matplotlib" and "scipy"

```
pip install matplotlib scipy
```

Let's install "Jupyter Lab," an interface that allows an easy edition of our scripts, the installation is made through "conda," which is the tool for packages management of Miniconda

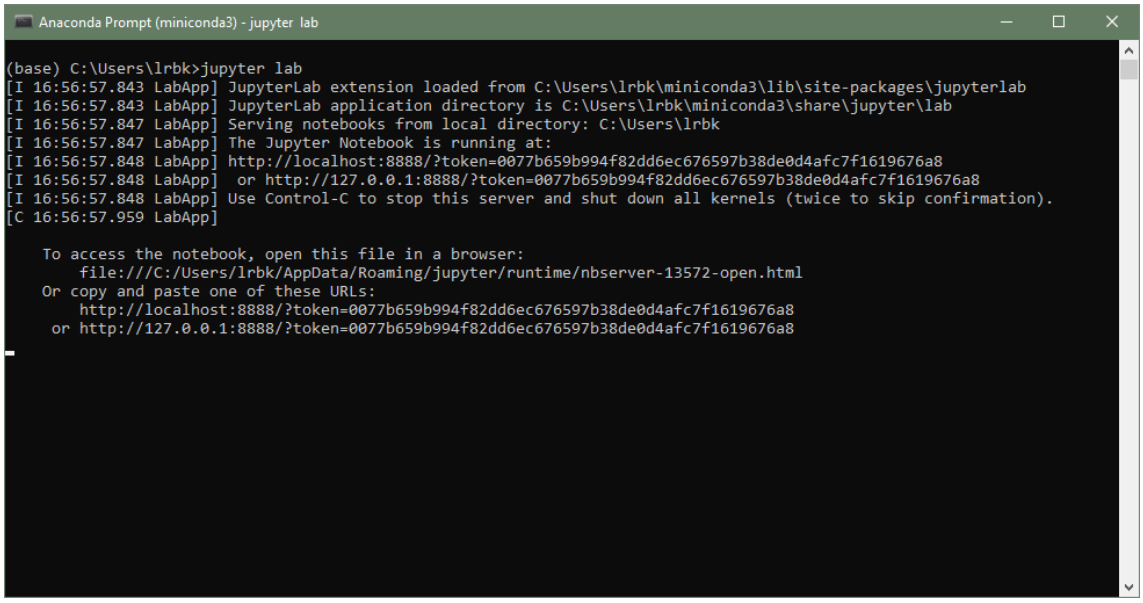
```
conda install -c conda-forge jupyterlab
```

It may ask you if you want to install a list of packages, write "y" and press "enter."

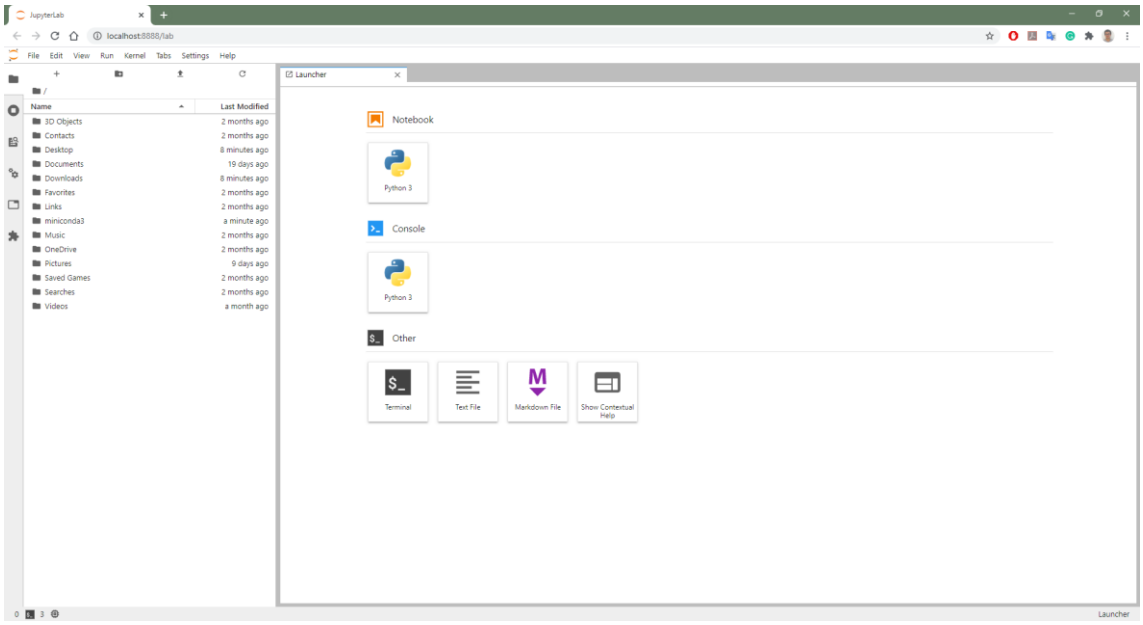


Once the installation of "Jupyter Lab" finishes, you could access it bt typing "Jupyter lab."

```
jupyter lab
```



You could see the interface of "Jupyter Lab."



Since this point, you are ready to start with Session 1.

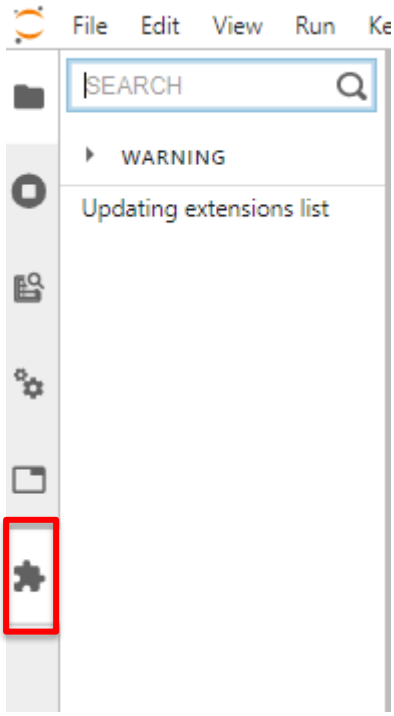
Before finishing the installation guide, we are going to install "Widgets", which are extensions for Jupyter Lab. Open the "Anaconda Prompt" and run the next commands:

```
conda install -c conda-forge ipywidgets
conda install -c conda-forge nodejs
jupyter labextension install @jupyter-widgets/jupyterlab-manager
```

To enable the widgets, open "Jupyter Lab" from the Anaconda Prompt:

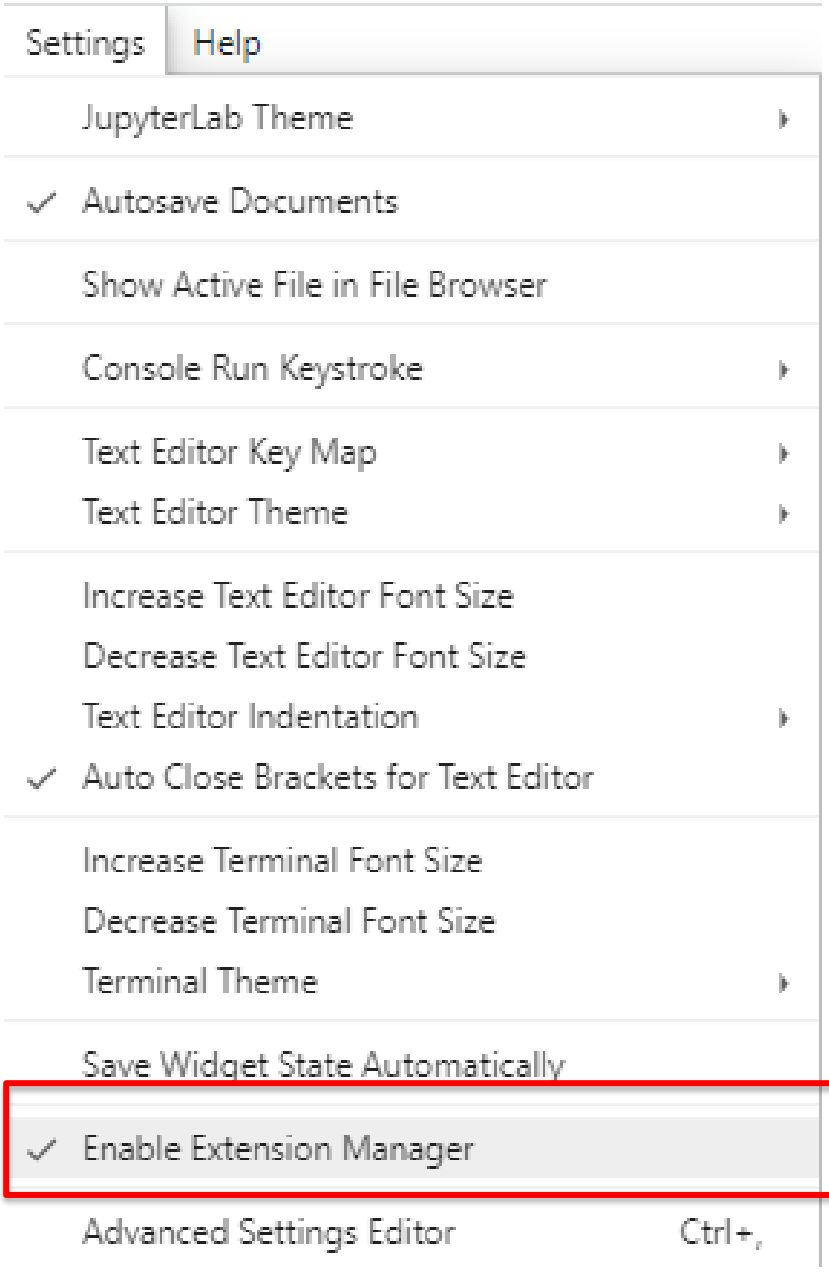
```
jupyter lab
```

Inside "Jupyter Lab" go to the extensions tab,



Clic on "Enable" and you could see the widgets "plugin"

If you cannot see the extensions tab, go to the "Settings" menu and clic on "Enable Extension Manager"


Settings
Help
JupyterLab Theme
Autosave Documents
Show Active File in File Browser
Console Run Keystroke
Text Editor Key Map
Text Editor Theme
Increase Text Editor Font Size
Decrease Text Editor Font Size
Text Editor Indentation
Auto Close Brackets for Text Editor
Increase Terminal Font Size
Decrease Terminal Font Size
Terminal Theme
Save Widget State Automatically
Enable Extension Manager
Advanced Settings Editor
Ctrl+,