## Installation of Anaconda and Jupyter Notebook

In the master Climate Physics, we will use Python in various courses. This way, you will get some experience with coding and data analysis. There are several editors in which you can write Python code, but during this introduction we prefer you use the Jupyter Notebook. Jupyter Notebook is an interactive computing environment, through which you are able to write and run Python code. The advantages of using such environment are numerous, among which the possibility of interactively writing and running code, and integrating code and text elements in the same document.

For more information about Jupyter, visit:
https://jupyter-notebook-beginner-guide.readthedocs.io/en/latest/what_is_jupyter.html

To be able to use the Notebook, you have to install Jupyter Notebook on your laptop. We suggest you to use the Anaconda distribution: you can find more information here:

https://jupyter-notebook-beginner-guide.readthedocs.io/en/latest/install.html

Or go directly to the site of Anaconda to download the complete Anaconda package:

https://www.anaconda.com/download

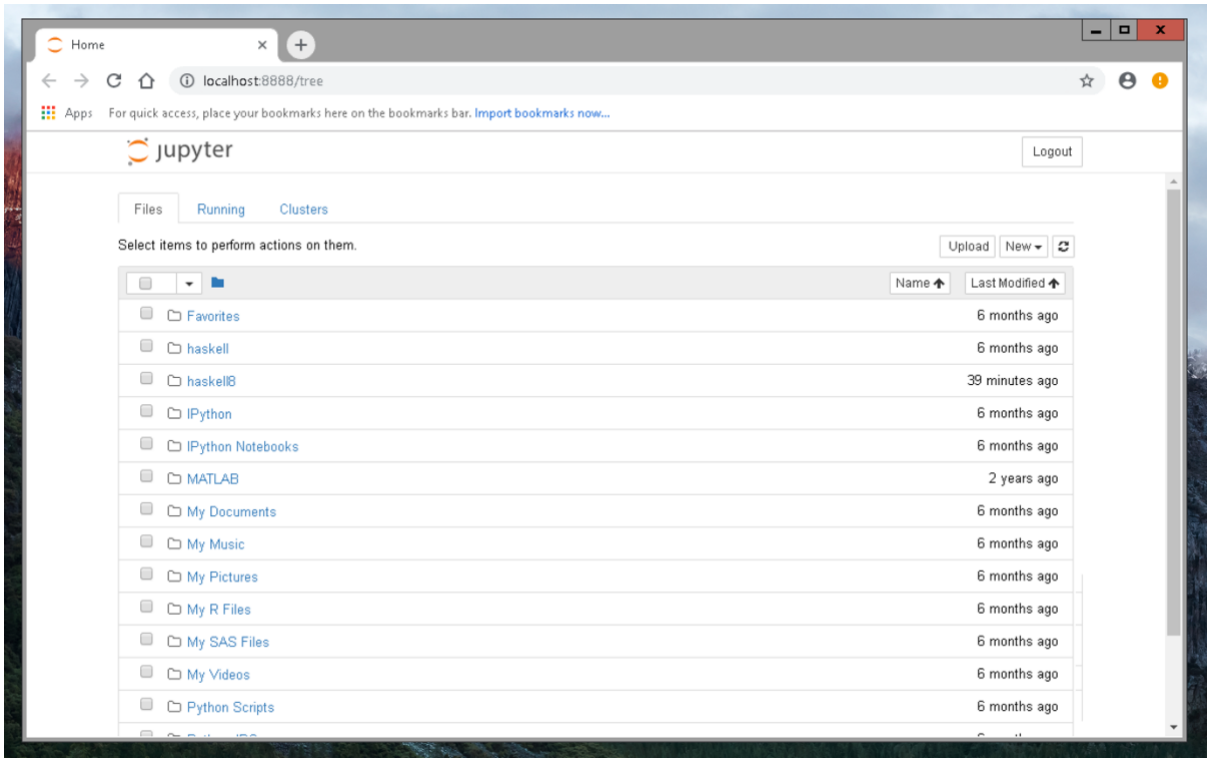
Then, follow the instructions for downloading Python 3.12.

## Launching of the Jupyter Notebook

Jupyter Notebook can be launched by clicking on the *Anaconda Navigator* icon. This opens a small menu in which you can launch *Jupyter Notebook* (Windows) or by typing in a terminal (Linux or Mac):

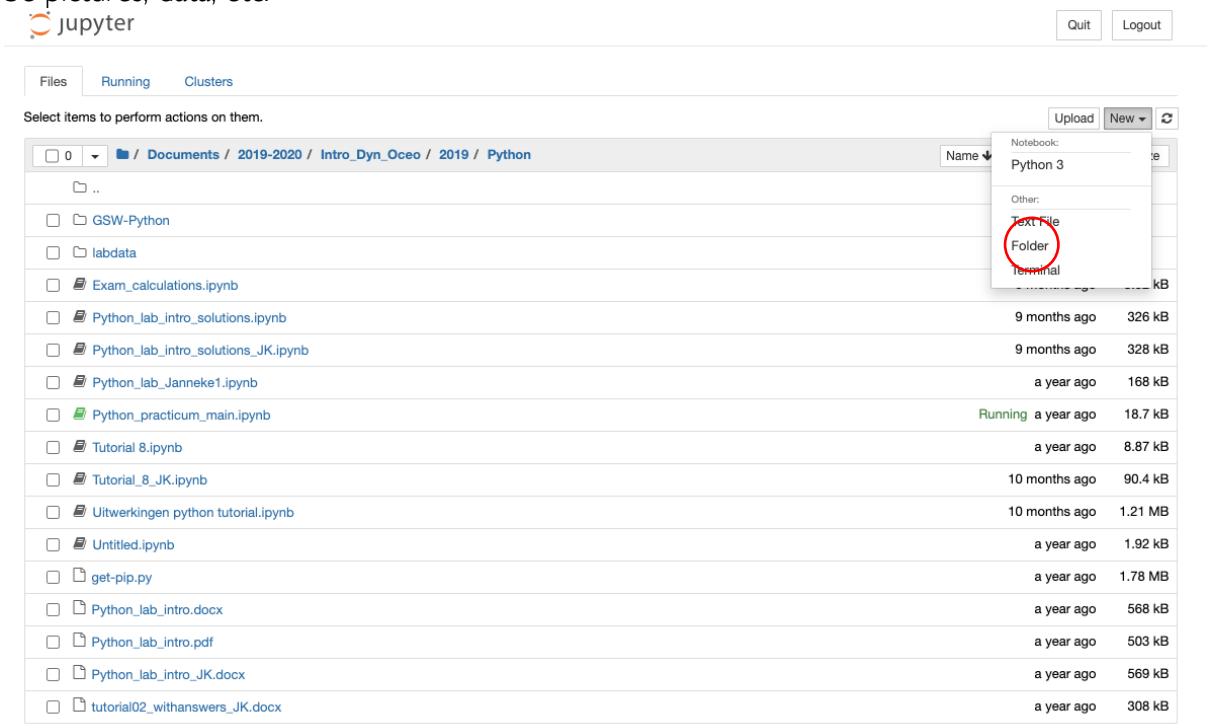
```
jupyter notebook
```

Once you launch the Notebook, a browser window will open, and it will look more or less like this one:

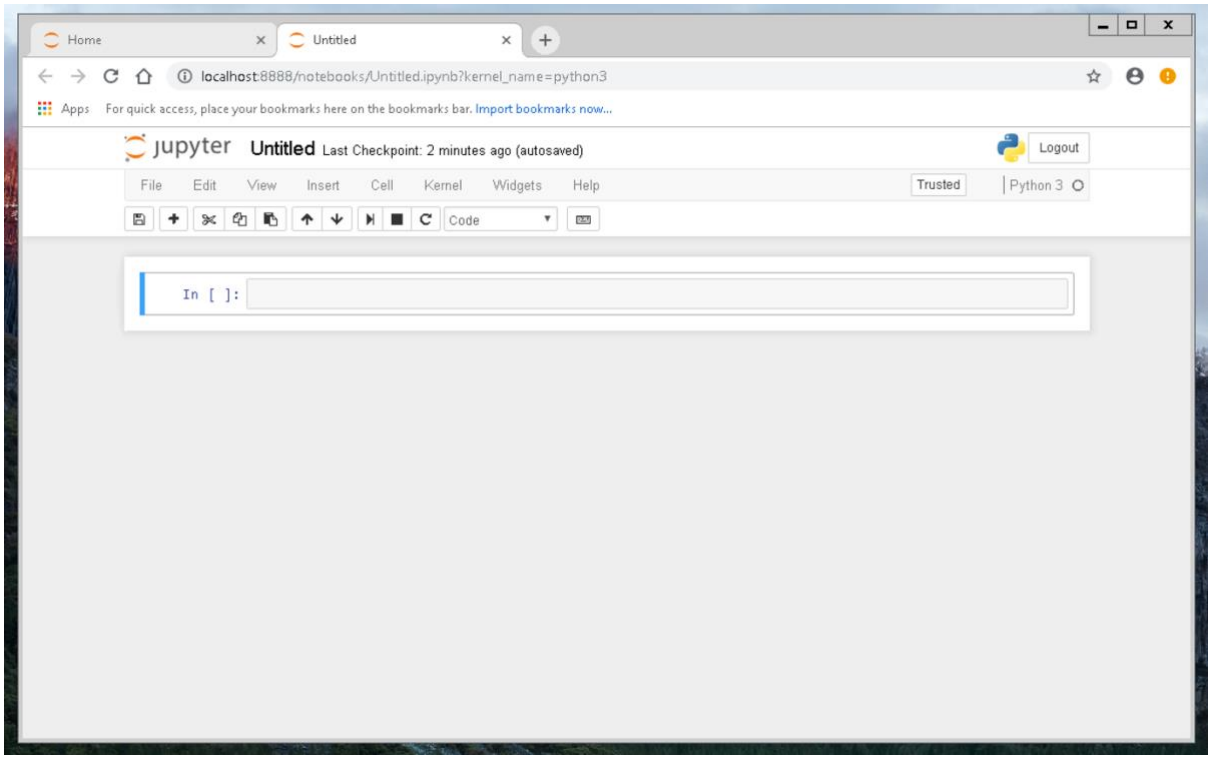



What you see is your home folder. Here, you can navigate through your folders. Go to the folder where you want to save all the Notebooks for this course.

By clicking on the small arrow next to '*New*', you can create a new folder. This will be your working folder. All the files needed to run your Notebook need to be stored here, these can be pictures, data, etc.



In this working folder, you can launch a new Notebook. Again, by clicking on the small arrow next to *'New'* and then selecting *'Python 3'*. Then, a new notebook opens, which looks something like this. Now you are ready to start coding!




**Additional packages**

You will need only a handful of packages for the practicum of this course, which are already included in the basic installation of Anaconda. These packages are: *numpy, scipy, matplotlib, jupyter.* Once Anaconda is installed on your computer, you can install new Python packages with the command

```
conda install {package_name}
```

You can type this command in the Jupyter Notebook, or in the terminal of your computer. The package will then be downloaded and installed, automatically. You can also find other packages in the Anaconda Navigator. To get an overview of all the packages in the current environment, type

```
conda list
```

Some packages may be "unknown" to conda and then you will get an error message. This may especially happen for smaller, scientific packages. Often you can find these on the conda-forge channel and install them trough

```
conda install -c conda-forge {special_package}
```