

Tutorial 2 – Jupyter notebook and Python revision

Aim:

- Create conda environments
- Create a jupyter lab notebook
- Revise Python

This tutorial will serve as revision for Python and help you to become proficient in using Jupiter lab notebooks.

1. Start jupyter lab

Start Jupiter lab either using “Anaconda navigator” or using the command line.

In order to use Jupiter lab on the command line, you will first need to install Anaconda. If you installed Anaconda on your own machine, make sure that you add the conda path to the environment variable.

To create and activate an environment do the following:

```
conda create --name py38 python=3.8
conda activate py38
conda install -c conda-forge jupyterlab
jupyter lab
```

2. Recreate the Tutorial-week2.html file in a jupyter lab notebook

Download and open the attached Tutorial-week2.html file that I exported from a notebook I created.

Now recreate the same file on your own Jupiter notebook.

Once you have completed recreating the notebook, try the next exercise for a challenge.

3. Python exercise

Write a program that reads in a text file and prints out the word frequencies. Try to use Jupiter lab notebook to document the development of your program. Example

Input text: “The rain fell on the car. The rain fell on the ground.”

Output: the-3, rain-2, fell-2, on-2, car-1, ground-1

4. Finally

Have a look at this matplotlib notebook for an example of how well a notebook can serve as a means of disseminating scientific information.

<https://nbviewer.jupyter.org/github/jrjohansson/scientific-python-lectures/blob/master/Lecture-4-Matplotlib.ipynb>