Getting started with python
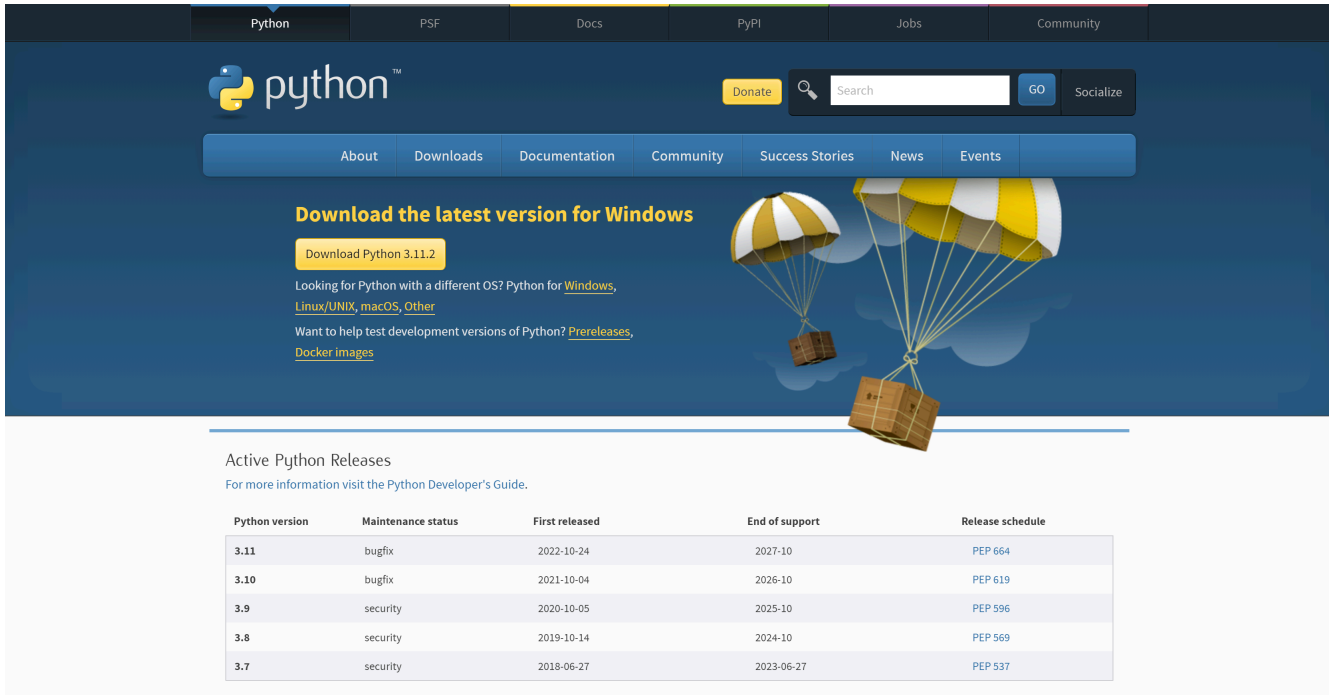
Installing python, virtualenv and jupyter on windows

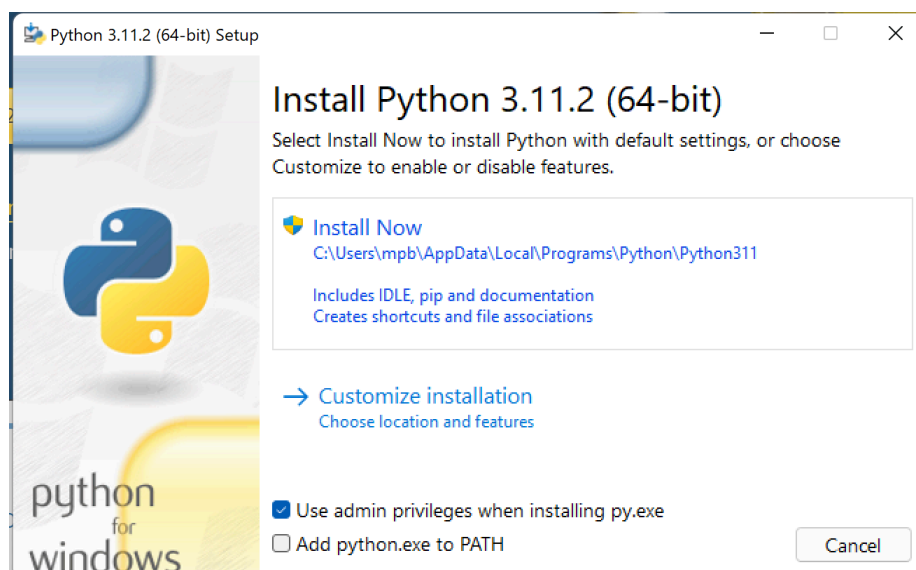## Get python

1. Download python to your computer:

2. Install python by running the downloaded exe-file:

Install python in the default location which should be:

C:\Users<YOUR USER>\AppData\Local\Programs\Python\Python

Set path

Set "Python37" path and "Python37/Scripts" path to environment variable.

1. From the start menu search for "environment variable" and click "Edit the system environment variables"
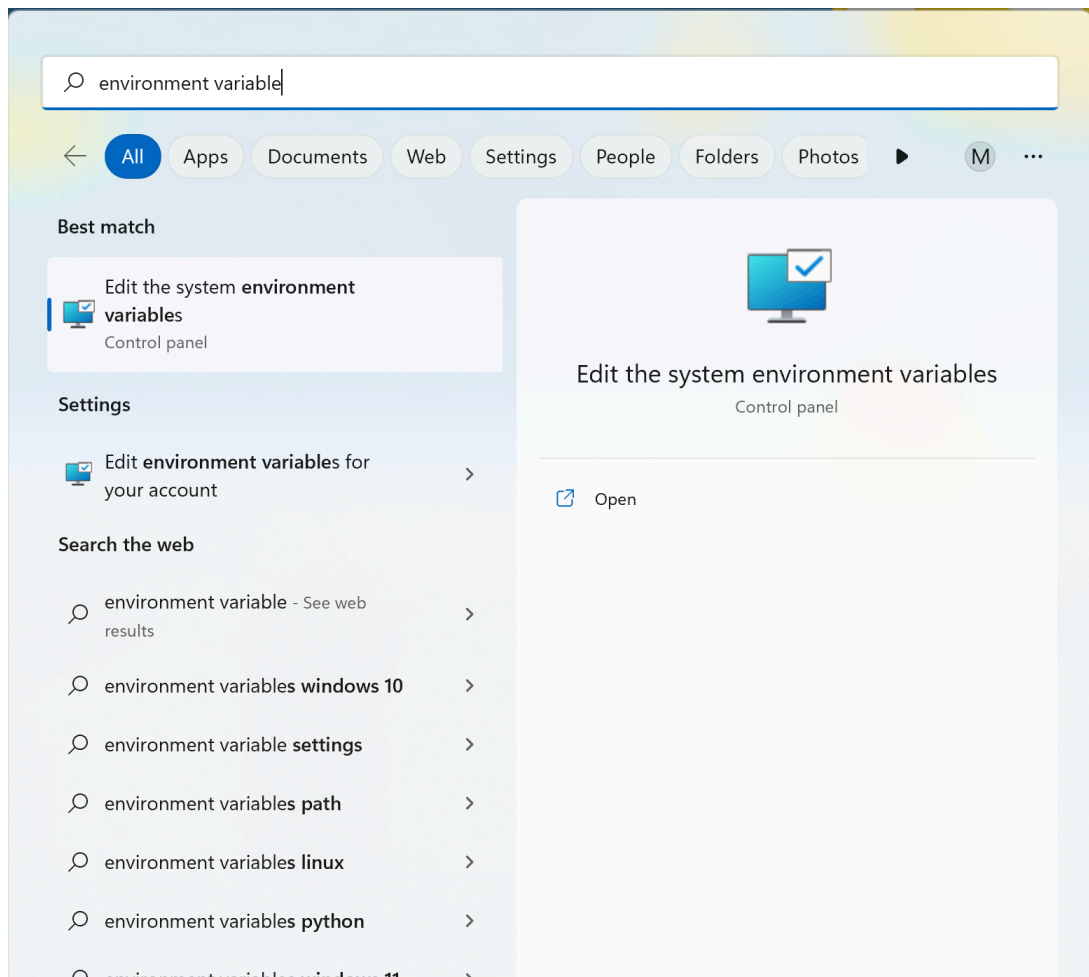
2. Click "Environment variables":

3. Mark "Path" under "User varaibles for " and click on "Edit"

4. Click on New and paste the path to the python.exe in your system which should be placed during installation at this destination:

C:\Users<YOUR USER>\AppData\Local\Programs\Python\Python
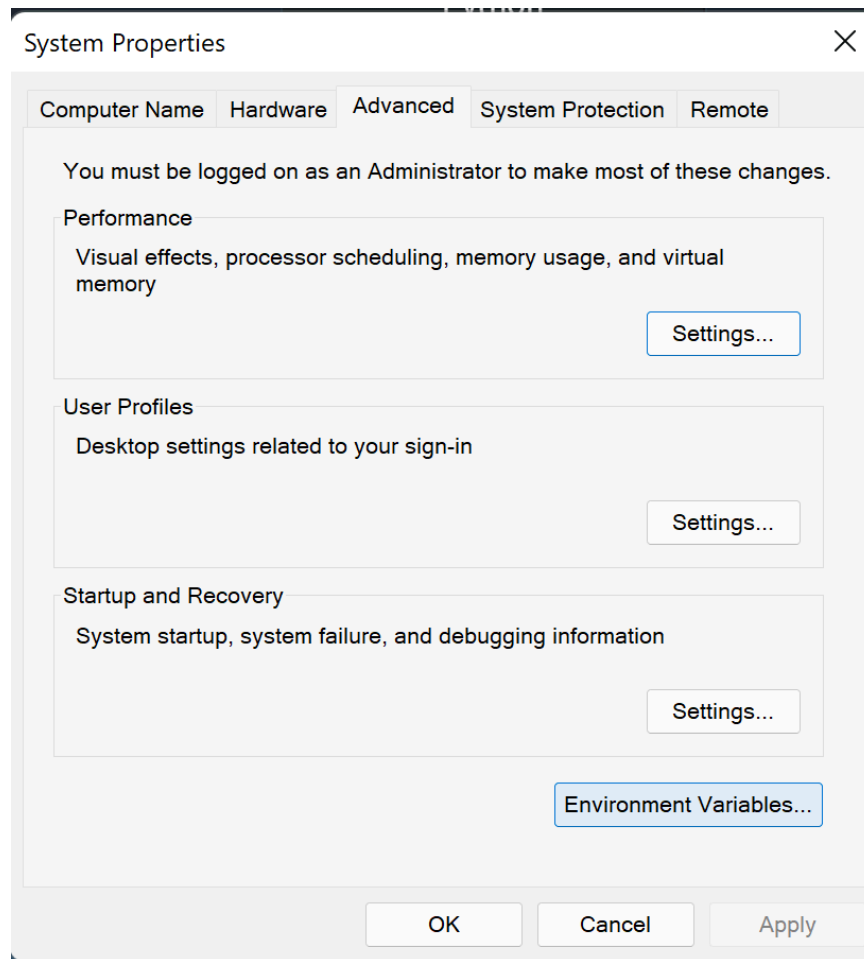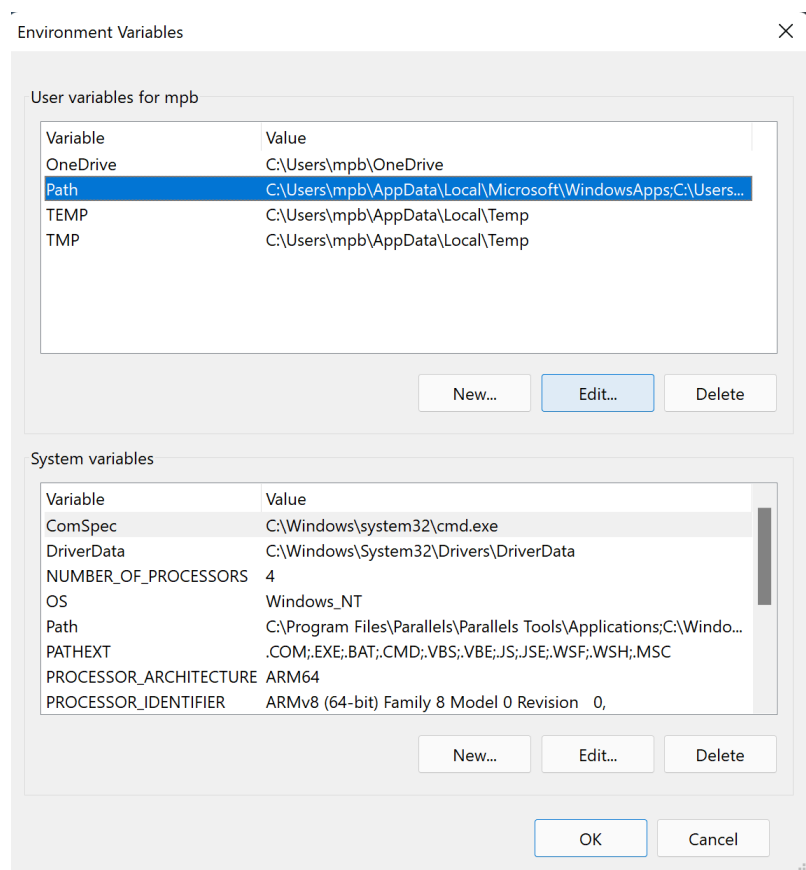
5. Click on New and paste the path to:

C:\Users<YOUR USER>\AppData\Local\Programs\Python\Python\Scipts

6. Make sure to keep your python above the windows app (if exists). Use the arrows to direct your python above the Microsoft.
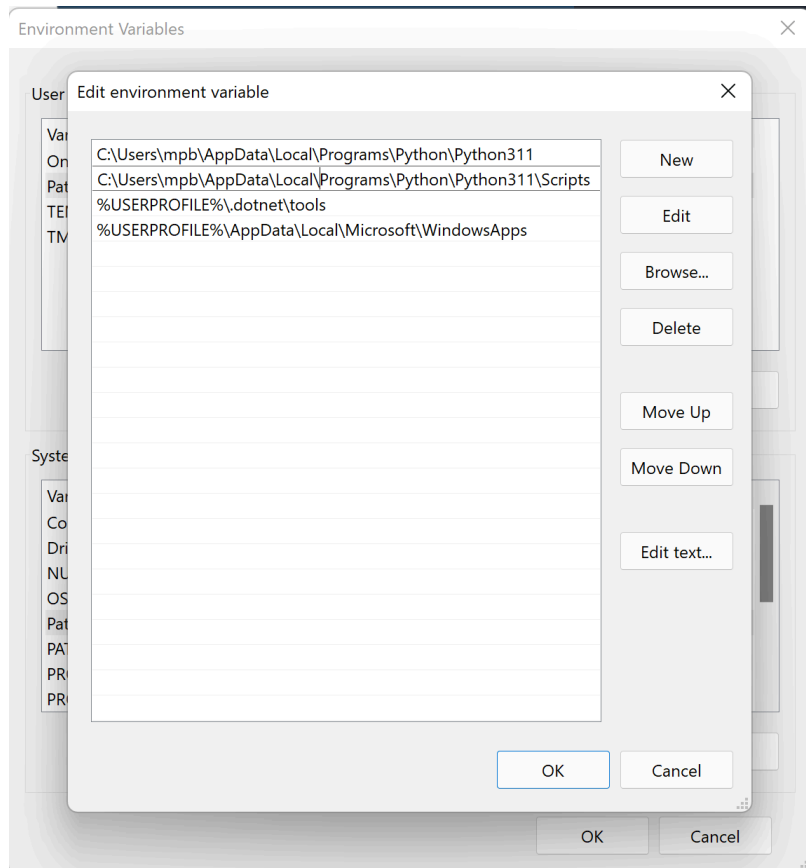
Check the installation.

1. Open command prompt (go to the start menu in windows and search for cmd)

2. Type `python` and validate you see the following:

```
Command Prompt - python                                              —  □  ✕
Microsoft Windows [Version 10.0.22000.1455]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mpb>python
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> _
```
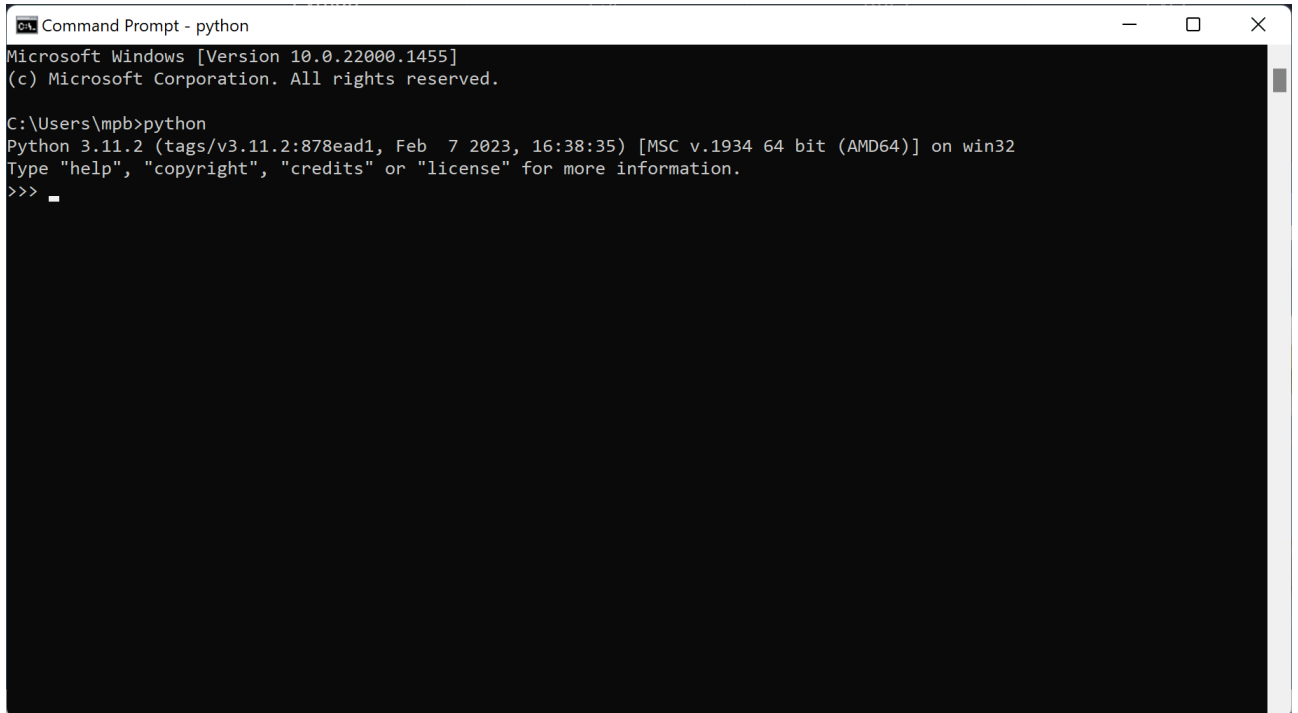
Install Jupyter in virtual environment

1. Open command prompt (go to the start menu in windows and search for cmd)
2. Creates a python virtual environment named pythoncourse (we will run a jupyter notebook from within this environment). Type:

   `pip install virtualenv`

   `virtualenv <THE NAME OF YOUR VIRTUAL PYTHON ENVIRONMENT>`

3. Activate virtual environment

   `<THE NAME OF YOUR VIRTUAL PYTHON ENVIRONMENT>\Scripts\activate`

4. Install Jupyter

   `pip install jupyter`

   If the installation hangs, then press the Enter key after 20-30 seconds

Open Jupyter Notebook

1. From Command Prompt type:

   `jupyter notebook`

2. You should see the output

3. At the same time your browser should open and give you the following window:
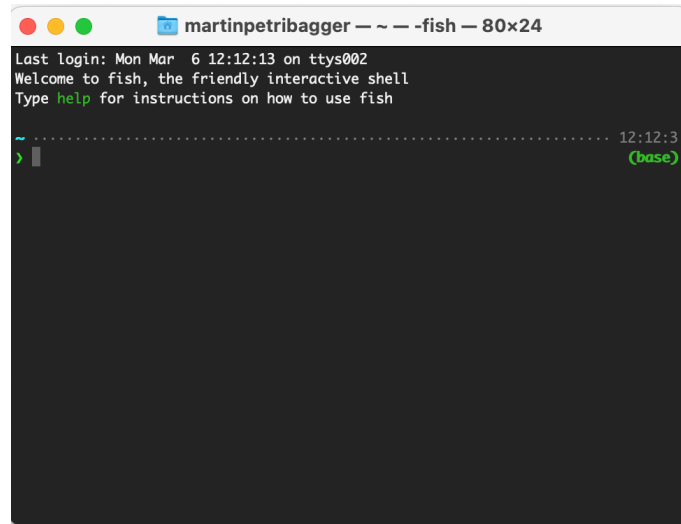

Congratulations – You now have installed

· Python

· A viual environment

· jupyter notebook

on mac

Install python 3

1. Xcode is Apple's Integrated Development Environment (IDE). You might already have Xcode on your Mac. If not, you can get Xcode from Apple appstore. Xcode

2. Open a terminal window

3. Install HomeBrew

```
/bin/bash -c "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

4. Install python 3

```
brew install python3
```

Install virtualenv and create virtual environment

1. Install virtualenv:

```
python3 -m pip install --user virtualenv
```

2. Navigate to where you want to save your environment dependencies:

```
cd <PATH FOR ENVIRONMENT>
```

3. Create directory for your dependencies and navigate to it:

```
mkdir <NAME OF FOLDER FOR ENVIRONMENT>
```

```
cd <NAME OF FOLDER FOR ENVIRONMENT>
```

4. Create the virtual environment:

```
virtualenv <THE NAME OF YOUR VIRTUAL PYTHON ENVIRONMENT>
```

Install Jupyter and open notebook

1. Activate virtual environment

```
source <THE NAME OF YOUR VIRTUAL PYTHON ENVIRONMENT>/bin/activate
```

2. Install Jupyter

```
pip install jupyter
```

3. Open Jupyter notebook

```
jupyter notebook
```

Congratulations – You now have installed

· Python 3

· A virtual environment

· jupyter notebook

Daily work

When you want to start working in python you will have to tell your system that you want to work in your virtual environment and from which directory you want to start.

1. Open
    - your **command prompt (cmd)** if you are on a windows computer
    - your **terminal** if you are on a mac
2. navigate to where you put the foldeer for your virtual environment `cd <NAME OF FOLDER FOR ENVIRONMENT>`
3. activate your virtual environment
    - Windows: `<THE NAME OF YOUR VIRTUAL PYTHON ENVIRONMENT>\Scripts\activate`
    - mac: `source <THE NAME OF YOUR VIRTUAL PYTHON ENVIRONMENT>/bin/activate`
4. (optional) Navigate to the folder you want as the root for yout Jupyter workspace.

    type `cd <NAME OF FOLDER>`
5. Start your jupyter notebook session

    type `jupyter notebook`