


LEARN CODING

ale66

RESOURCES

- Online materials
- install components 

ONLINE MATERIALS

ONLINE MATERIALS

1
2

- Moodle (MyAriel) web page for static information
- MS Teams channel
- online textbook
- GitHub presence

MS TEAMS CHANNEL

Live broadcast and recording from the MS Teams team.

DM on Teams to request inclusion

ONLINE TEXTBOOK

As reference reading we will use an *Foundations of Python Programming*, a version of **Think Python**, from [Runestone academy](#)

To join, please write me on Teams with these informations

Register Students

Upload a csv file with the following format to automatically register your students. Each row must have six elements in the order shown below.

username,email,first_name,last_name,password,course

Choose a CSV file with student information

Choose File no file selected

Register Students

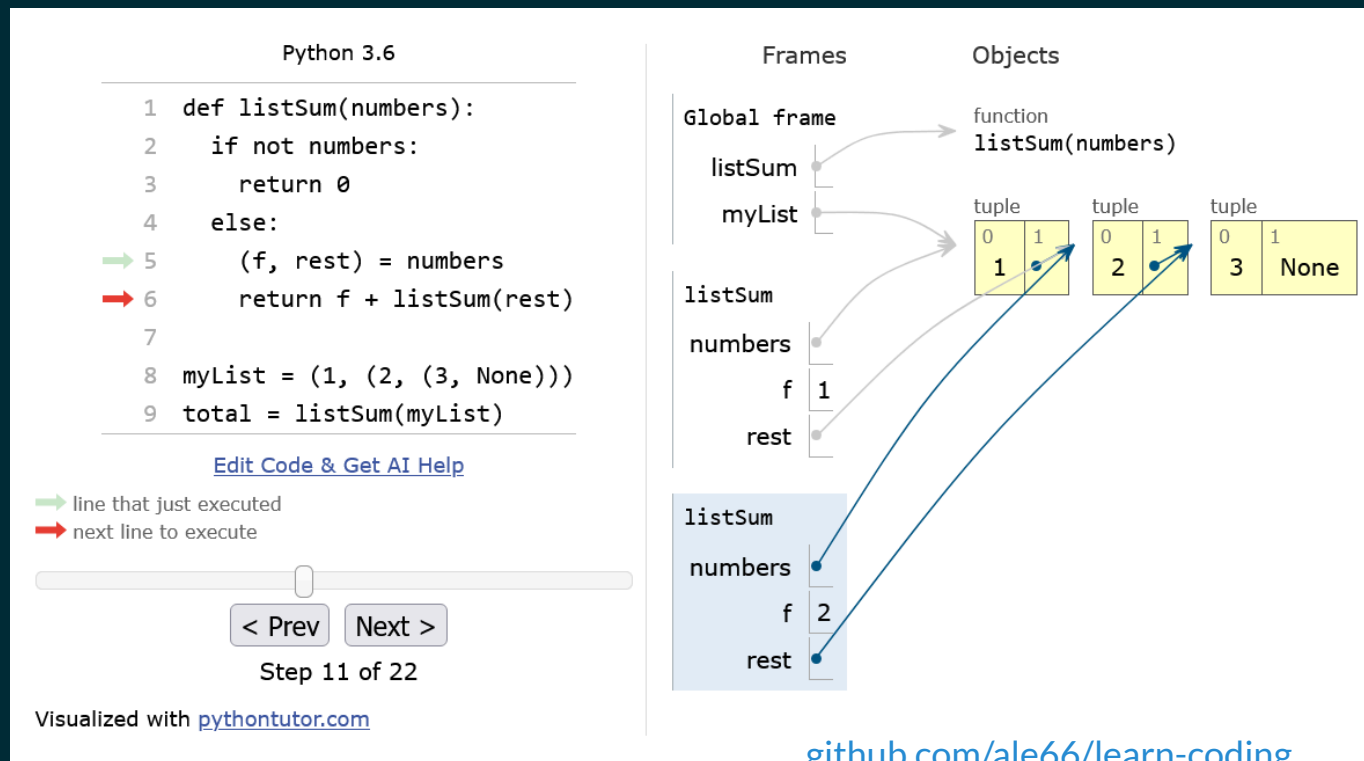
GITHUB PRESENCE

A public repository with most materials is on
github.com/ale66/learn-coding

PYTHONTUTOR

Step-by-step execution of simple codes with a nice visualisation of what happens in the computer memory: a crucial tool for learning

pythontutor.com



INSTALL COMPONENTS

INSTALL COMPONENTS

INSTALL NEEDED COMPONENTS

1
2

The following presentation relates to Win 10 laptops.

For Win 11: you need to authorise installations.

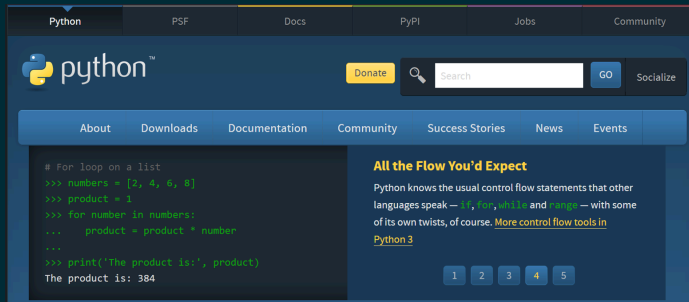
For MacOS: proceed to normal software download+installation. In the notes below substitute

Windows Power Shell by *terminal*

dir by *ls -lrt*

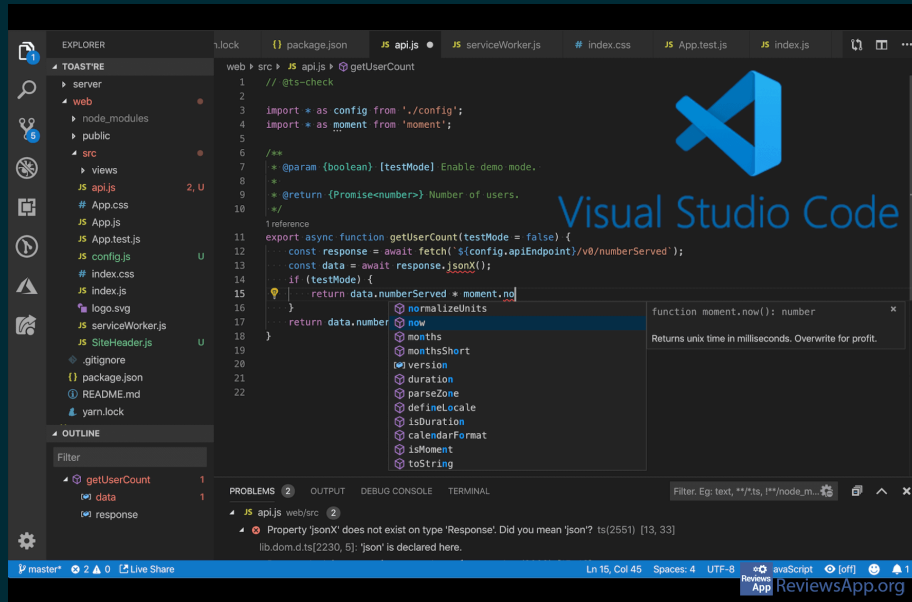
For Linux: you don't need me :-)

PYTHON



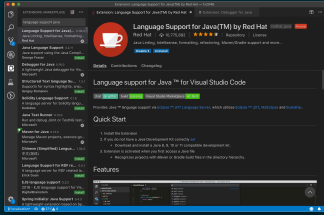
- install from www.python.org/
- no need for Anaconda virtual env. (yet)

VS CODE



- Free and light
- lots of extensions allow customisation

VS CODE EXTENSIONS



CTRL+Shift+x to the marketplace

- Python, by Microsoft
- Jupyter, by Microsoft
- Markdown All-in-one
- Simple CSV editor

PIP

an external command for your Terminal/Powershell

fetch+install *packages* containing Py. functions

Python extensively relies on packages

Get **get-pip.py** from the **PIP** web site.

```
1 > wget https://bootstrap.pypa.io/get-pip.py -o get-pip.py
```

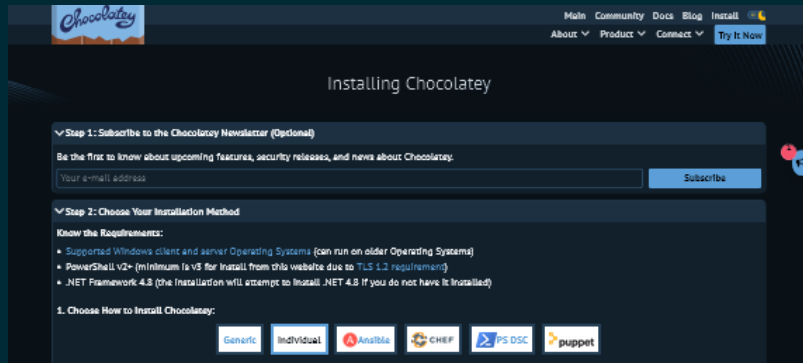
```
1 > python get-pip.py
```

GET ESSENTIAL MODULES

```
1 > pip install os
2 ...
3 > pip install numpy
4 ...
5 > pip install pandas
6 ...
7 > pip install matplotlib
```

APP MANAGEMENT

- for Win: [Chocolatey](#)
- for iOs: [Homebrew](#)



It manages installed software as linux does
Intallation is of average complexity
Start a **PowerShell** in administrator mode;
see ‘individual installation’.

EXAMPLE COMMANDS

```
1 > choco install python
```

```
1 > choco install vscode
```

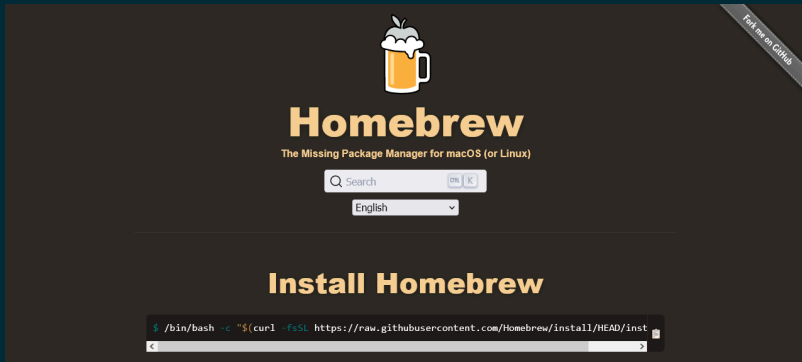
```
1 > choco install pip
```

```
1 > choco upgrade python
```

```
1 # upgrade all installed packages
```

```
2 > choco upgrade all --yes
```

HOME BREW



Essentially the same as Chocolatey, but for MacOS.

```
1 > brew --cask install visual-studio-code
```

N.B. to install Git on MacOS we need brew



- a protocol for managing code (web pages *are* code)
- keeps track of our work so it can undo changes that disrupt previous work
- collaboration is supported so teams can work asynchronously
- branching allows to explore new ideas without spoiling the existing code



Github is a community repository for sharing code and open collaborations

download the **Git** app

to maintain your copy of the GH repo

github.com/ale66/learn-web up-to-date

General tendency: code is public but data is very private

Git implements incremental/differential synchronisation
it's easy to synchronise your local copy of a repo with the
Github version

- first time: clone existing repository into a suitable folder

```
1 >git clone https://github.com/ale66/learn-coding.git
```

- updating: from a terminal working on the repository
folder (or below)

```
1 >git pull
```

FURTHER TIPS

- try practicing daily, in your **zone**
- try getting past frustration and *enjoy* the progress you make: you are in control now
- sign up to [Stack Overflow](#) to find solutions
- *do not*, at any rate, watch Python videos on YouTube...