Let's Code Python

How to install Tools

Duration: 4 days (23 & 30 April, 7 & 14 May 2022)

Time: 9am to 12pm

Delivery Method: Virtual Instructor Lead Training (VILT)

Course Credits: N/A (Certificate of completion will be awarded at the end)

Google Classroom code: svpqjll

Google Meet code: meet.google.com/xjt-nqjz-oev

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Tools needed

Nowadays there are many tools at one's disposal when it comes to programming or learning how to program. In this course, we will be covering some of the tools that will become part of your arsenal. The list below is a shortlist of some of the popular tools, but it is in no way exhaustive of all tools.

- Python
- PipEnv (We be done in class)
- PyCharm
- Github account
- Git
- Github Desktop

1. Create a Github account

a. For this course GitHub is the chosen version control platform.
b. Create a free account on the website by following this link → GitHub
c. Here is a link to a video about → GitHub
d. Download Github Desktop from this link → Download GitHub Desktop

2. Install Python

a) Download from this link → Download Python
b) Once downloaded please follow the instructions from this Video

3. Install PyCharm

a) Download from this link → Download PyCharm
b) Installation instructions can be found on the same page.

4. Install Git

a) Download from this link → Download Git
b) Here is a link to a video about → Git

5. Environment Setup

5.1 Setting up PATH

Programs and other executable files can be in many directories, so operating systems(OS) provide a search path that lists the directories that the OS searches for executables.

The path is stored in an environment variable, which is a named string maintained by the operating system. This variable contains information available to the command shell and other programs. The path variable is named Path in Windows.

5.2 Python Environment Variables

Here are important environment variables, which can be recognized by Python

Sr.No.	Variable & Description
1	**PYTHONPATH** It has a role like PATH. This variable tells the Python interpreter where to locate the module files imported into a program. It should include the Python source library directory and the directories containing Python source code.
2	**PYTHONSTARTUP** It contains the path of an initialization file containing Python source code. It is executed every time you start the interpreter. It is named as.pythonrc.py in Unix and it contains commands that load utilities or modify PYTHONPATH.
3	**PYTHONCASEOK** It is used in Windows to instruct Python to find the first case-insensitive match in an import statement. Set this variable to any value to activate it.
4	**PYTHONHOME** It is an alternative module search path. It is usually embedded in the PYTHONSTARTUP or PYTHONPATH directories to make switching module libraries easy.

5.3 Running Python

There are three different ways to start Python –

Interactive Interpreter

1. You can start Python from DOS, or any other system that provides you a cli
2. Enter python on the command line.
3. Start coding right away in the interactive interpreter.

$python #Unix/Linux [1]

Or
python% #Unix/Linux [2]

Or
C:> python #Windows/DOS [3]

5.4 Script from the Command-line

A Python script can be executed at the command line by invoking the interpreter on your application, as in the following –

$python script.py # Unix/Linux [4]

Or
python% script.py # Unix/Linux [5]

Or
C: >python script.py # Windows/DOS [6]

5.5 Integrated Development Environment

You can run Python from a Graphical User Interface (GUI) environment as well if you have a GUI application on your system that supports Python.

- Unix − IDLE is the very first Unix IDE for Python.
- Windows − PythonWin is the first Windows interface for Python and is an IDE with a GUI.
- Macintosh − The Macintosh version of Python along with the IDLE IDE is available from the main website, downloadable as either MacBinary or BinHex'd files.

If you are not able to set up the environment properly, post in the group to get help. Make sure the Python environment is properly set up and working perfectly fine.

Note − All the examples given in subsequent modules can be executed with Python 2.4.3 and above.

6. Conclusion

The tools and resources listed above will be used for the duration of the course. If any of them give an error during the setup, please do not hesitate to post on the WhatsApp group asking for help.

Note

- 1 & 2 used on Linux based systems
- 3 used on windows systems
- 4 & 5 are used on Linux systems to open scripts
- 6 used by Windows systems to open scripts