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Programming in

A presentation by:

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Python Installation and environment set-up

- Local Environment Setup
- Downloading Python
- Installation
- Setting-up system env-PATH
- Launching Python
- IDE

Download , Install Python (Windows OS) :

Step 1: Download the Full Installer

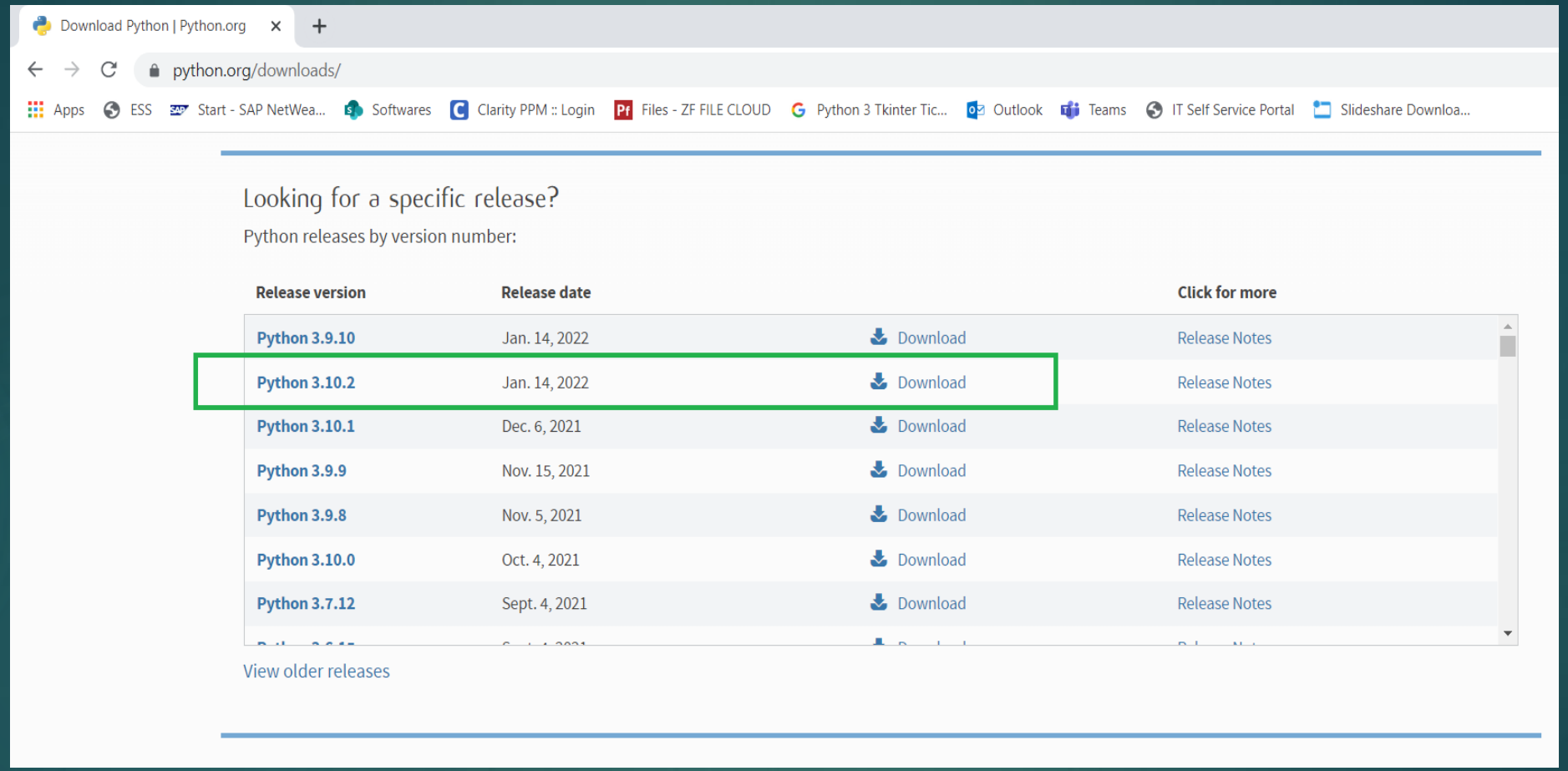
1.Open a browser window and navigate to the Python.org .

2.Under the “Python Releases for Windows” heading, click the link for the *Latest Python 3 Release - Python 3.x.x*.

As of date 19 JAN 2022, the latest version was Python 3.10.2.

3.Scroll to the bottom and select either *Windows x86-64 executable installer for 64-bit* or *Windows x86 executable installer for 32-bit*.

1.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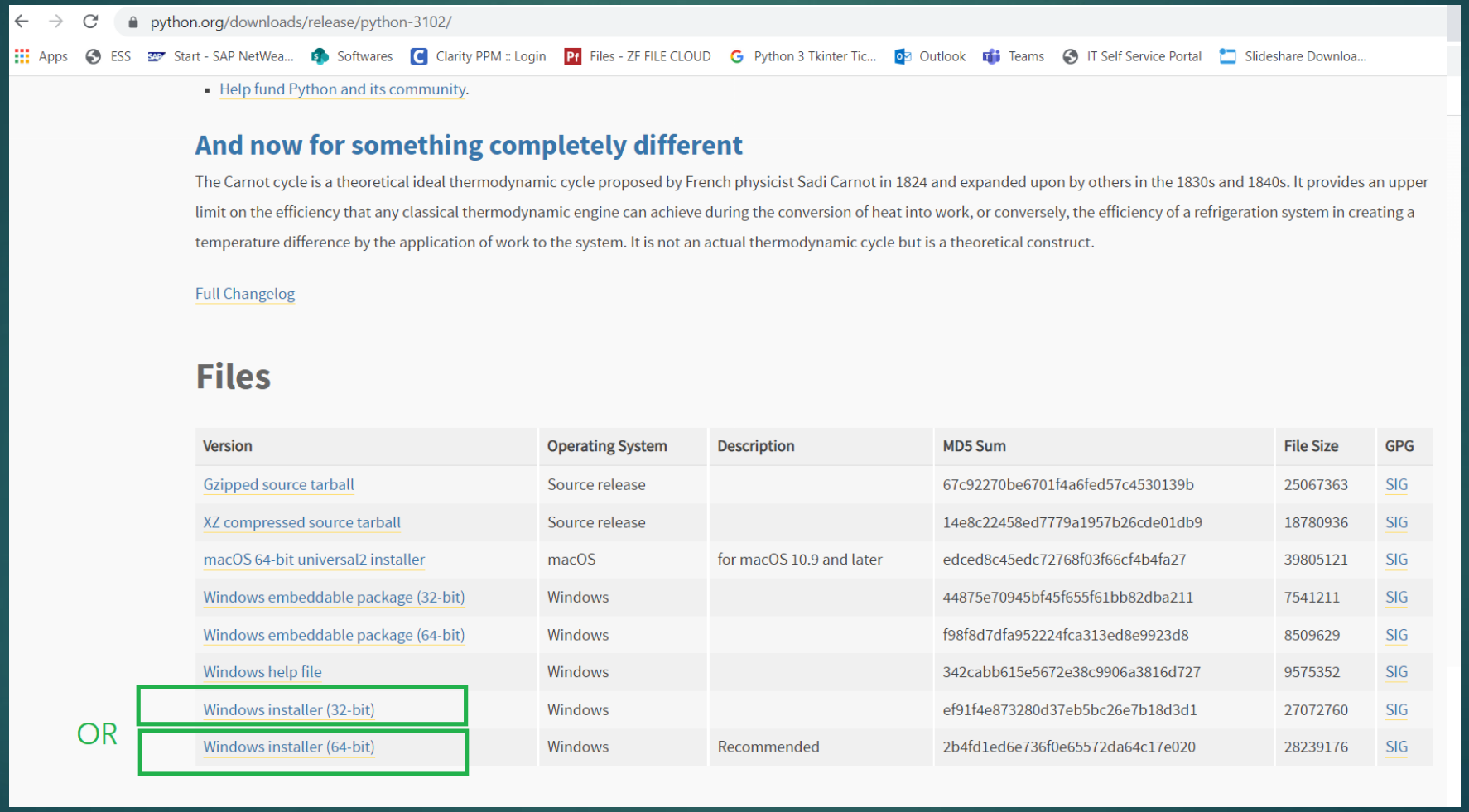
Download 32 Bit installer or 64 bit as per your system specifications

2.



OR

After successful Download , Run the installer executable

There are four things to notice *about this dialog box shown in previous slide:*

1.The default install path is in the AppData/ directory of the current Windows user.

2.The Customize installation button can be used to customize the installation location and which additional features get installed, including pip and IDLE.

3.The Install launcher for all users (recommended) checkbox is checked default. This means every user on the machine will have access to the py.exe launcher. You can uncheck this box to restrict Python to the current Windows user.

4.The Add Python 3.8 to PATH checkbox is unchecked by default. There are several reasons that you might not want Python on PATH, so make sure you understand the implications before you check this box. (However it is recommended to add it to the PATH by checking the checkbox)

The full installer gives you total control over the installation process.

Step 3: Verify Your Installation

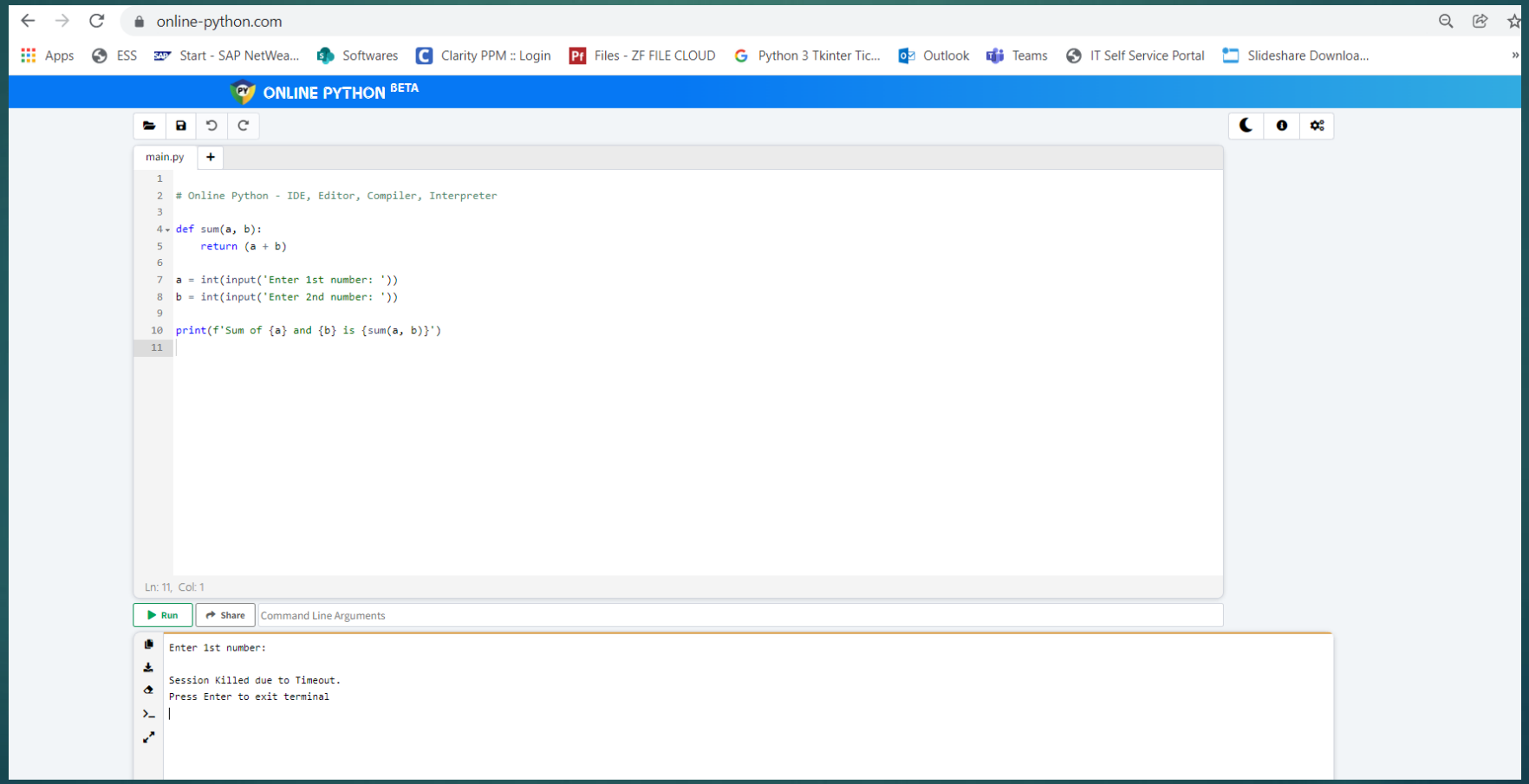
(to be entered in Command prompt in Windows)

1. To check Python version :
Commands : "python -V" , "python --version"

2. To Check Installed Python directory :
Commands : "where.exe python"

Few websites with Online Python- compilers (For self practice)

https://www.online-python.com/



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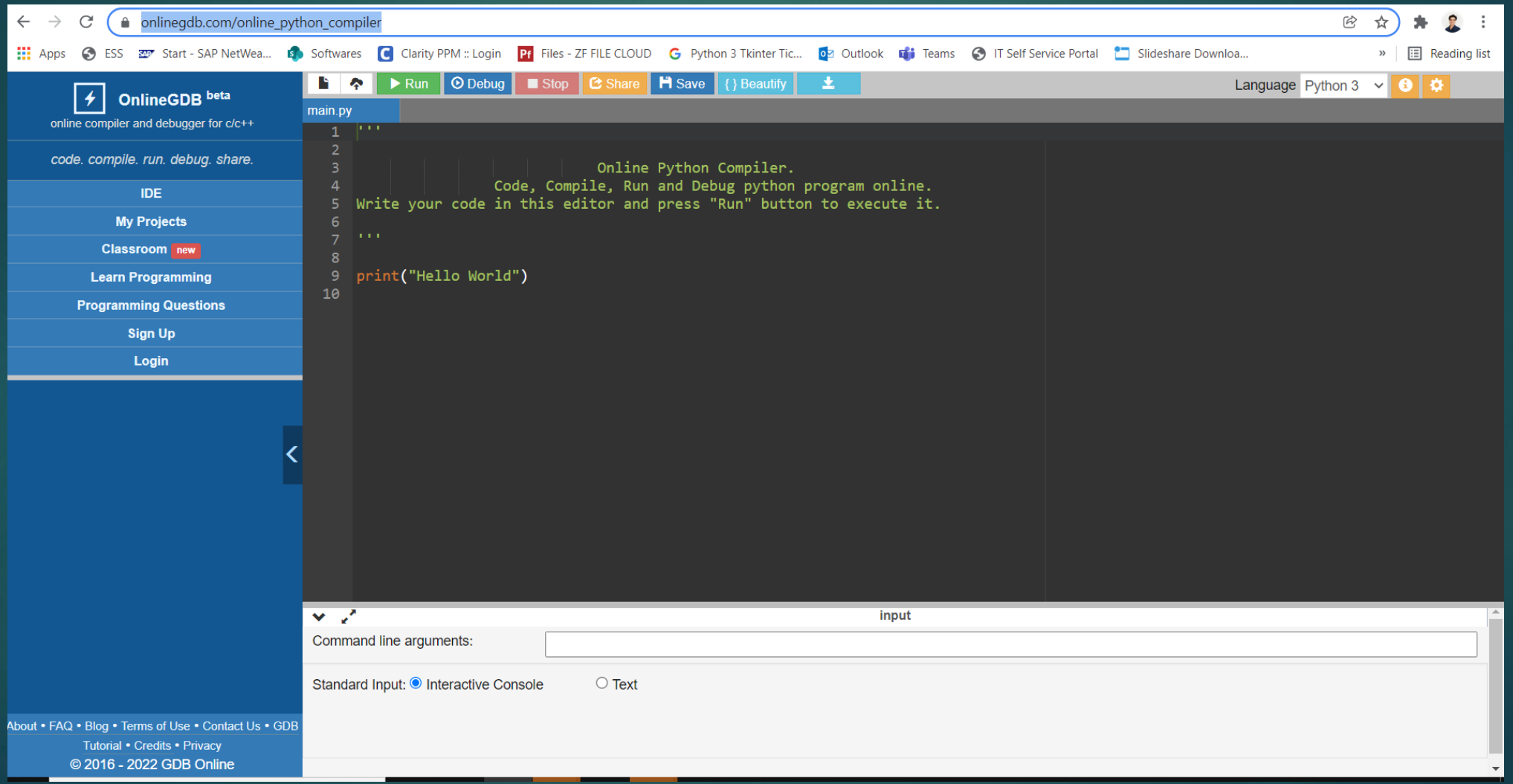
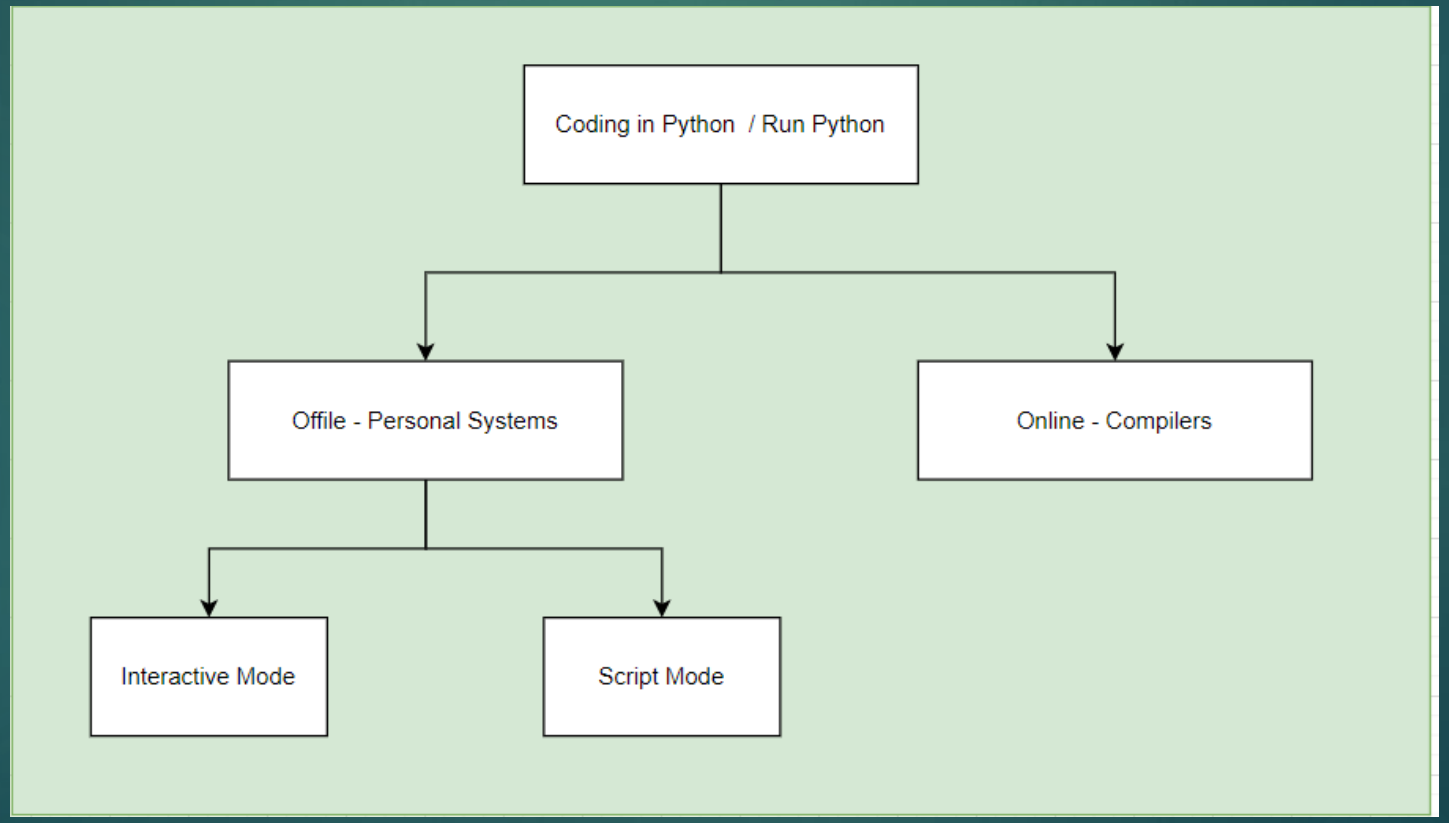


Launching Python

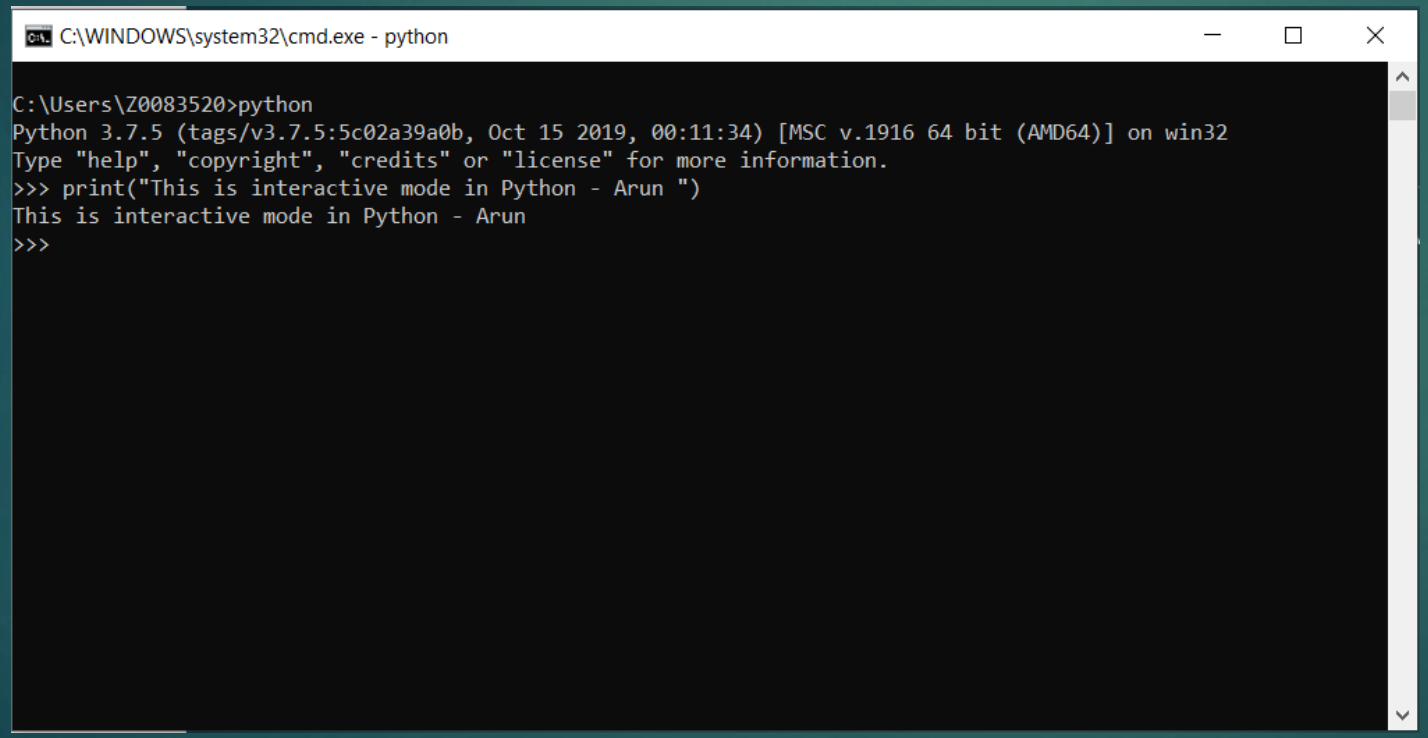
When programming in Python, you have two basic options for running code: interactive mode and script mode. Distinguishing between these modes can be slightly confusing for beginners, especially when you're trying to follow along with others' tutorials, so here's a brief rundown.



Interactive Mode

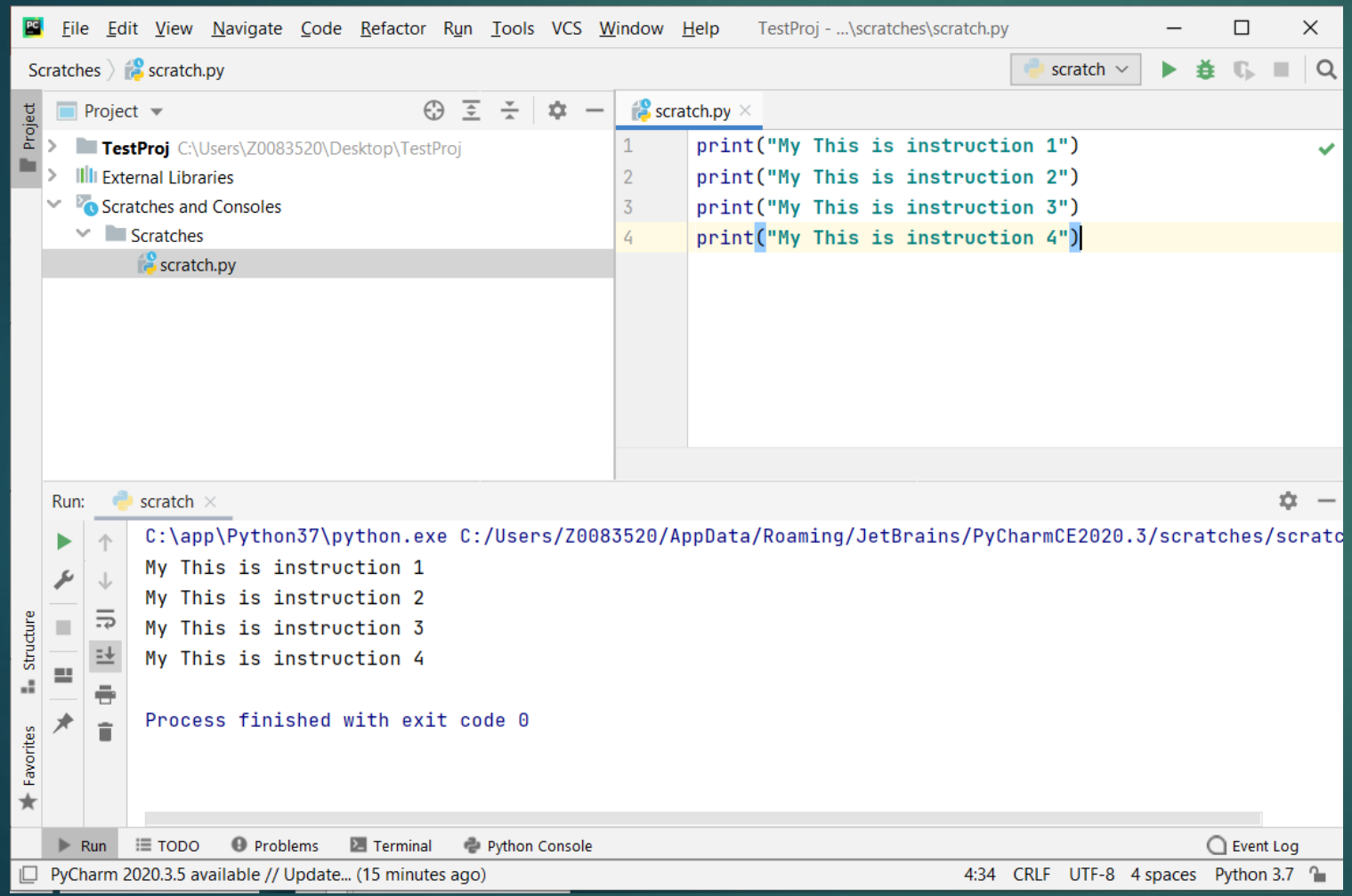
Interactive mode (a.k.a. shell mode) is great for quickly and conveniently running single lines or blocks of code.

The “>>>” indicates that the shell is ready to accept interactive commands. So for example if you want to print the statement “this is interactive mode”, simply type the appropriate code and hit enter.



Press Win+R to launch run , followed by “Cmd” in entry field to launch command prompt

Script Mode



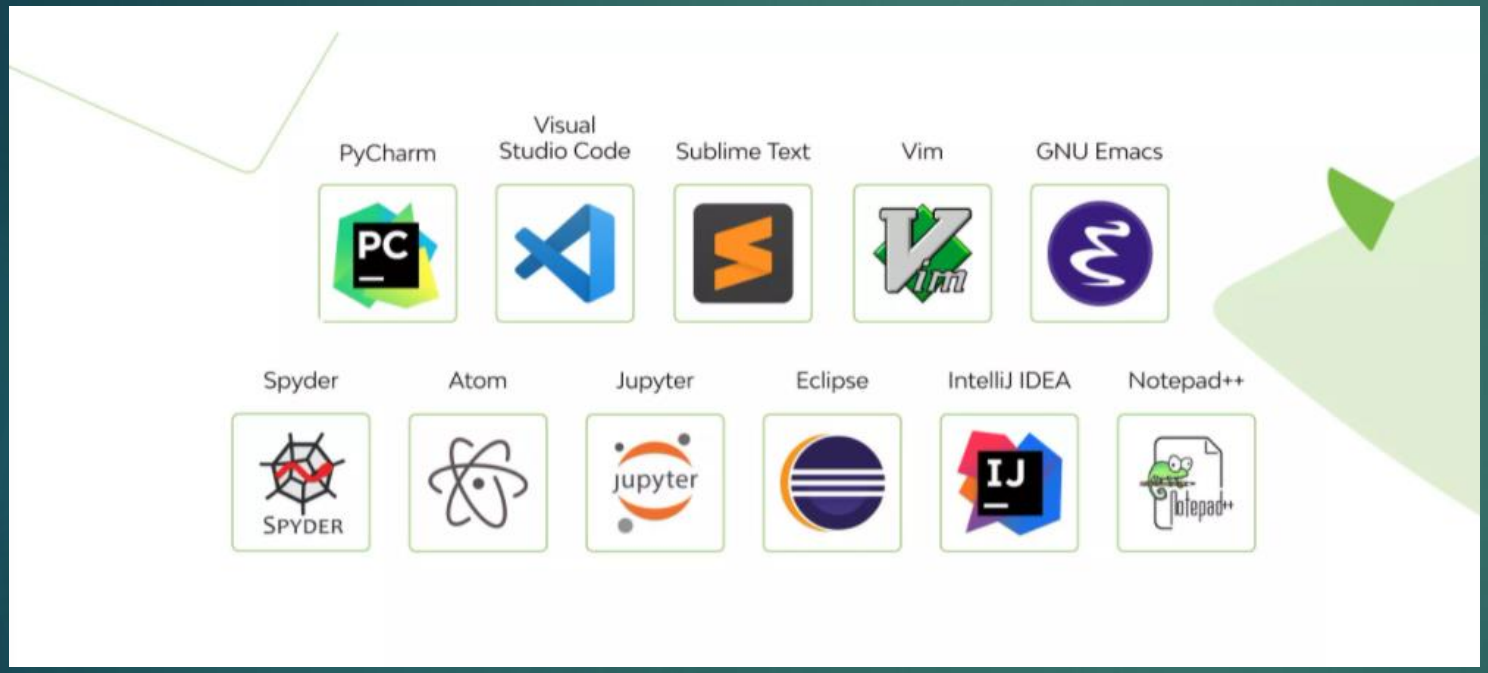
If you are working with more than a few lines of code, or you're ready to write an actual program, script mode is what you need. Instead of having to run one line or block of code at a time, you can type up all your code in one text file, or script, and run all the code at once.

Python script files are stored with .py file format

Difference between Interactive and Script Mode programming in python

Interactive Mode	Script Mode
It is a way of executing a Python program in which statements are written in command prompt and result is obtained on the same.	In the script mode, the Python program is written in a file. Python interpreter reads the file and then executes it and provides the desired result. The program is compiled in the command prompt,
The interactive mode is more suitable for writing very short programs.	Script mode is more suitable for writing long programs.
Editing of code can be done but it is a tedious task.	Editing of code can be easily done in script mode.
We get output for every single line of code in interactive mode i.e. result is obtained after execution of each line of code.	In script mode entire program is first compiled and then executed.
Code cannot be saved and used in the future.	Code can be saved and can be used in the future.
It is more preferred by beginners.	It is more preferred by experts. Beginners to use script mode.

Python IDE – Integrated development environments



An integrated development environment (IDE) is a software application that provides comprehensive facilities to computer programmers for software development.
An IDE normally consists of at least a source code editor, build automation tools and a debugger.