



Programming in



A presentation by:

□ Arun Kumar



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.

Download Python | Python.org

python.org/downloads/

Apps

ESS

Start - SAP NetWea...

Softwares

Clarity PPM :: Login

Files - ZF FILE CLOUD

Python 3 Tkinter Tic...

Outlook

Teams

IT Self Service Portal

Slideshare Downloa...

Looking for a specific release?

Python releases by version number:

Release version	Release date	Click for more	
Python 3.9.10	Jan. 14, 2022	Download	Release Notes
Python 3.10.2	Jan. 14, 2022	Download	Release Notes
Python 3.10.1	Dec. 6, 2021	Download	Release Notes
Python 3.9.9	Nov. 15, 2021	Download	Release Notes
Python 3.9.8	Nov. 5, 2021	Download	Release Notes
Python 3.10.0	Oct. 4, 2021	Download	Release Notes
Python 3.7.12	Sept. 4, 2021	Download	Release Notes

[View older releases](#)



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

2.

python.org/downloads/release/python-3102/

AppsESSStart - SAP NetWea...SoftwareesClarity PPM :: LoginFiles - ZF FILE CLOUDPython 3 Tkinter Tic...OutlookTeamsIT Self Service PortalSlideshare Downloa...

Help fund Python and its community.

And now for something completely different

The Carnot cycle is a theoretical ideal thermodynamic cycle proposed by French physicist Sadi Carnot in 1824 and expanded upon by others in the 1830s and 1840s. It provides an upper limit on the efficiency that any classical thermodynamic engine can achieve during the conversion of heat into work, or conversely, the efficiency of a refrigeration system in creating a temperature difference by the application of work to the system. It is not an actual thermodynamic cycle but is a theoretical construct.

[Full Changelog](#)

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		67c92270be6701f4a6fed57c4530139b	25067363	SIG
XZ compressed source tarball	Source release		14e8c22458ed7779a1957b26cde01db9	18780936	SIG
macOS 64-bit universal2 installer	macOS	for macOS 10.9 and later	edced8c45edc72768f03f66cf4b4fa27	39805121	SIG
Windows embeddable package (32-bit)	Windows		44875e70945bf45f655f61bb82dba211	7541211	SIG
Windows embeddable package (64-bit)	Windows		f98f8d7dfa952224fca313ed8e9923d8	8509629	SIG
Windows help file	Windows		342cabb615e5672e38c9906a3816d727	9575352	SIG
Windows installer (32-bit)	Windows		ef91f4e873280d37eb5bc26e7b18d3d1	27072760	SIG
Windows installer (64-bit)	Windows	Recommended	2b4fd1ed6e736f0e65572da64c17e020	28239176	SIG

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/>

The screenshot shows the online-python.com website. The browser's address bar displays "online-python.com". The website's header is blue with the text "ONLINE PYTHON BETA". Below the header, there is a toolbar with icons for file operations and a settings menu. The main area is a code editor with a file named "main.py" open. The code in the editor is as follows:

```
1
2 # Online Python - IDE, Editor, Compiler, Interpreter
3
4 def sum(a, b):
5     return (a + b)
6
7 a = int(input('Enter 1st number: '))
8 b = int(input('Enter 2nd number: '))
9
10 print(f'Sum of {a} and {b} is {sum(a, b)}')
11
```

Below the code editor, there is a "Run" button and a "Share" button. To the right of these buttons is a text input field labeled "Command Line Arguments". Below the code editor and buttons is a terminal window. The terminal shows the following output:

```
Enter 1st number:
Session Killed due to Timeout.
Press Enter to exit terminal
> |
```



https://www.onlinegdb.com/online_python_compiler

OnlineGDB beta
online compiler and debugger for c/c++
code. compile. run. debug. share.
IDE
My Projects
Classroom new
Learn Programming
Programming Questions
Sign Up
Login

main.py
1 '''
2
3
4 Online Python Compiler.
5 Code, Compile, Run and Debug python program online.
6 Write your code in this editor and press "Run" button to execute it.
7 '''
8
9 print("Hello World")
10

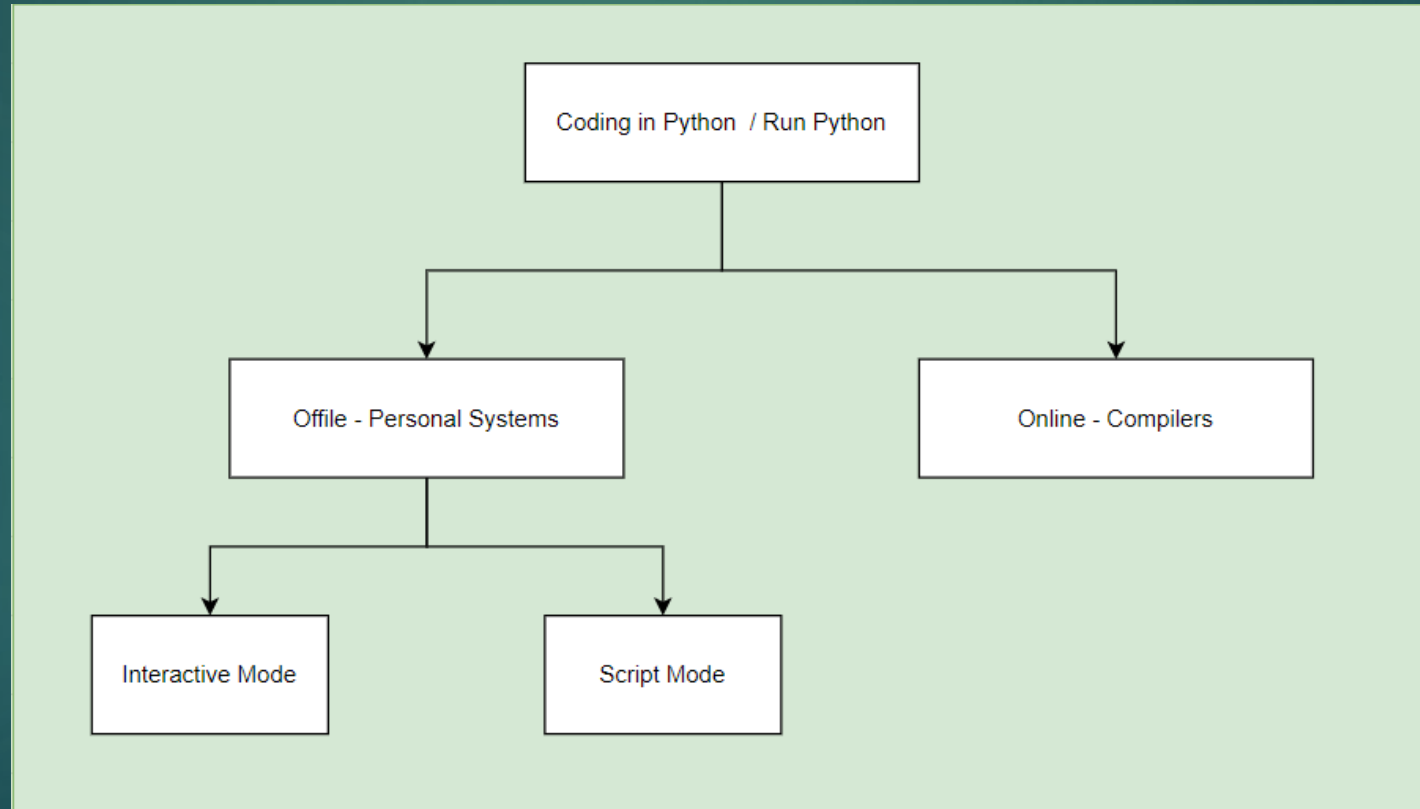
input
Command line arguments:
Standard Input: ☒ Interactive Console ☐ Text

Language Python 3



Launching Python

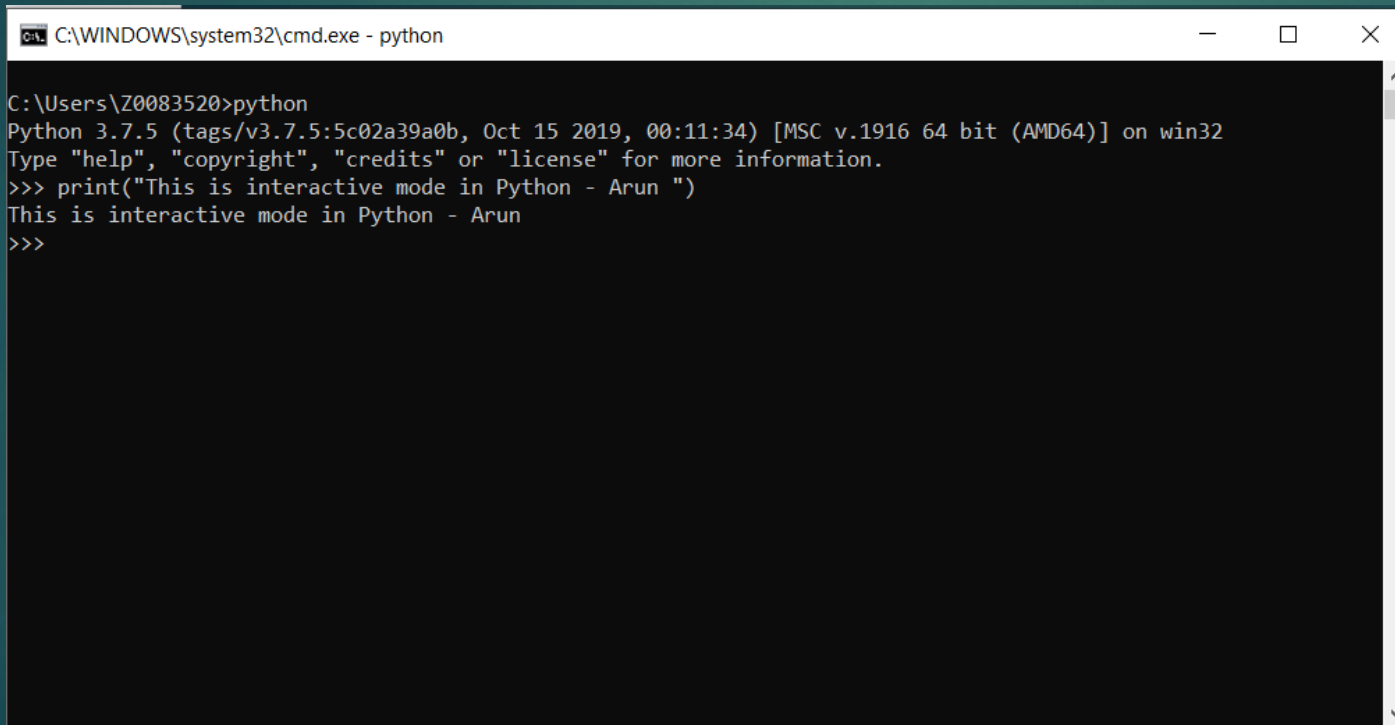
When programming in Python, you have two basic options for running code: interactive mode and script mode. Distinguishing between these modes can be slightly confusing for beginners, especially when you're trying to follow along with others' tutorials, so here's a brief rundown.



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.

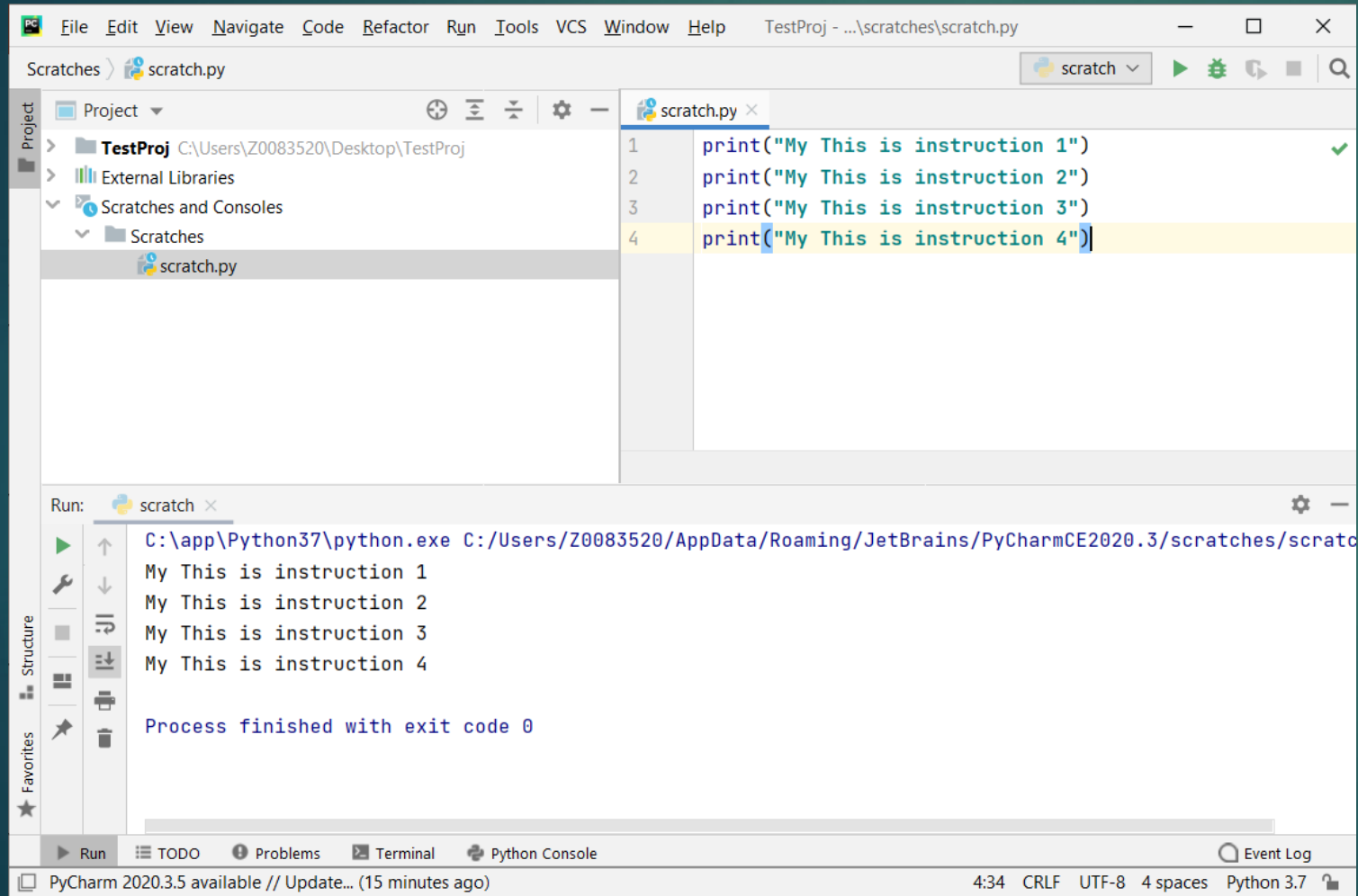


```
C:\WINDOWS\system32\cmd.exe - python

C:\Users\Z0083520>python
Python 3.7.5 (tags/v3.7.5:5c02a39a0b, Oct 15 2019, 00:11:34) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> print("This is interactive mode in Python - Arun ")
This is interactive mode in Python - Arun
>>>
```

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.