

Python Working Modes

Python developer or programmer work with python in 2 modes

1. Interactive Mode
2. Scripting Mode/Programming Mode

Interactive Mode

In interactive mode python developer work with python shell.

Python shell is a command line interface(CLI), where python developer type command and get result. In interactive mode python developer executes one command.

In interactive mode python developer cannot write a program or script.

Interactive mode is single line command line interface.

This is useful for trying out small snippets of code, or for testing things out as you're writing them.

Python shell is command line interpreter.

Python shell performs the following operations. (REPL Tool)

1. READ
2. EVALUTE
3. PRINT
4. LOOP

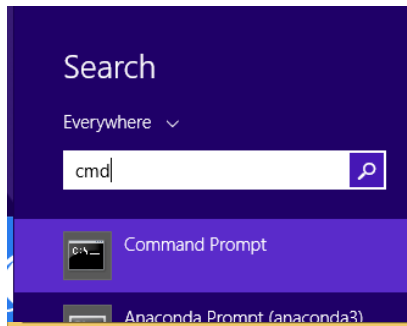
How to work with interactive mode?

1. Command Prompt
2. IDLE

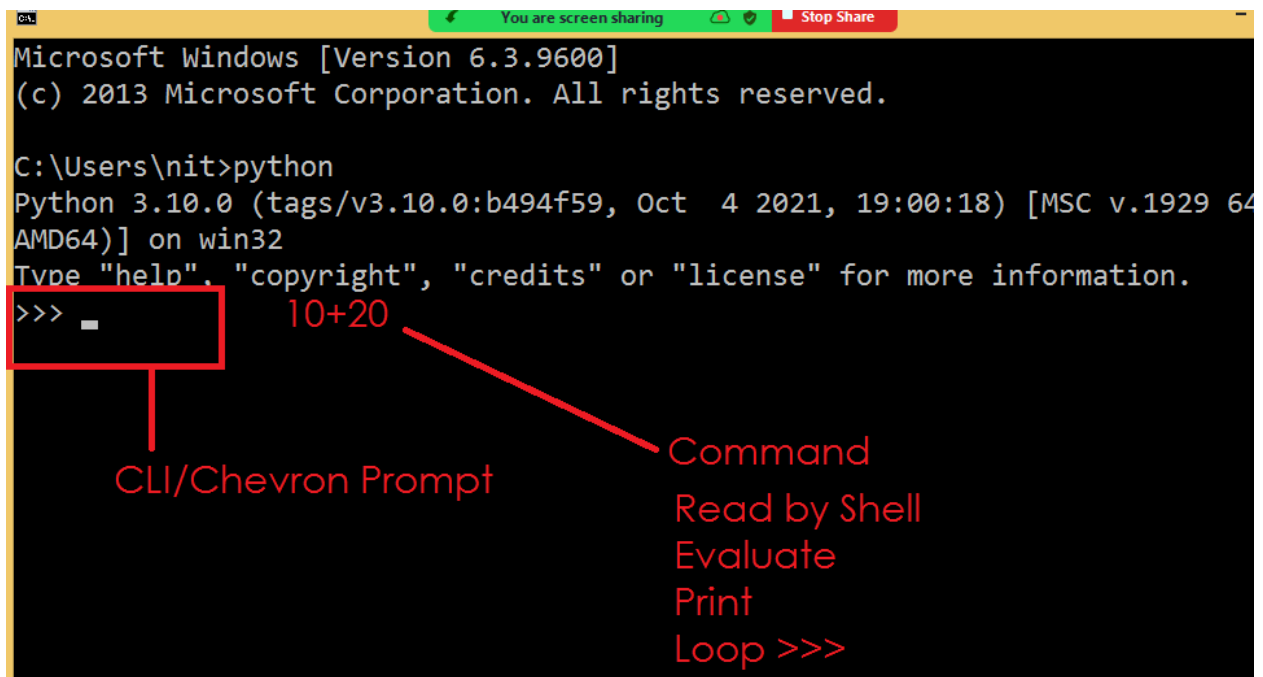
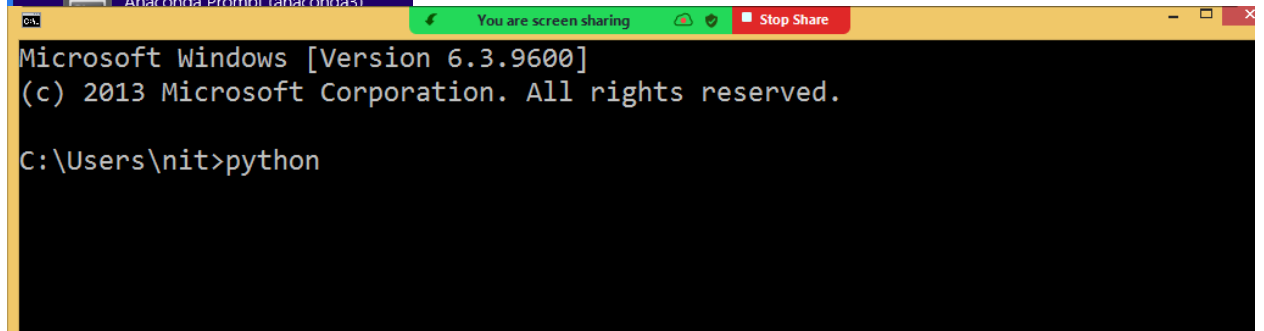
1st method

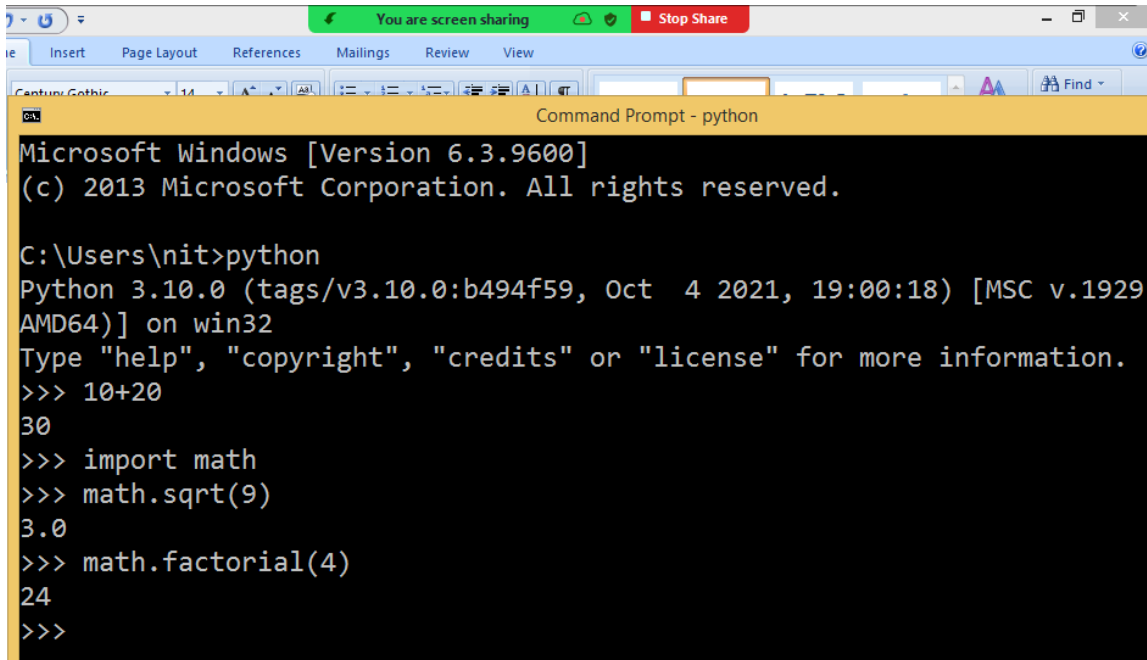
1. Open command prompt
2. Search → CMD

3.



4.





```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

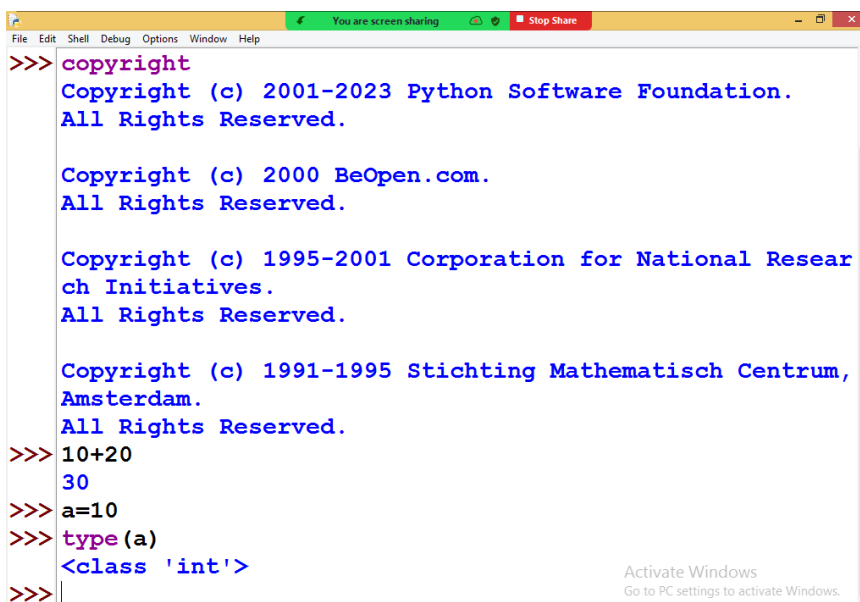
C:\Users\nit>python
Python 3.10.0 (tags/v3.10.0:b494f59, Oct 4 2021, 19:00:18) [MSC v.1929
AMD64] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> 10+20
30
>>> import math
>>> math.sqrt(9)
3.0
>>> math.factorial(4)
24
>>>
```

`exit()` function is used to close interactive shell.

2nd method

Every python editor allows working in two modes, interactive mode and scripting mode/programming mode.

1. Open IDLE
2. Search → IDLE



```
>>> copyright
Copyright (c) 2001-2023 Python Software Foundation.
All Rights Reserved.

Copyright (c) 2000 BeOpen.com.
All Rights Reserved.

Copyright (c) 1995-2001 Corporation for National Research
Initiatives.
All Rights Reserved.

Copyright (c) 1991-1995 Stichting Mathematisch Centrum,
Amsterdam.
All Rights Reserved.
>>> 10+20
30
>>> a=10
>>> type(a)
<class 'int'>
>>>
```

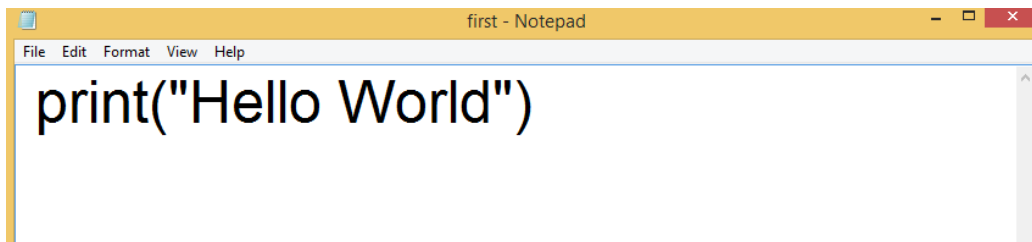
Scripting mode or Programming mode

In scripting mode python developer write a python program/script and save program with extension .py.

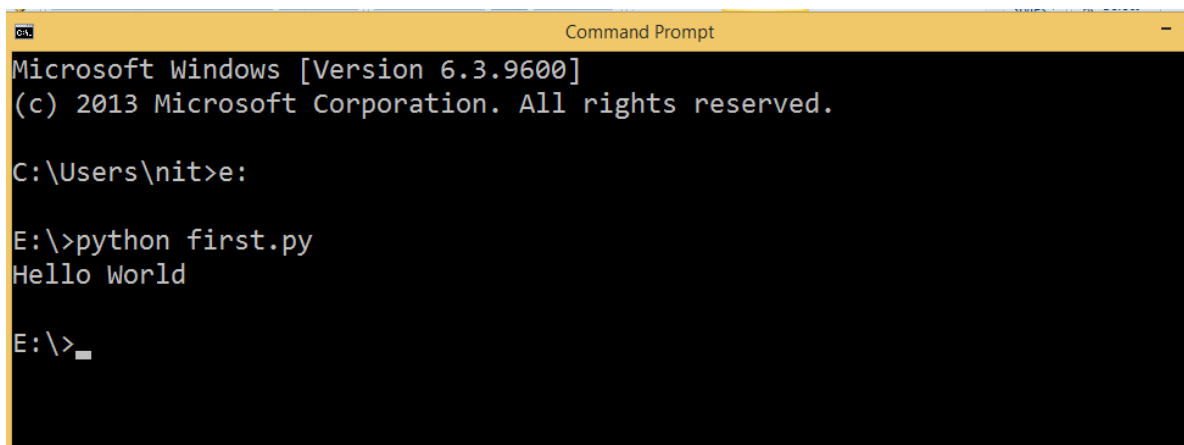
In programming mode python developer can do automation.

Writing a python program and executing without python editor

1. Open notepad



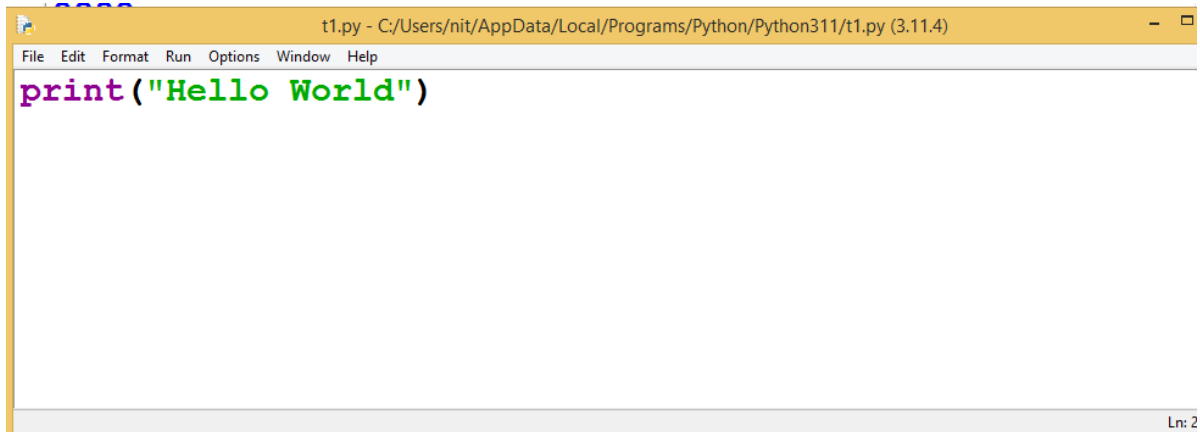
2. Open command prompt



Writing python program and executing within python editor (IDLE)

1. Open IDLE
2. Select File → New File
3. Type python program
4. Select File → Save Program
5. Select Run → Run Module

Every python program is called module.

A screenshot of a Python IDE window. The title bar reads "t1.py - C:/Users/nit/AppData/Local/Programs/Python/Python311/t1.py (3.11.4)". The menu bar includes "File", "Edit", "Format", "Run", "Options", "Window", and "Help". The code editor contains a single line: `print("Hello World")`. The status bar at the bottom right indicates "Ln: 2".

```
t1.py - C:/Users/nit/AppData/Local/Programs/Python/Python311/t1.py (3.11.4)
File Edit Format Run Options Window Help
print("Hello World")
Ln: 2
```

Language Fundamentals

Character set of python