

Class – 12<sup>th</sup>  
Sub – IP (Python)

Python Basic  
Quick Revision

# Python

- It is widely used general purpose, high level programming
- language. Developed by Guido van Rossum in 1991.

## **It is used for:**

software development,  
web development (server-side),  
system scripting,  
Mathematics.



## Features of Python

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1. Easy to use – Due to simple syntax rule
2. Interpreted language – Code execution & interpretation line by line
3. Cross-platform language – It can run on windows,linux,macinetosh etc. equally
4. Expressive language – Less code to be written as it itself express the purpose of the code.
5. Completeness – Support wide rage of library
6. Free & Open Source – Can be downloaded freely and source code can be modify for improvement



# How to work in Python

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## (i) in Interactive mode

\* Search the `python.exe` file in the drive in which it is installed.

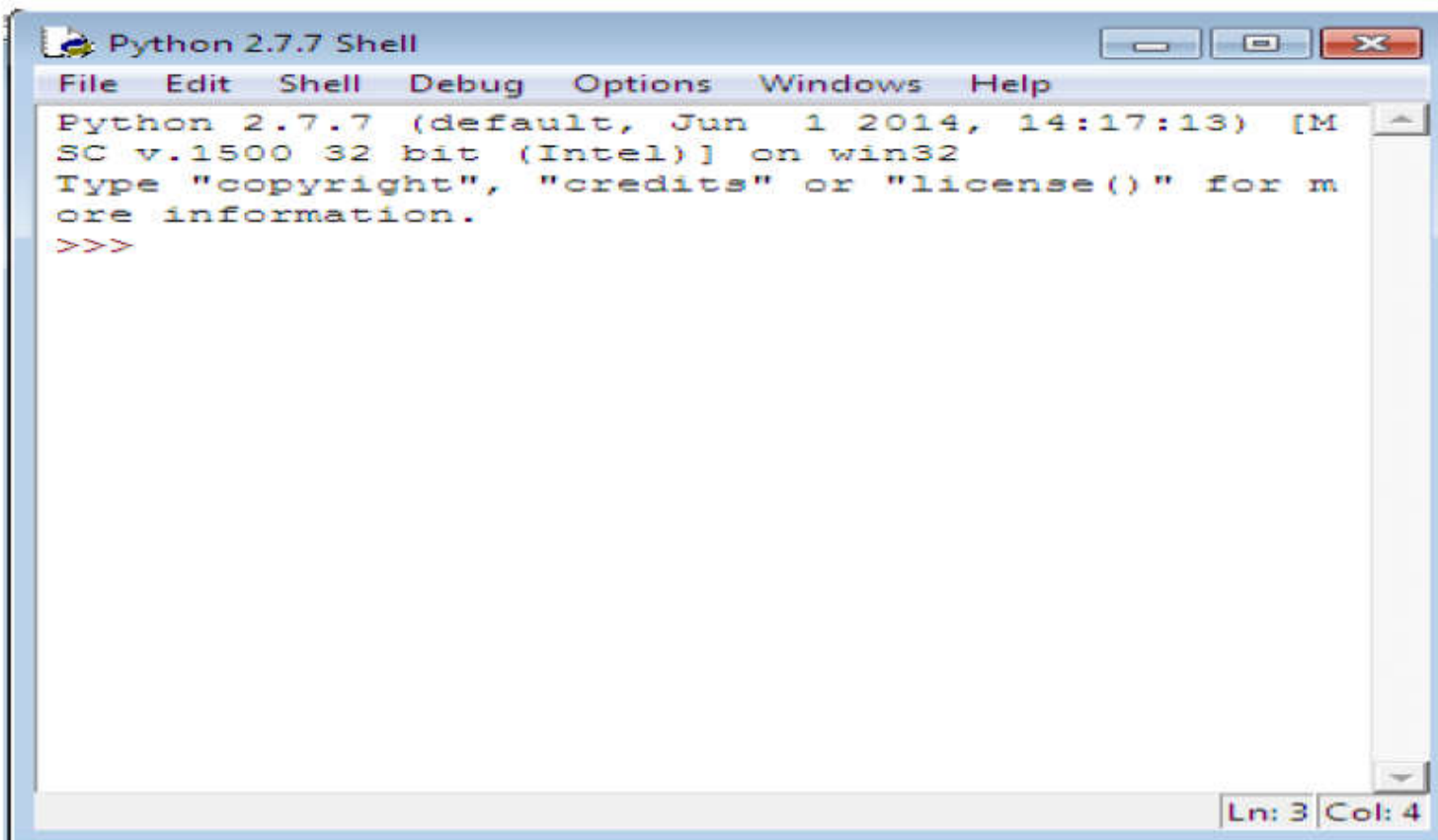
If found double click it to start python in interactive mode

```
C:\Python27\python.exe
Python 2.7.2 (default, Jun 1 2014, 14:17:13) [MSC v.1500 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> _
```



# How to work in Python

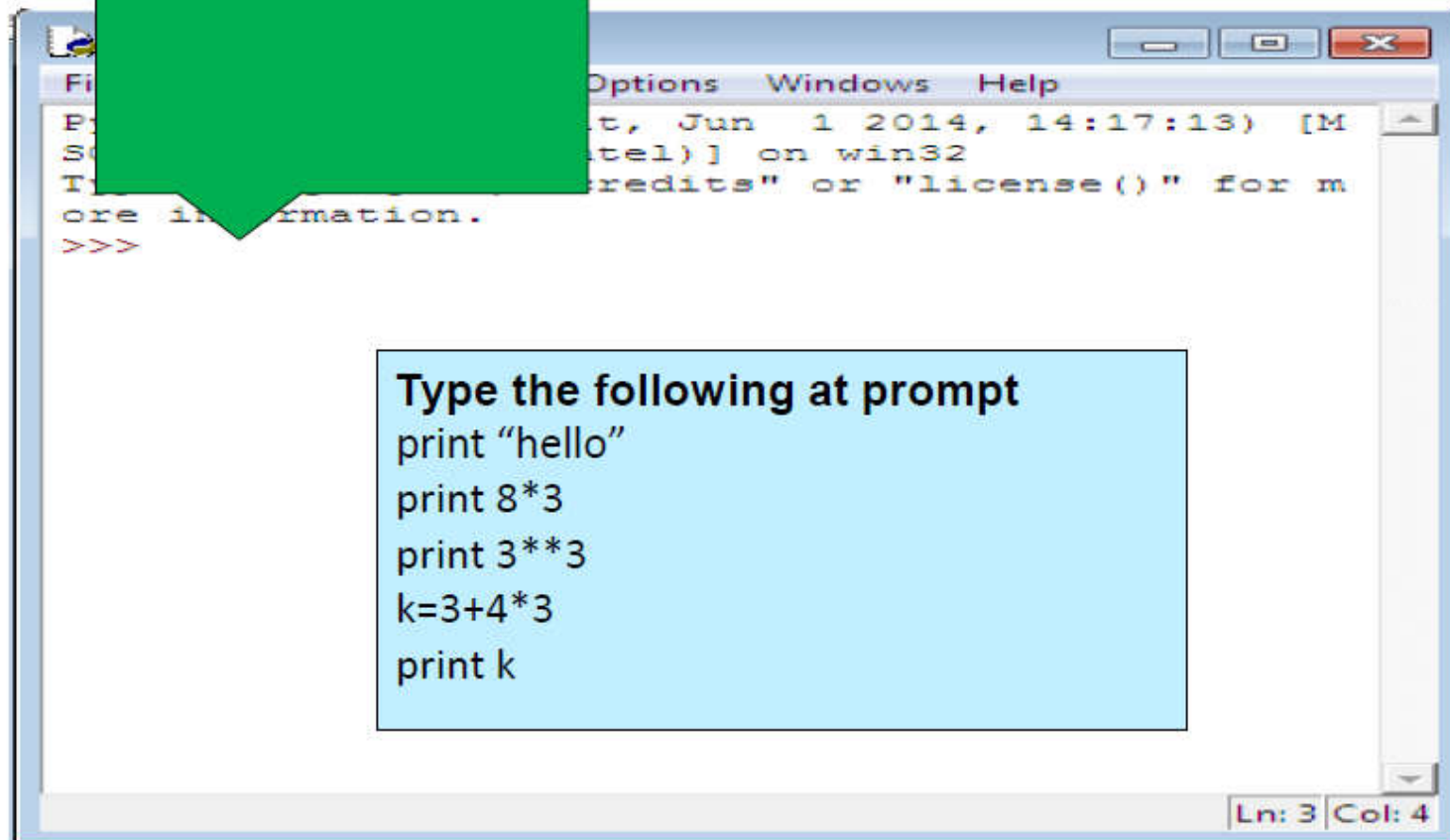
\* Click start button -> All programs ->  
python<version>->IDLE(Python GUI)



```
Python 2.7.7 Shell
File Edit Shell Debug Options Windows Help
Python 2.7.7 (default, Jun 1 2014, 14:17:13) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
Ln: 3 Col: 4
```

# How to work in Python

Python command  
prompt >>>



The image shows a screenshot of a Python command prompt window. The window has a menu bar with 'File', 'Options', 'Windows', and 'Help'. The main text area shows the following text: 'Python 2.7.6 (tags/Python-2.7.6:1584506b, Jun 1 2014, 14:17:13) [Microsoft Windows] on win32\nType "credits" or "license()" for more\n>>>'. A green callout box points to the prompt '>>>'. A blue box contains a list of commands to type at the prompt: 'print "hello"', 'print 8\*3', 'print 3\*\*3', 'k=3+4\*3', and 'print k'. The status bar at the bottom right shows 'Ln: 3 Col: 4'.

```
File Options Windows Help
Python 2.7.6 (tags/Python-2.7.6:1584506b, Jun 1 2014, 14:17:13) [Microsoft Windows] on win32
Type "credits" or "license()" for more
>>>

Type the following at prompt
print "hello"
print 8*3
print 3**3
k=3+4*3
print k

Ln: 3 Col: 4
```





# How to work in Python

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(ii) in Script mode

## Step 1 (Create program file)

Below steps are for simple hello world program

a. Click Start button->All Programs ->

Python<version>->IDLE

b. Now click File->New in IDLE Python Shell

Now type

```
print "hello"
```

```
print "world"
```

```
print "python is","object oriented programming lang."
```

c. Click File->Save and then save the file with filename  
and .py extension

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# How to work in Python

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## (ii) in Script mode

### Step 2 (Run program file)

- a. Click Open command from IDLE's File menu and select the file you have already saved
- b. Click Run-> Run Module
- c. It will execute all the commands of program file and display output in separate python shell window

Note :- Python comes in 2 flavours – python 2.x and python 3.x . Later one is Backward incompatible language as decide by Python Software foundation(PSF). Mean code written in 2.x will not execute on 3.x . Visit the below link for difference between 2.x & 3.x

<https://www.geeksforgeeks.org/important-differences-between-python-2-x-and-python-3-x-with-examples/>





## Data Handling

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Most of the computer programming language support data type, variables, operator and expression like fundamentals. Python also support these.

### Data Types

Data Type specifies which type of value a variable can store. `type()` function is used to determine a variable's type in Python.

## Data Types In Python

1. Number
2. String
3. Boolean
4. List
5. Tuple
6. Set
7. Dictionary

## 1. Number In Python

It is used to store numeric values

Python has three numeric types:

1. Integers
2. Floating point numbers
3. Complex numbers.

## 1. Integers

Integers or int are positive or negative numbers with no decimal point. Integers in Python 3 are of unlimited size.

e.g.

```
a= 100
```

```
b= -100
```

```
c= 1*20
```

```
print(a)
```

```
print(b)
```

```
print(c)
```

Output :-

```
100
```

```
-100
```

```
200
```

## 2. Floating point numbers

It is a positive or negative real numbers with a decimal point.

e.g.

```
a = 101.2
```

```
b = -101.4
```

```
c = 111.23
```

```
d = 2.3*3
```

```
print(a)
```

```
print(b)
```

```
print(c)
```

```
print(d)Run Code
```

Output :-

```
101.2
```

```
-101.4
```

```
111.23
```

```
6.8999999999999995
```



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## 2. String In Python

A string is a sequence of characters. In python we can create string using single ( ' ') or double quotes ( " "). Both are same in python. e.g.

```
str='computer science'
print('str-', str) # print string
print('str[0]-', str[0]) # print first char 'h'
print('str[1:3]-', str[1:3]) # print string from postion 1 to 3 'ell'
print('str[3:]-', str[3:]) # print string staring from 3rd char 'llo world'
print('str *2-', str *2 ) # print string two times
print("str +'yes'-", str +'yes') # concatenated string
```

Output

```
str- computer science
str[0]- c
str[1:3]- om
str[3:]- puter science
str *2- computer sciencecomputer science
str +'yes'- computer scienceyes
```

Thankyou....