

Python programming

Features of python

- Easy to learn
- Easy to read
- High level language
- Multithreading, multiprocessing
- Garbage collector
- Interpreter → runs the program line by line. It converts every line into machine language, and executes in the memory
- GUI → Graphical user interface → tkinter, QtPy
- Networking → socket programming
- If you know python then you may design → single user, web application (Django, Flask), ML, AI (Scikit-learn)
- Interactive — allows to accept i/p from user
- Python dynamically typed.

```
s=34  
s="Kishori"  
s=56.7
```

Variable

- Variable name should start with alphabet, can use combination of alphabet and digits
- It cannot contain special character
- Do not use keywords as variable

Structure of python program

1. Semicolon is not mandatory
2. No {}, () begin and end curly braces for loops, functions are not needed, () for condition declaration is not needed.

Download python from python.org

To check python version

Open cmd prompt

```
C:\system32>python --version
```

To open python shell or REPL (Read evaluate print loop)

```
C:\system32>python
```

Operators in python

Arithmetic operators

+, -, *, /, %, //(integer division), :=(walrus)

a=4

b=3

C=a//b

Ternary operator in python

C=a>b?a:b #java

C=a if a>b else b #pythonic

There is no ++ and - - operator

Logical operator

and , or, not

relational operators

>, <, >=, <=, ==, !=

Bitwise operators

&, |, >>, <<, ^

Loops in python

2 loops in python

1. For loop
 - a. If you know number of iterations in advance
2. While loop
 - a. If the number of iterations are not known, then we use while loop

For----else

While----else