

# Python

- ① C
- ② C++
- ③ Java
- (4) JavaScript
- (5) Python
- (6) Go
- (7) Scala

- System Programming
- Graphical User Interface
- Web Scrapping
- Managing Database
- Fast Prototyping
- Numeric / Scientific Programming
- Game development
- Image Processing
- Robotics
- Automation
- Data science
- Data Mining

- Quality of software: Python was meant for readability. Its reusable and maintainable as compared to other languages. Its easier to understand. It supports all the modern features like OOPs and functional programming.
- Productivity of Developers: The same program which is written in other high-level languages like c++ or java can be written in one-third or one-fifth line of codes. That means debugging can be easy and it will be less prone to error which in turn increases the productivity of the developers.
- Portability: Mostly it's platform-independent. It can run on any platform or OS with minor or no change at all which makes it a highly portable language. Now you can use MicroPython to interact with hardware as well. It can be used on most of the edge devices.
- Supporting Libraries: Python already has a lot of inbuilt libraries that come with the standard python package which you download from its [official site](#). With these libraries, you can build lots of basic applications or day to day automation tasks like copying data in bulk from one place to another. Apart from this, there's a huge list of third-party libraries like Numpy, Matplotlib, Scikit Learn, etc.
- Fun to use: Its simplicity and availability of lots of supporting libraries plus huge open source community support make development in python a breeze. That's why its widely preferred by hobbyists as well.

Python version  $\leftarrow \begin{matrix} 2.X \\ 3.X \end{matrix}$   $\begin{matrix} X \\ \checkmark \end{matrix}$

$$\underline{a + b} = \underline{1 + 2} = \underline{3}$$

$\left[ \begin{matrix} \text{Scripting} \\ \text{OOP} \end{matrix} \right] \rightarrow \text{CLASS Obj}$