

* Python :-

- * Python is a high-level, interpreted, general purpose programming language.
- * Its design philosophy emphasizes code readability with the use of significant indentation.
- * It supports multiple programming paradigms, such as, structured (particularly procedural), object oriented and functional programming.
- * Python was conceived in the late 1980's by Guido Van Rossum at Centrum Wiskunde & Informatica (CWI) in the Netherlands as a successor to ABC programming language.

* Features :-

1] Easy to Learn and use.

- * Syntax is very simple and much similar to English language.
- * No use of semicolons or curly-brackets, the indentation defines the code block.
- * It is readable.

2] Expressive language.

- * Complex tasks can be done using very less lines of code.

3] Interpreted language

- * The python program is executed one line at a time.
- * It makes debugging easy and makes it portable.

4] Cross platform Language.

- * Python can run equally on different platforms such as Windows, Linux, UNIX, Macintosh, etc. So it can be said that python is portable language.
- * It enables programmers to develop the software for several competing platform by writing program only once.

5] Free and open source

- * Python is freely available to everyone.
- * Anyone can contribute to python community which is working for making new python modules and functions, across the world.
- * The source code of python is available to anyone, i.e. anyone can download its source code without paying any penny.

6] Object Oriented Language

- * Python supports classes and objects.
- * It supports inheritance, polymorphism, and encapsulation, etc.
- * It helps programmers to write reusable code and develop applications in less code.

7] Extensible

- * It converts program into byte code, and any platform can use that byte code.

8] Large standard library

- * It provides a vast range of libraries for the various fields such machine learning, web developer, and also for scripting.
- * There are various machine learning libraries, such as Tensor flow, Pandas, Numpy, Keras, etc
- * Django, flask, pyramids are the popular framework for python web development.

9] GUI programming support.

- * GUI is used for the developing desktop application.
- * PyQT5, Tkinter, Kivy are the libraries used for developing the web applications.

10] Integrated

- * Python runs code line by line like C, C++, Java.
- * It can be easily integrated with C, C++, Java.

11] Embeddable

- * The code of the other programming language can be used in Python source code.
- * Python source code can also be used in other programming language.

12] Dynamic Memory allocation.

- * Data type of variables is not needed to be specified at time of declaration.
- * Whenever any value is assigned to the variable, the memory is allocated automatically at run-time.

It is commonly used for developing websites and softwares, task automation, data analysis, and data visualization.

Open source refers to the code that is designed to be publicly accessible, anyone can see, modify, and distribute the code as they see fit.

Git-hub:-

- * Collection of repositories
- * Cloud based Software.
- * It is a kind of virtual storage.