

## Introduction about Python

1.what is the meaning of Python---->??

-->Python is a general purpose high level programming language

Who developed python----->???

Python was developed by "**Guido van Rossum**"

when it was implemented---->??

--->1989

when it appeared to the Public---->??

---> feb 20th 1991

**where we can use Python language**

1) For developing Desktop applications.

2) For developing web applications.

3) For developing games.

4) For machine learning.

5) For developing Artificial intelligence applications.

## Features Of Python

1) Simple and easy to learn

-->Python is a programming language. When we read a python program we can feel like reading English statements.

-->The syntaxes are very simple and easy.

-->when we compare with other languages we can write programs with very less numbers.

-->we can reduce development and cost of the project

## 2) Freeware and Open Source

-->we can use python software without any license and its freeware.

-->its source code is open, so that we can customize based on our requirements.

## 3) High level programming language.

language:--> it is a medium of communication between two human beings.

Programing language:--> its the communication between Human and machine

Program:-->They are set of instruction given to machine to achieve a result/output

Low Level language:---> a language which is understood by only machine(0,1)

High Level language:---> The language which is understandable by human beings

ex:-->

java,c,c++,Python.

#### 4) Platform independent

Once we write a python program it can run on any platform without rewriting once again.

#### 5) Dynamically Typed

in python we are not required to declare type of the variable, whenever we are assigning the value

based on value type will be allocated automatically, hence python is considered as dynamically typed language.

syntax:--> type(var\_name) or type(value)

#### 6) Interpreted

we are not required to compile python program explicitly, internally python interpreter will take care that compilation.

#### 7) IT support cross platform

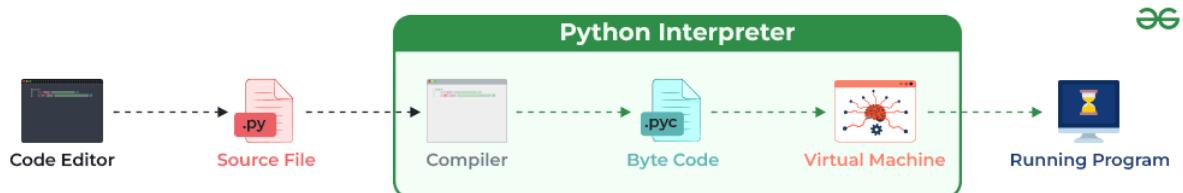
it support different OS (operating system) like windows, linux, mac, ubuntu, and internet Platform like chrome, firefox, opera mini, uc browser system like HP, Dell, Apple

#### 8) IT supports Dynamic memory Allocation.

Once we initialize the value, immediately in the next line we can re-assign the value.

#important question

1) How does the compilation happen in python-->??



The source code has to be saved with an extension of .py format and this file is fed as input to the compiler where compiler checks to the syntax and convert it into the byte code(0 1 1 0) and this byte code is again fed as input to the interpreter and with the help of PVM it gives the required output.

PVM--->(Python Virtual Machine) it creates a virtual environment for the execution of the code.

Note:--> compilation in python happens implicitly (internally)