

Python Features

1. Easy Language

Python is an easy language. It is easy to read, write, learn and understand.

- Python has a **smooth learning curve**. It is easy to learn.
- Python has a **simple syntax** and Python code is easy to understand.
- Since it's **easy to understand**, you can easily read and understand someone else's code.
- Python is also **easy to write** because of its simple syntax.

Because it is an easy language, it is used in schools and universities to introduce students to programming. Python is for both start-ups and big companies.

2. Readable

The Python language is designed to make developers life easy. Reading a Python code is like reading an English sentence. This is one of the key reason that makes Python best for beginners.

Python uses **indentation** instead of **curly braces**, unlike other programming languages. This makes the code look clean and easier to understand.

3. Interpreted Language

Python is an interpreted language. It comes with the **IDLE (Interactive Development Environment)**. This is an interpreter and follows the **REPL structure (Read-Evaluate-Print-Loop)**. It executes and displays the output of one line at a time.

So it displays errors while you're running a line and displays the entire stack trace for the error.

4. Dynamically-Typed Language

Python is not **statically-typed** like Java. You don't need to declare data type while defining a variable. The interpreter determines this at runtime based on the types of the parts of the expression. This is easy for programmers but can create runtime errors.

5. Object-Oriented Programming Language

Python is object-oriented but supports both functional and object-oriented programming. Everything in Python is an object.

It has the **OOP (Object-oriented programming)** concepts like inheritance and polymorphism.

6. Popular and Large Community Support

Python has one of the largest communities on StackOverflow and Meetup. If you need help, the community will answer your questions.

They also already have many answered questions about Python.

7. Open-Source

Python is open-source and the community is always contributing to it to improve it. It is free and its source code is freely available to the public. You can download Python from the official Python Website.

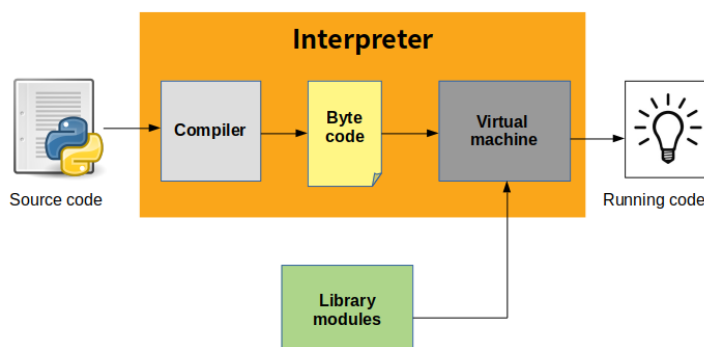
8. Large Standard Library

The standard library is large and has many packages and modules with common and important functionality. If you need something that is available in this standard library, you don't need to write it from scratch. Because of this, you can focus on more important things. You can also install packages from the PyPI (Python Package Index) if you want even more functionality.

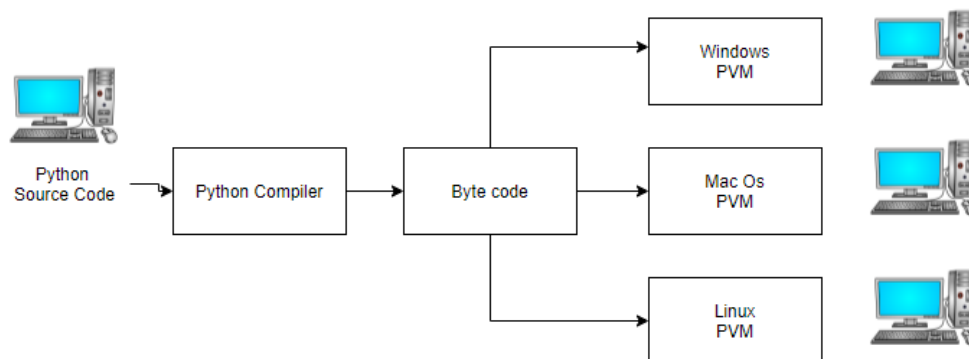
9. Platform-Independent

Python is platform-independent. If you write a program, it will run on different platforms like Windows, Mac and Linux. You don't need to write them separately for each platform.

Python Execution :



Platform Independent



10. Extensible and Embeddable

Python is extensible. You can use code from other languages like C++ in your Python code. It is also embeddable. You can embed your Python code in other languages like C++.

11. GUI Support

You can use Python to create GUI (Graphical User Interfaces). You can use tkinter, PyQt, wxPython or Pyside for this.

Python features a huge number of GUI frameworks available for it to variety of other cross-platform solutions. It binds to platform-specific technologies.

12. High-level Language

Python is a high-level language and C++ is mid-level. It is easy to understand and closer to the user. You don't need to remember system architecture or manage the memory.