SYSTEM REQUIREMENTS

Software Requirement:

Operating System : Windows 10

Language : Python

Tool : Anaconda

SOFTWARE DESCRIPTION

Python IDE is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages. Python is a MUST for students and working professionals to become a great Software Engineer especially when they are working in Web Development Domain.

ADVANTAGES OF LEARNING PYTHON:

Python is Interpreted − Python is processed at runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.

Python is Interactive − You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.

Python is Object-Oriented − Python supports Object-Oriented style or technique of programming that encapsulates code within objects.

Python is a Beginner's Language − Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

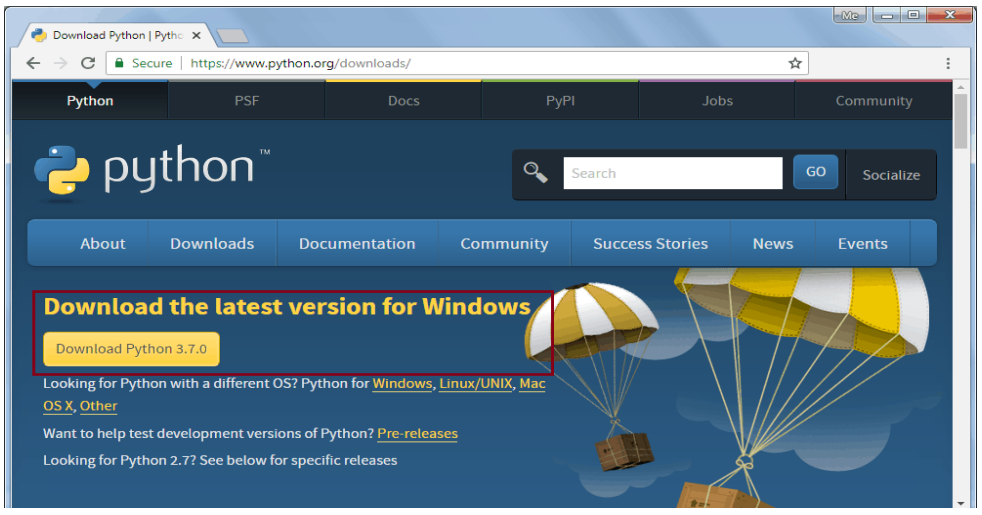
Characteristics of Python

Following are important characteristics of Python Programming

- It supports functional and structured programming methods as well as OOP.
- It can be used as a scripting language or can be compiled to byte-code for building large applications.
- It provides very high-level dynamic data types and supports dynamic type checking.
- It supports automatic garbage collection.
- It can be easily integrated with C, C++, COM, ActiveX, CORBA, and Java.

PYTHON FEATURES:

1) Easy to Learn and Use: Python is easy to learn and use. It is developer-friendly and high-level programming language.



Install of python

2) Expressive Language

Python language is more expressive means that it is more understandable and readable.

3) Interpreted Language

Python is an interpreted language i.e. interpreter executes the code line by line at a time. This makes debugging easy and thus suitable for beginners.

4) Cross-platform Language

Python can run equally on different platforms such as Windows, Linux, Unix and Macintosh etc. So, we can say that Python is a portable language.

5) Object-Oriented Language

Python supports object-oriented language and concepts of classes and objects come into existence.

6) Extensible

It implies that other languages such as C/C++ can be used to compile the code and thus it can be used further in our python code.

7) Large Standard Library

Python has a large and broad library and provides rich set of module and functions for rapid application development.

8) GUI Programming Support

Graphical user interfaces can be developed using Python.

9) Integrated

It can be easily integrated with languages like C, C++, and JAVA etc.

Python Applications

Python is known for its general-purpose nature that makes it applicable in almost each domain of software development. Python as a whole can be used in any sphere of development.

Web Applications

We can use Python to develop web applications. It provides libraries to handle internet protocols such as HTML and XML, JSON, Email processing, request, beautiful Soup, Feed parser etc. It also provides Frameworks such as Django, Pyramid, Flask etc. to design and develop web-based applications.

Desktop GUI Applications

Python provides Tk GUI library to develop user interface in python-based application. Some other useful toolkits wx Widgets, Kivy, pyqt that are useable on several platforms. The Kivy is popular for writing multi touch applications.

Software Development

Python is helpful for software development process. It works as a support language and can be used for build control and management, testing etc.

Scientific and Numeric

Python is popular and widely used in scientific and numeric computing. Some useful library and package are SciPy, Pandas, IPython etc. SciPy is group of packages of engineering, science and mathematics.

Business Applications

Python is used to build Business applications like ERP and e-commerce systems.

Console Based Application

We can use Python to develop console-based applications. For example: IPython.

Audio or Video based Applications

Python is awesome to perform multiple tasks and can be used to develop multimedia applications. Some of real applications are: TimPlayer, cplay etc.

3D CAD Applications

To create CAD application Fandango is a real application which provides full features of CAD.

Enterprise Applications

Python can be used to create applications which can be used within an Enterprise or an Organization. Some real time applications are: OpenErp, Tryton, Picalo etc.

Applications for Images

Using Python several applications can be developed for image. Applications developed are: VPython, Gogh, imgSeek etc.