Unit 1st Introduction

Introduction to Python:

- **Python** is a general purpose, dynamic, high level, and interpreted programming language. It supports Object Oriented programming approach to develop applications. It is simple and easy to learn and provides lots of high-level data structures.
- Python is *easy to learn* yet powerful and versatile scripting language, which makes it attractive for Application Development.
- Python's syntax and *dynamic typing* with its interpreted nature make it an ideal language for scripting and rapid application development.
- Python supports *multiple programming patterns*, including object-oriented, imperative, and functional or procedural programming styles.
- Python is not intended to work in a particular area, such as web programming. That is why it is known as *multipurpose* programming language because it can be used with web, enterprise, 3D CAD, etc.
- We don't need to use data types to declare variable because it is *dynamically typed* so we can write a=10 to assign an integer value in an integer variable.

Python History and Versions:

- Python laid its foundation in the late 1980s.
- The implementation of Python was started in the December 1989 by **Guido Van Rossum** at CWI in Netherland.
- In February 1991, van Rossum published the code (labeled version 0.9.0) to alt.sources.
- In 1994, Python 1.0 was released with new features like: lambda, map, filter, and reduce.
- Python 2.0 added new features like: list comprehensions, garbage collection system.
- On December 3, 2008, Python 3.0 (also called "Py3K") was released. It was designed to rectify fundamental flaw of the language.
- ***ABC programming language*** is said to be the predecessor of Python language which was capable of Exception Handling and interfacing with Amoeba Operating System.
- Python is influenced by following programming languages:ABC language & Modula3

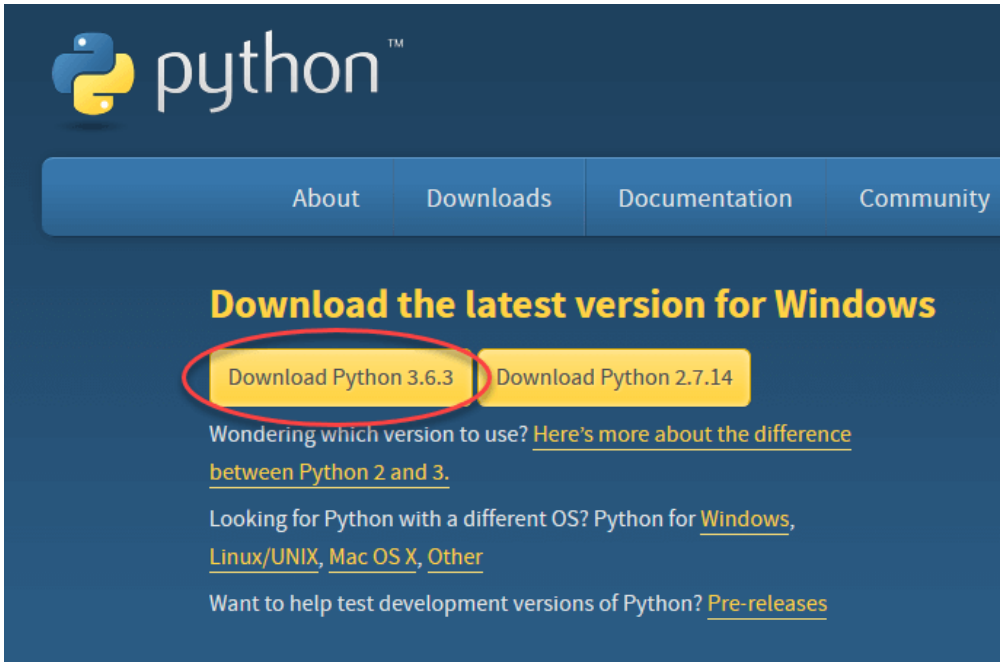
Python Features:

1. *Easy to Learn and Use*: Python is easy to learn and use. It is developer-friendly and high level programming language**.**
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. *Free and Open Source***:** Python language is freely available at offical web address.The source-code is also available. Therefore it is open source.
6. *Object-Oriented Language*: Python supports object oriented language and concepts of classes and objects come into existence**.**
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.

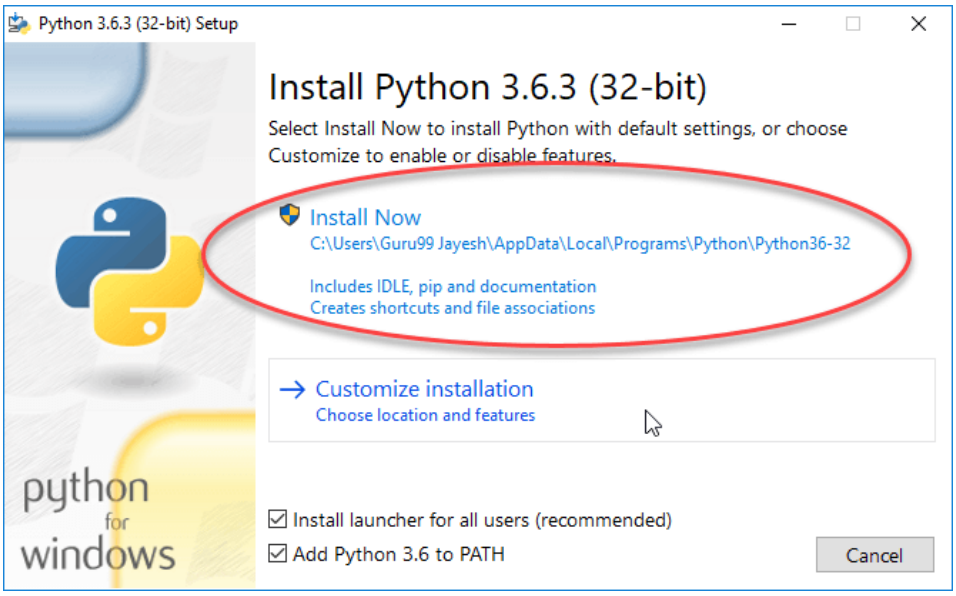
Python Interpreter:

Installing Python

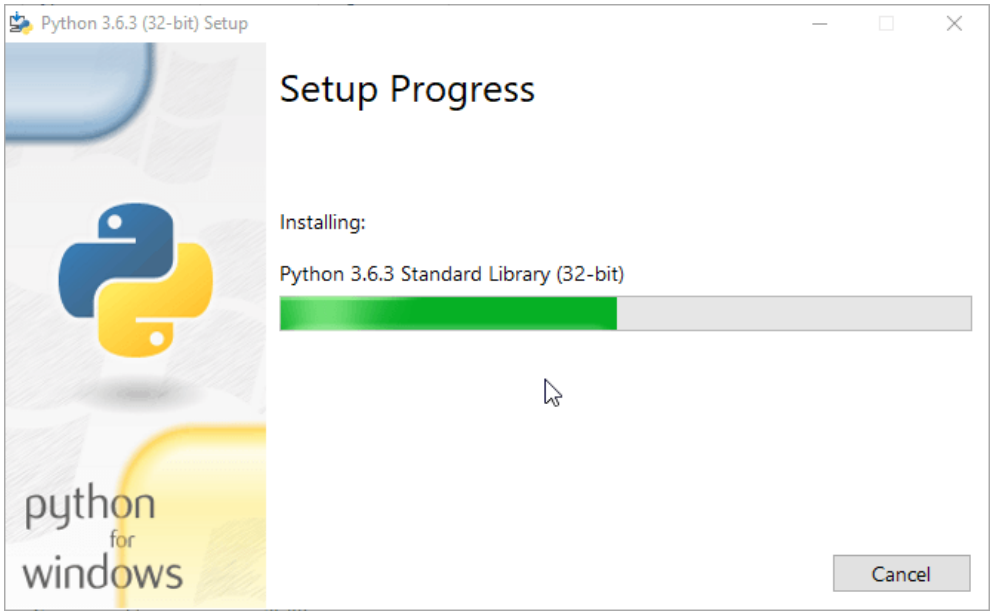
Step 1) to download and install Python visit the official website of Python **http://www.python.org/downloads/** and choose your version. We have chosen Python version 3.6.3



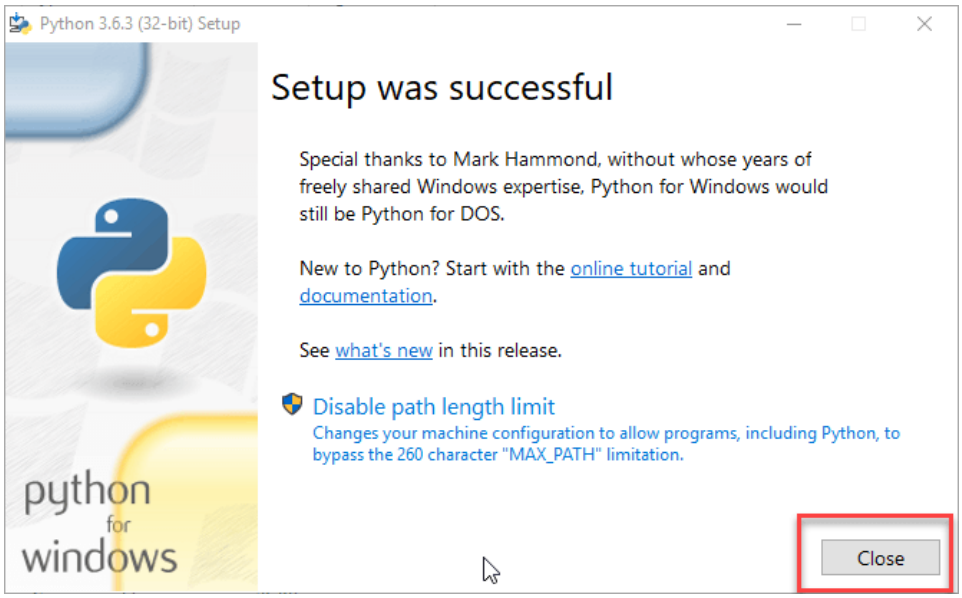
Step 2) once the download is complete, run the exe for install Python. Now click on Install Now.



Step 3) you can see Python installing at this point.



Step 4) when it finishes, you can see a screen that says the Setup was successful. Now click on "Close".


Python 3.6.3 (32-bit) Setup
Setup was successful
Special thanks to Mark Hammond, without whose years of freely shared Windows expertise, Python for Windows would still be Python for DOS.
New to Python? Start with the online tutorial and documentation.
See what's new in this release.
Disable path length limit
Changes your machine configuration to allow programs, including Python, to bypass the 260 character "MAX_PATH" limitation.
python
for
windows
Close