What is Python?

- General purpose High Level Programming Language i.e. Machine independent language.
- It can used for:-
    - Console app, Desktop Application, Web Application, Mobile Apps, Machine Learning, IOT Applications

Popular Apps in Python

Youtube, Mozilla, Google, Quora, Dropbox, Instagram, Bittorrent

Most projects on Github: 1$^{st}$- JS; 2$^{nd}$-Python

About Python

- Very Simple Straight Forward Syntax
- Case Sensitive
- Object oriented Language
- Dynamically Typed
- We will work on Python 3
- Indentation is used in place of curly braces
- Use of variable without declaration
- Interpreted Language

Features

- Emphasis on code readability
- Automatic Memory Management
- Dynamically typed
- Large Library
- Multi-paradigm programming language (object orient, Procedural, structural etc.)
- With the python interactive interpreter it is easy to check python commands
- Platform independent

Learning Path

Python Basics

GUI app with Python          Web app with Python

Python for data science      Python for AI & Machine Learning

**History of Python**

- History: Who, When, Where & Why
    - Idea started: 1980
    - Implementation Started: 1989
    - Finally Published: 27 feb 1991
    - First Professional version
    - Inventor: Guido van Rossum
    - Developed While working in National Research Institute, Neatherland
- Ancestors
    - SETL (Set Language), 1969
    - ABC influenced by SETL
- Forum
    - Python was an open source project
    - 1994, the primary discussion forum for python was formed
- Python: the name
    - Monty's Python Flying Circus
- Version History
    - Python 1.0(1994)
        - Python 1.5(1997)
        - Python 1.6(2000)
    - Python 2.0(2000)
        - Python 2.1 (2001)…… Python 2.7(2010)
        - Python 2.7.15 (1st May 2018)
    - Python 3.0(2008)
        - 3.1(2009), 3.2(2011), 3.3(2012), 3.4(2014)
        - 3.6.5 (28 Mar 2018)

Python 2 V/S Python 3

- No backward Compatibility
- Division operator like C                 /////// Division Operator
- Print "hello'                            /////// print("hello")
- Implicit str type is ASCII               //////Implicit str type is UNICODE
  Explicit Support for UNICODE
- range() & xrange()              /////only range()
- Exception handling              //// as keyword is required
- raw_input() for reading String      /////only input() function exists
  input() for reading data with filtering