



BASIC PYTHON

Duration: 3 Months

Introduction To Python

- Why Python
- Application areas of python
- Python implementations
- Python versions
- Installing pythonPython interpreter architecture
 - Python byte code compiler
 - Python virtual machine(pvm)

Writing and Executing First Python Program

- Using interactive mode
- Using script mode
 - General text editor and command window
 - Idle editor and idle shell
- Understanding print() function
- How to compile python program explicitly

Python Language Fundamentals

- Character set
- Keywords
- Comments
- Variables
- Literals
- Operators
- Reading input from console
- Parsing string to int, float

Python Conditional Statements

- If statement
- If else statement
- If elif statement
- If elif else statement

Looping Statements

- While loop
- For loop
- Pass, break and continue keywords

Standard Data Types

- Int, float, complex
- Str, list, tuple

- Dict, set

String Handling

- What is string
- String representations
- String functions, methods
- String indexing and slicing
- String formatting

Python List

- Creating and accessing lists
- Indexing and slicing lists
- List methods
- Nested lists
- List comprehension

Python Tuple

- Creating tuple
- Accessing tuple
- Immutability of tuple

Python Set

- How to create a set
- Iteration over sets
- Python set methods

Python Dictionary

- Creating a dictionary
- Dictionary methods
- Accessing values from dictionary
- Updating dictionary
- Iterating dictionary
- Dictionary comprehension

Python Functions

- Defining a function
- Calling a function
- Types of functions
- Function return statement
- Nested function
- Function as argument
- Function as return statement
- Decorator function
- Closure
- Map(), filter(), reduce() functions
- Anonymous or lambda function

Modules & Packages

- Why modules
- Script v/s module
- Importing module
- Standard v/s third party modules
- Why packages
- Understanding pip utility