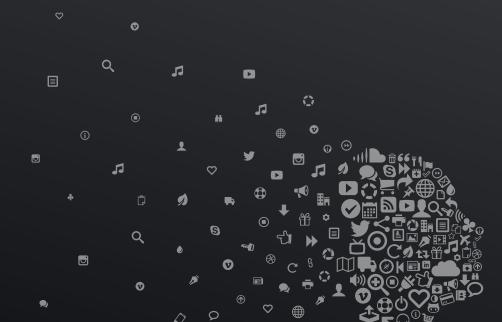


# Testleaf

Always Ahead

## ROADMAP TO BECOME PYTHONIST







### PYTHON INTRODUCTION

Module 1:
Python
Fundamentals

- Brief Intro to Python
- Features Versions Diff between 2.x vs 3.x
- Install Python and Environment Setup
- Working with Python
- Basic Syntax Variable and Datatypes Operators

Module 2:
Program Flow Control
for Python

- Python Basics Quiz
- Conditional blocks using if, else and elif
- Loops: for while Nested Loops
- Loop Manipulations: pass, continue and break
- Programming using Conditional and Loops block

Module 3:
Number Manipulation
String Manipulation

- Loops, Conditional block Quiz
- Number and Mathematical Functions
- String Manipulation: Accessing String Basic Operations
- String Slices and Understanding String in-built methods
- Programming using String inbuild Functions.

Module 4: Data Structure List, Set and Tuple

- String Functions Quiz
- Introduction of List, Set and Tuple
- List and Tuple Manipulations using in-built methods
- Set manipulations using in-built methods
- Programming using List, Tuple and Set DS

Module 5:
Data Structure
Dictionaries / Map
Manipulation

- List, Set & Tuple Functions Quiz
- Introduction of Python Dictionaries
- Accessing Values in Dictionaries and Manipulations
- Functions and Properties
- Hands-on: Programming using Dictionaries



#### Module 6: Python built-in Functions

- Dictionaries Quiz
- User Defined functions and Python Package functions
- Defining and Calling Function Types of Functions
- Functions Arguments and Anonymous Functions
- Global vs. Local Variables

## Module 7: Python in-built Modules

- Built-In functions Quiz
- Organizing Python Project into Modules
- Importing own modules as well as external modules
- Understanding Packages
- Lambda Function in Python

#### Module 8: File Operations Input and Output

- Modules and Lambda Functions Quiz
- Reading config files in Python
- Write log files in Python
- Design Read Function: read(), readline() and readlines()
- Design write function: write() and wirtelines()
- Manipulate file pointer using seek

## Module 9: Python Exception Handling

- What is Exception?
- Handling an Exception using try... expect...else try-finally clause
- Argument of an Exception
- Python Standard Exception Raising an Exceptions
- User-Defined Exceptions

#### Module 10: Python OOPs Concept

- Concepts of Class, Object and Instances
- Constructor, Class attributes and Destructors
- Inheritance, Overlapping and Overloading operators
- Adding and retrieving dynamic attributes of classes
- Programming Using Oops Supports



## Module 11: Regular Expression

- What is Regular Expression?
- The Match Function
- The Search Function
- Match vs Search
- Search and Replace
- Modifiers and Patterns

## Module 12: Python Database Interaction

- Introduction to RDMS
- Connections Executing queries Transaction and Handling Error
- Interact with NoSQL database

#### Module 13 : Introduction to REST Services

- Introduction REST
- REST Architecture
- Implementing a simple REST service
- Building full-fledged GET, POST, PUT & DELETE methods using Flask

## Module 14 : Python Multithreading

- Introduction to Thread
- Starting a Thread
- Threading module
- Synchronizing of threads
- Multithreaded Priority Queue