Syllabus of Python Course

Core Python (Duration-24hrs)

Module 1: An Introduction to Python (Duration-2hrs)

- What can Python do?

- Why Python?

- Good to know

- Python Syntax compared to other programming languages

- Python Install

Module 2: Beginning Python Basics (Duration-3hrs)

- The print statement

- Comments

- Python Data Structures & Data Types

- String Operations in Python

- Simple Input & Output

- Simple Output Formatting

- Operators in python

Module 3: Python Program Flow (Duration-3hrs)

- Indentation

- þÿ T h e   I f   s t a t e m e n t   a n d   i t s   r e l a t e d

- þÿ A n   e x a m p l e   w i t h   i f   a n d   i t s   a   r e l a

- The while loop

- The for loop

- The range statement

- Break &Continue

- Assert

- Examples for looping

Module 4: Functions& Modules (Duration-3hrs)

- Create your own functions

- Functions Parameters

- Variable Arguments

- Scope of a Function

- Function Documentation

- Lambda Functions& map

- n Exercise with functions

- Create a Module

- Standard Modules

Module 5: Exceptions Handling (Duration-3hrs)

- Errors

- Exception handling with try

- handling Multiple Exceptions

- Writing your own Exception

Module 6: File Handling (Duration-2hrs)

- File handling Modes

- Reading Files

- Writing& Appending to Files

- Handling File Exceptions

- The with statement

Module 7: Classes In Python (Duration-4hrs)

- New Style Classes

- Creating Classes

- Instance Methods

- Inheritance

- Polymorphism

- Exception Classes & Custom Exceptions

Module 8: Generators and iterators (Duration-2hrs)

- Iterators

- Generators

- The Functions any and all

- With Statement

- Data Compression

Module 9: Data Structures (Duration-2hrs)

- List Comprehensions

- Nested List Comprehensions

- Dictionary Comprehensions

- Functions

- Default Parameters

- Variable Arguments

- Specialized Sorts

Module 10: Collections (Duration-2hrs)

- namedtuple()

- deque

- ChainMap

- Counter

- OrderedDict

- default dict

- UserDict

- UserList

- user string

ADVANCE PYTHON (Duration-16hrs)

Module 11: Writing GUIs in Python (Tkinter) (Duration-3hrs)

- Introduction

- Components and Events

- An Example GUI

- The root Component

- Adding a Button

- Entry Widgets

- Text Widgets

- Check buttons

Module 12: Python SQL Database Access (Duration-4hrs)

- Introduction

- Installation

- DB Connection

- Creating DB Table

- INSERT, READ, UPDATE, DELETE operations

- COMMIT & ROLLBACK operation

- handling Errors

Module 13:Network Programming (Duration-3hrs)

- Introduction

- A Daytime Server

- Clients and Servers

- The Client Program

- The Server Program

Module 14: Date and Time (Duration-1hr)

- sleep

- Program execution time

- more methods on date/time

Module 15: Few more topics in-detailed (Duration-1hr)

- Filter

- Map

- Reduce

- Decorators

- Frozen set

- Collections

Regular expression (Duration-1hr)

- Split

- Working with special characters, date, emails

- Quantifiers

- Match and find all

- character sequence and substitute

- Search method

Module 17: Threads ESSENTIAL (Duration-1hr)

- Class and threads

- Multi-threading

- Synchronization

- Treads Life cycle

- use cases

Module 18: Accessing API ESSENTIAL (Duration-1hr)

- Introduction

- Facebook Messenger

- Open weather

Module 19: DJANGO ESSENTIAL (Duration-1hr)