

Python

Course Duration: 40 Hr.

1) Python – An Introduction

- Python: An Overview
- History of Python
- Version of Python
- Feature of Python
 - Simple
 - Open Source
 - High Level Programming Language
 - Portable
 - Object Oriented & Procedure Oriented
 - Interpreted
 - Easy to Maintain
- Comparisons of Python with Other Language
 - Java
 - C++
 - Java Script
 - Perl
- Execution of Programs
- Python Comment

2) Python Variables & Data Types

- What is variables

- Assign Variables
- Data Types:
 - Numeric Data Types
 - Boolean Data Types
 - Compound Data Types
 - Dictionaries
 - Sets
 - Array

3) Operators:

- Types of Operators
 - Arithmetic Operators
 - Relational Operators
 - Assignment Operators
 - Logical / Boolean Operators
 - Identity Operators
 - Membership Operators
 - Bitwise Operators
- Operators Precedence & Associativity
 - Precedence of Operators
 - Associativity of Operators

4) Python Conditional Statements:

- The If Statements
- The if-else Statements
- The Elif Statements
- The Nested If – Else Statements

5) Python Looping Concept:

- Python for Loop
- Python While Loop

6) Python Control Statements:

- The Break Statements
- The Continue Statements
- The Pass Statements

7) Python Data Type Casting

8) Python Number

- Mathematical Function
- Random Function
- Trigonometric Function

9) Python String

- Accessing Strings
- Basic Operations
- String slices
- String Built-In Function

10) Python List

- Introduction
- Accessing list
- Operations
- Working with lists
- List Slices
- Aliasing
- Cloning
- List Comprehension
- Deleting List
- Built-in Function

11) Python Tuple

- Introduction
- Creating Tuple
- Accessing Tuple
- Modifying Tuple
- Deleting Tuple
- Built-in Function

12) Python Dictionary

- Introduction
- Creating Dictionary

- Accessing Dictionary
- Deleting Dictionary
- Built-In Function

13) Python Sets

- Introduction
- Declaring an Sets
- Operation on Sets
- Built-In Function

14) Python Date & Time

- The Time Module
- The Calendar Module

15) Python Function

- Defining a function
- Calling a function
- Types of functions
- Function Arguments
- Anonymous functions
- Global and local variables

16) Module

- Introduction
- The Import Statement
- The From...Import Statement
- The From...Import* Statement

17) File Handling (Input / Output)

- Introduction
- Opening & closing Files
- Reading & writing Files
- Rename & Remove Files
- The Directories

18) Exception Handling

- Error in Python Program
 - Syntax error
 - Exception
- Types of Exception
- Handling Exception in Python
- Raising Exception
- User Defined Exception

19) OOPs Concepts

- Class and object
- Attributes
- Inheritance
- Overloading
- Overriding
- Interface & Abstraction

20) Multithreading

- Thread
- Starting a thread
- Threading module
- Synchronizing threads
- Multithreaded Priority Queue

21) Python Mail Sending Program

- Introducing
- Execute mail program
- Attachment with file
- Sending multiple mail

22) Regular Expression

- Match function
- Search function
- Matching VS Searching
- Modifiers
- Patterns

23) Database Connection

- Introduction
- Connections
- Executing queries
- Transactions
- Handling error

24) Interacting with Networks

- Socket in Python
- TCP/IP Client & Server
- Creating a Client / Server Program
- Executing Socket Program

25) GUI (Graphical User Interface)

- Introduction
- Tkinter programming
- Tkinter widgets

26) Python Web Scraping

- Introduction
- Scrape all the details of any website
- Built-in Function

27) Python for Image Processing

- Introduction
- Image processing

- Loading Video
- Reading image
- Saving a capture video

28) Python Data Science

- introduction
- Data analysis with Python
- Plotting Graph

29) Introduction with Python Matching Learning

30) Introduction with Python Artificial Intelligence

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