Class 01: Python Basics & Setup for Beginners

- Introduction to Python
- Preparing Environment
- Writing and Running Your First Program
- Understanding How Python Code Works
- Basics of Debugging
- Python Variable
- Python Comments
- Playing With Simple addition, subtraction, multiplication, division
- Introduction of Data Types
- Details Road Map to Learn Python

Class 02:Understanding Python Data Types

- Data Types
- Type Conversion
- Checking Data Types
- Mutable & Immutable Data Types

Class 03: Strings, Numbers & Operations in Python

- Strings
- Formatted Strings
- String Methods
- Numbers and Math Operations
- Operator Precedence
- Math Functions

Class 04: Control Flow and Looping Constructs

- If Statements
- Logical Operators
- Comparison Operators
- While Loops
- For Loops
- Nested Loops
- Break and Continue Statements

Class 05: Python Data Structures: Lists, Tuples, Sets & Dictionaries

- Lists
- List Methods
- List Comprehension

- Tuples
- Tuple Methods
- Sets
- Set Methods
- Dictionaries
- Dictionary Methods

Class 06: Mastering Functions in Python

- Writing Functions
- Function Parameters
- Keyword Arguments
- Return Statements
- Lambda Functions
- Creating Reusable Functions
- Scope: Local and Global Variables

Class 07: File Handling & Exception Management

- Reading from Files
- Writing to Files
- Working with File Paths
- File Methods
- Handling Exceptions with Try-Except
- Using Finally and Else with Try-Except
- Raising Exceptions
- Custom Exceptions

Class 08: Introduction to Object-Oriented Programming

- Introduction to OOP
- Creating Classes and Objects
- Instance Variables and Methods
- Class Variables and Methods
- Constructors

Class 09: Advanced OOP: Inheritance, Polymorphism & Encapsulation

- Inheritance
- Method Overriding
- Polymorphism
- Encapsulation
- Using Properties

Class 10: Working with APIs, JSON, and DateTime

- Working with Dates and Times
- Working with JSON Module
- Working with HTTP Requests
- Consuming APIs with Requests

Class 11: Python Modules & Package Management

- Creating and Using Modules
- Using Built-in Modules
- Installing and Using Packages with Pip
- Python Standard Library Overview

Class 12: Capstone Projects: OOP, CRUD, and Image Processing

- Bank Account Console Project Using Python OOP
- Product List CRUD Console Project Using HTTP
- Image Backgroud Remover Console Project