

Python Course Structure

❖ 1: Introduction to Python

- What can Python do?
- Why Python?
- Good to know
- Python Syntax compared to other programming languages
- Python Install

❖ 2: Beginning Python Basics

- The print statement
- Comments
- Python Data Structures & Data Types
- String Operations in Python
- Simple Input & Output
- Simple Output Formatting
- Operators in python

❖ 3: Data Types in Python

- Fundamental
- Collectional

❖ 4: Control Structures

- Indentation
- The If statement and its' related statements
- The while loop
- The for loop
- The range statement
- Break &Continue
- Assert
- Examples for looping

❖ 5: Functions

- Create your own functions
- Functions Parameters
- Variable Arguments
- Scope of a Function
- Lambda Functions& map
- n Exercise with functions
- Create a
- Standard s

❖ 6: Exceptions Handling

- Errors
- Exception handling with try
- handling Multiple Exceptions
- Writing your own Exception

❖ 7: File Handling

- File handling Modes
- Reading Files
- Writing& Appending to Files
- Handling File Exceptions
- The with statement

❖ 8: OOP's In Python

- New Style Classes
- Creating Classes
- Instance Methods
- Inheritance
- Polymorphism
- Exception Classes & Custom Exceptions

❖ 9: Data Structures

- List Comprehensions
- Nested List Comprehensions
- Dictionary Comprehensions
- Functions
- Default Parameters
- Variable Arguments
- Specialized Sorts

❖ 10: Writing GUIs in Python (Tkinter)

- Introduction
- Components and Events
- An Example GUI
- The root Component
- Adding a Button
- Entry Widgets
- Text Widgets
- Check buttons

❖ 11: Python SQL Database Access

- Introduction
- Installation
- DB Connection
- Creating DB Table
- INSERT, READ, UPDATE, DELETE operations
- COMMIT & ROLLBACK operation
- handling Errors

Python Course Structure

❖ 12: Date and Time Module

- sleep
- Program execution time
- more methods on date/time

❖ 13: Few more topics in-detailed

- Filter
- Map
- Reduce
- Decorators
- Frozen set
- Collections

❖ 14: Regular Expression

- Split
- Working with special characters, date, emails
- Quantifiers
- Match and find all
- character sequence and substitute
- Search method

❖ 15: Threads ESSENTIAL

- Class and threads
- Multi-threading
- Synchronization
- Treads Life cycle
- use cases

❖ 16: DJANGO

- Django Overview
- Django Installation
- Creating a Project
- Usage of Project in depth Discussion
- Creating an Application
- Understanding Folder Structure
- Creating a Hello World Page
- Database and Views
- Static Files and Forms