Complete Java Classes
A Cognizance of Excellence

- By Kunal Sir

"Python Syllabus"

An Introduction To Python:-

- ➢ What is Python and history of Python?
- ➢ Features of Python.
- ➢ Installation and Working with Python.
- ➢ Understanding Python variables.
- ➢ Python basic Operators.
- ➢ Python Identifiers, Keywords and Indentation.
- ➢ Understanding python blocks.
- ➢ Command line arguments.
- ➢ Getting User Input.
- ➢ Python Data Types.
- ➢ What are variables ?
- ➢ Python Core objects and Functions.

Program Flow Control :-

- ➢ Conditional blocks using if, else and else if.
- ➢ For loops in python.
- ➢ For loop using ranges, string, list and dictionaries.
- ➢ Use of while loops in python.
- ➢ Loop manipulation using pass, continue, break and else.
- ➢ Programming using Python conditional and loops block.

List, Ranges, Dictionaries, Tuples and Sets in Python:-

- ➢ Introduction.
- ➢ Lists in Python
- ➢ Understanding Iterators
- ➢ Generators ,Comprehensions and Lambda Expressions
- ➢ Generators and Yield

- ➢ Next and Ranges
- ➢ Understanding and using Ranges
- ➢ Python Dictionaries
- ➢ Dictionary manipulation.
- ➢ Ordered Sets with tuples
- ➢ Sets
- ➢ Python Sets Examples

File Input and Output in Python:-

- ➢ Reading and writing text files.
- ➢ Reading config files in python.
- ➢ Writing log files in python.
- ➢ Understanding read functions, read (), readline (), readlines (), write () and writelines ().
- ➢ Writing Binary Files Manually.
- ➢ Using Pickle to Write Binary Files.
- ➢ Manipulating file pointer using seek.

Object Oriented Programming in Python:-

- ➢ OOPs Concepts.
- ➢ Concept of class, object and instances.
- ➢ Constructor, class attributes and destructors.
- ➢ Accessing attributes, Built-In Class Attributes.
- ➢ Inheritance and Polymorphism (overlapping and overloading operators).
- ➢ Data Hiding.

Exception Handling in Python:-

- ➢ Exceptions Handling Introduction.
- ➢ Avoiding code break using exception handling.
- ➢ Handling various exceptions using try....except...else.

- By Kunal Sir

➢ Try-finally clause.
➢ Argument of an Exception and create self-exception class.
➢ Raising an exceptions, User-Defined Exceptions.

Testing and Debugging Python Programs:-

➢ Debug Python programs using pdb debugger.
➢ Testing with Python using UnitTest.
➢ Assert for debugging.
➢ Iterable and generator in Python.
➢ Yielding from the generators.

Database Handling in Python Programs:-

➢ SQL Database connection using python.
➢ Install the MySQL dB and other Packages
➢ DML and DDL Operations with Databases.
➢ Performing Transactions.
➢ Handling Database Errors.
➢ Disconnecting Database.
➢ Web Scraping.

Multithreading in Python Programs:-

➢ What is multithreading?
➢ Starting a New Thread.
➢ Forking threads.
➢ The Threading Module.
➢ Synchronizing Threads.

- By Kunal Sir

Django Framework:-

- ➢ Basic of Django Framework & its uses.
- ➢ Installation and setting up Django.
- ➢ Pipenv for virtual environments.
- ➢ Syntax and URL.
- ➢ Class-based views.
- ➢ User authentication.
- ➢ Custom user models.
- ➢ Testing.
- ➢ Deploying Django Framework.

Flask Framework & TkInter GUI Framework:-

- ➢ Overview of Flask Web App with python.
- ➢ Installation of Flask and Demo Application.
- ➢ Overview of TkInter Framework
- ➢ Tkinter Widgets

****