



## INTRODUCTION

- ◆ Installation and Working with Python
- ◆ Understanding Python variables
- ◆ Python basic Operators
- ◆ Understanding python blocks

## PYTHON DATA TYPES

- ◆ Declaring & using Numeric data types: int, float, complex
- ◆ Using string data type and string operations
- ◆ Defining list and list slicing
- ◆ Use of Tuple data type

## OBJECT ORIENTED PROGRAMMING – OOPS

- ◆ Concept of class, object and instances
- ◆ Constructor, class attributes and destructors
- ◆ Real time use of class in live projects
- ◆ Inheritance , overlapping and overloading operators
- ◆ Adding and retrieving dynamic attributes of classes
- ◆ Programming using Oops support

## PROGRAM FLOW CONTROL

- ◆ Conditional blocks using if, else and elif
- ◆ Simple 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

## REGULAR EXPRESSION

- ◆ Powerful pattern matching and searching
- ◆ Power of pattern searching using regex in python
- ◆ Real time parsing of networking or system data using regex
- ◆ Password, email, url validation using regular expression
- ◆ Pattern finding programs using regular expression

## FUNCTIONS, MODULES & PACKAGES

- ◆ Organizing python codes using functions
- ◆ Organizing python projects into modules
- ◆ Importing own module as well as external modules
- ◆ Understanding Packages
- ◆ Powerful Lamda function in python
- ◆ Programming using functions, modules & external packages

## PYTHON EXCEPTION HANDLING

- ◆ Avoiding code break using exception handling
- ◆ Safe guarding file operation using exception handling
- ◆ Handling and helping developer with error code
- ◆ Programming using Exception handling

## PYTHON DATABASE INTERACTION

- ◆ SQL Database connection using python
- ◆ Creating and searching tables
- ◆ Reading and storing config information on database
- ◆ Programming using database connections

## PYTHON MULTITHREADING

- ◆ Understanding threads
- ◆ Forking threads
- ◆ Synchronizing the threads
- ◆ Programming using multithreading

## STRING, LIST & DICTIONARY MANIPULATIONS

- ◆ Building blocks of python programs
- ◆ Understanding string in build methods
- ◆ List manipulation using in build methods
- ◆ Dictionary manipulation
- ◆ Programming using string, list and dictionary in build functions

## PYTHON FILE OPERATION

- ◆ Reading config files in python
- ◆ Writing log files in python
- ◆ Understanding read functions, read(), readline() and readlines()
- ◆ Understanding write functions, write() and writelines()
- ◆ Manipulating file pointer using seek
- ◆ Programming using file operations

## CONTACTING USER THROUGH EMAILS USING PYTHON

- ◆ Installing smtp python module
- ◆ Sending email
- ◆ Reading from file and sending emails to all users addressing them
- ◆ directly for marketing

## PYTHON CGI INTRODUCTION

- ◆ Writing python program for CGI applications
- ◆ Creating menus and accessing files
- ◆ Server client program

## LIVE PROJECT

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