

Python

Duration : 30 hrs

An Introduction to Python

- Why Python, its Unique Feature and where to use it?
- Python Environment Setup
- Start programming on an interactive shell.
- Python Identifiers, Keywords
- Python Data Types and Variable

Conditional Statement and Loops

- Condition and Loops in Python

Python Core Objects

- Built in modules (Library Functions)
- Numeric and Math's Module
- String/List/Dictionaries/Tuple

Functions

- Python built-in function
- Python user-defined functions
- Python packages and functions
- The anonymous Functions - Lambda Functions

Object Oriented Python

- OOPs Concepts
- Object, Classes and Destroying Objects
- Accessing attributes, Built-In Class Attributes
- Inheritance and Polymorphism
- Overriding Methods,
- Abstraction and Encapsulation

Regular Expression

- Regular Expressions
- What are regular expressions?
- The match and search Function
- Compile and matching
- Matching vs searching
- Search and Replace feature using RE
- Extended Regular Expressions
- Wildcard characters and work with them

File Handling

- Writing data to a file
- Reading data from a file

- Read and Write data from CSV file
- OS module
- Rename and Removing files, directories

Exception Handling in Python

- Exceptions Handling
- Handling various exceptions using try....except...else
- Try-finally clause
- The argument of an Exception and create a self exception class
- Python Standard Exceptions
- Raising an exceptions, User-Defined Exceptions

Debugging Python Programs

- Debug Python programs using pdb debugger
- Assert for debugging
- Standard project setup in Python

Modules & Packages

- Modules
- How to import a module?
- Packages
- How to create packages

Database Handling

- Create Database Connection
- Creating and accessing SQLite database
- Python with MySQL Database
- Creating Database table
- CRUD operation on a database
- Performing Transactions
- Handling Database Errors
- Disconnecting Database