Python (Core and Adv.)

Course Overview

- This is 100% hands-on course; students will learn Python in detail.
- Hands on practice sessions and guidance by Industry experts.
- Content customization and collaboration platform matching the diverse training need.
- 100% placement assistance with placement team.

Target Participants

- Working people, Students, IT Professionals

Learning Formats

- Online interactive and video based training

Our Trainer (s)

This course is delivered by **Expert Trainer having real time experience.** Having 10+ years hands on working experience with Python and other programming languages.

Lesson 1: Introduction

- Introduction to Python
- Installation of Python
- Python Shell and Editor

Lesson 2: Data Types and Variables

- Integer
- String
- Boolean Values

Lesson 3: Sequences, Iteration and String Formatting

- While Loop
- For Loop, Range () function
- Break, Continue, exit
- Flow Controls: If-else, If-elsif- else
- Infinite Loops

Lesson 4: Lists, Dictionary, Tuples and Set:

- Python lists, tuples, dictionary and
- sets: how they are created, slicing of a list, adding or removing elements.
- Methods used in are explained with sample programs
    - keys
    - extend
    - values
    - items
    - get
    - set default

  append
  insert
  remove
  clear
  index
  count

  sort
  copy

Lesson 5: Strings:

- Working with strings.
- Methods : lower(), upper(), title(), isalpha(),
- isdecimal(), isspace(), join(), split(), rjust(), ljust(), strip(),
- lstrip(), startswith(), endswith(), isdigit(), maketrans(),
- replace(), max(), min(), replace(), index(), rindex(), find(),
- rfind(), swapcase(), zfill()
- Modules: re, re.compile(), re.search(), format()

Lesson 6: Reading and Writing Files

- This chapter covers all the basic I/O functions available in Python.
- We cover open(), read(), Write(), close(), readLine(), seek(),
- tell(), makedirs(), getcwd() so on and so forth with example programs.

Lesson 7: Lambda Functions -- functions as objects

- Lambda functions or anonymous functions.
- Advantages and use cases
- We explain the lambda functions with built in functions like:
    - filter()
    - map()

Lesson 8: Functions and Debugging

- Functions:
    - What is function and advantages
    - We cover basic syntax, defining the function, calling a function with sample programs and fine examples.
- Debugging:
    - Debugging the programs.
    - We cover Standard Error, Zero Division Error, Syntax Error
    - and Type Error with example programs

Lesson 8: Object Oriented Programming

- Procedure and Object Oriented, Code Reusability,
- Object Oriented Concepts, What is Class and Object,
- OOPS Features: Encapsulation, Polymorphism,
- Abstraction, Inheritance, Types of Inheritance, what is
- constructor, Passing parameters to Constructors, Initializing
- Objects, class method, static variable and methods

Lesson 9: Regular Expressions

- What is regular expression and advantages
- We cover Regular Expression Patterns searching, greedy
- characters, escape sequences and modifiers with example programs.

Lesson 10: Generators and Decorators

- What is Generators and Decorators?
- We cover purpose of generators, creation of generator and decorators and how are they different from normal functions.

Lesson 11: Advanced Python for:

- Database:
  - Importing the API module,
  - Acquiring a connection with the database,
  - Issuing SQL statements and stored procedures and Closing the connection using MySQLdb.
- Web Scrapping:
  - Web browser Module,
  - Downloading from the Web with the Requests Module,
  - Parsing HTML with the Beautifulsoup Module,
  - Controlling with the browser,
  - Real Webpage Extraction,
  - Walking the tree, HTML Parsing,

Lesson 12: Graphical User Interface(GUI) Automation:

- Controlling the Keyboard from Python, Screenshots and
- Image Recognition, checkbox, Multi section, Dialogue box,
- Controlling the Mouse from Python

Lesson 13: Networking and Email:

- Creating SMTP objects for creating and sending emails,
- Parsing Extensible Markup Language(XML) With SAX API,
- Working with HTML, Web Page Structure,
- Navbar, comments, footers and divs,
- Parsing paragraph data