

(PYTHON LANGUAGE COURSE)

(Course Duration: 2 Months)



An ISO 9001:2015 Certified Institute

Course Overview

Python covers a vast area of expertise such as Introduction to Python and Computer Programming, Data Types, Variables, Basic Operators, Boolean Values, Conditional Execution, Loops, Lists and many more.

Course Content

Introduction to Python

- What is Language & History of Python.
- Advantages & Disadvantages of Python
- Installing Python
- Python language Environment
- User Interface or IDE
- Writing and executing first python program

Python Language Fundamentals

- Working with Interactive mode
- Working with Script mode
- Python Character Set
- Python Tokens, Keywords, Identifiers, Literals, Operators
- Variables and Assignments
- Input and Output in Python

Operators

- Arithmetic Operators
- Relational Operators
- Logical Operators
- Membership Operators
- Identity Operators
- Bitwise Operators
- Assignment Operators
- Operators Precedence
- Evaluating Expression
- Type Casting

Conditional Statements

- The if Statement
- The if-else Statement
- The if-elif Statement
- Nested if Statements
- Python Indentation

Looping Statements

- The For Loop
- The While Loop
- Loop else Statement



- Nested Loops
- Break and Continue

Data Handling

- Standard Data Types
- Numbers
- String Handling
- Python List
- Python Tuple
- Python Set
- Python Dictionary
- Frozen set
- Bool
- Mutable and Immutable

String Manipulation

- Introduction to Python String
- Accessing Individual Elements
- String Operators
- String Slices
- String Functions and Methods

List Manipulation

- Introduction to Python List
- Creating List
- Accessing List
- Joining List
- Replicating List
- List Slicing

Tuples

- Introduction to Tuple
- Creating Tuples
- Accessing Tuples
- Joining Tuples
- Replicating Tuples
- Tuple Slicing

Dictionaries

- Introduction to Dictionary
- Accessing values in dictionaries
- Working with dictionaries
- Properties

Set and Frozen set

- Introduction to Set and Frozenset
- Creating Set and Frozenset
- Accessing and Joining
- Replicating and Slicing

The Range Function

- Introduction to range()
- Types of range() function
- Use of range() function



Python Functions

- Built-In Functions
 - Introduction to Functions
 - Using a Functions
 - Python Function Types
 - Structure of Python Functions
- User Defined Functions
 - Types of Functions
 - Flow of Execution
 - Arguments and Parameters
 - Default Arguments, Named Arguments
 - Scope of Variables
- Recursion Function
 - Use of recursion function

Modules and Packages

- Built-in Modules
 - Importing Modules in Python Programs
 - Working with Random Modules
 - E.g. - builtins, os, time, datetime, calendar, sys, etc.
- User Defined Functions
- Structure of Python Modules

File Input/Output

- Text and Bytes files
- Opening a file
- Reading and Writing Files
- Other File tools
- Array
- Python Numpy