

# PYTHON

## Introduction to Python

- Why Python?
- What can Python do?
- Python Install
- Python Syntax compared to other programming languages

## Beginning Python Basics

- The print statement & Comments
- String Operations in Python
- Simple Input & Output
- Operators in python

## Python Program Flow

- The If statement and its' related statement
- The while loop
- The for loop
- The range statement
- Break &Continue
- Examples for looping

## Function & Modules

- Functions Parameters
- Variable Arguments
- Scope of a Function
- Create a Module & Standard Modules

## Exceptios Handling

- Errors
- Exception handling with try
- Handling Multiple Exceptions
- Writing your own Exception

## File Handling

- File handling Modes
- Reading Files
- Writing& Appending to Files
- Handling File Exceptions

## Classes In Python

- New Style Classes
- Creating Classes
- Instance Methods
- Inheritance
- Polymorphism
- Exception Classes & Custom Exceptions

## Generators and iterators

- Iterators
- Generators
- The Functions any and all
- With Statement
- Data Compression

## Data Structures

- List Comprehensions
- Nested List Comprehensions
- Dictionary Comprehensions
- Functions
- Default Parameters
- Variable Arguments

## Writing GUIs in Python (Tkinter)

- Introduction
- Components and Events
- An Example GUI
- The root Component
- Adding a Button
- Entry & Text Widgets
- Check buttons

## Python SQL Database Access

- Introduction
- Installation
- DB Connection
- Creating DB Table
- INSERT, READ, UPDATE, DELETE operations
- COMMIT & ROLLBACK operation