

# Python Course Content

## Core Python

### Introduction

- ✓ History
- ✓ Features
- ✓ Setting up path
- ✓ Working with Python
- ✓ Basic Syntax
- ✓ Variable and Data Types
- ✓ Operator

### Conditional Statements

- ✓ If
- ✓ If- else
- ✓ Nested if-else

### Looping Statements

- ✓ For
- ✓ While
- ✓ Nested loops

## Control Statements

- ✓ Break
- ✓ Continue
- ✓ Pass

## String Manipulation

- ✓ Accessing Strings
- ✓ Basic Operations
- ✓ String slices
- ✓ Function and Methods

## Lists

- ✓ Introduction
- ✓ Accessing list
- ✓ Operations
- ✓ Working with lists
- ✓ Function and Methods

## Tuple

- ✓ Introduction
- ✓ Accessing tuples
- ✓ Operations
- ✓ Working
- ✓ Functions and Methods

## Dictionary

- ✓ Introduction
- ✓ Accessing values in dictionaries
- ✓ Working with dictionaries
- ✓ Properties
- ✓ Functions

## Functions

- ✓ Defining a function
- ✓ Calling a function
- ✓ Types of functions
- ✓ Function Arguments
- ✓ Anonymous functions
- ✓ Global and local variables

## Modules

- ✓ Importing module
- ✓ Math module
- ✓ Random module
- ✓ Packages
- ✓ Composition

## Input-Output

- ✓ Printing on screen
- ✓ Reading data from keyboard
- ✓ Opening and closing file
- ✓ Reading and writing files
- ✓ Functions

## Exception Handling

- ✓ Exception
- ✓ Exception Handling
- ✓ Except clause
- ✓ Try ? finally clause
- ✓ User Defined Exceptions

## Advanced Python

### OOPs concept

- ✓ Class and object
- ✓ Attributes
- ✓ Inheritance
- ✓ Overloading
- ✓ Overriding
- ✓ Data hiding

### Regular expressions

- ✓ Match function
- ✓ Search function
- ✓ Matching VS Searching
- ✓ Modifiers
- ✓ Patterns

### Multithreading

- ✓ Thread
- ✓ Starting a thread
- ✓ Threading module
- ✓ Synchronizing threads
- ✓ Multithreaded Priority Queue

## GUI Programming

- ✓ Introduction
- ✓ Tkinter programming
- ✓ Tkinter widgets

## Networking

- ✓ Socket
- ✓ Socket Module
- ✓ Methods
- ✓ TCP Client and server implementation
- ✓ UDP Client and server implementation
- ✓ SCTP Client and server implementation for TCP
- ✓ SCTP Client and server implementation for UDP
- ✓ Byte Array
- ✓ Bit Array