

# PYTHON WITH DJANGO

## Core Python

### Course Overview

- Master in Python programming language
- Understand Python Scripts on UNIX/Windows, Python Editors and IDEs
- Master the Concepts of Sequences and File operations
- Learn how to use and create functions, sorting different elements, Lambda function, error handling techniques and Regular expressions and using modules in Python
- How to use python in real-time project and sample projects

### Introduction

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

### Conditional Statements

- If
- If- else
- Nested if-else
- Examples

### Looping

- For
- While
- Nested loops
- Examples

### Control Statements

- Break
- Continue
- Pass
- Examples

### String Manipulation

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

### Lists

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

### Tuple

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

### Dictionaries

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

### Functions

- Defining a function
- Calling a function

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- Types of functions
- Function Arguments
- Anonymous functions
- Global and local variables
- Examples

### **Lambda Operator, Filter, Reduce and Map**

- Lambda function
- Filter function
- Reduce function
- Map function

### **List Comprehension**

- Introduction
- Generator Comprehension
- Set Comprehension

### **Modules**

- Importing module
- Math module
- Random module
- Packages
- Composition
- Examples

### **Input-Output**

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

### **Exception Handling**

- Exception
- Exception Handling
- Except clause
- Try??? Finally clause
- User Defined Exceptions
- Examples

### **Regular expressions**

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

### **Packages**

- Predefined Packages
- User Defined packages

### **File Handling**

- Text Files
- Binary Files
- Zip and Unzip Files
- Pickling
- Unpickling
- Reading Program from another Program in Command Prompt

## **Adv Python**

### **OOPS**

- Class and object
- Attributes
- Methods
- Overloading
- Overriding
- Data hiding

### **Inheritance**

- Single Inheritance
- Multilevel Inheritance
- Multiple Inheritance
- Hybrid Inheritance
- Hierarchal Inheritance
- IS-A Relationship and HAS-A Relationship

### **Polymorphism**

- Duck Type Philosophy
- Method Overloading
- Operator Overloading

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- Constructor Overloading
- Method Overriding
- Constructor Overriding

### Database

- Introduction
- Connections
- Executing queries
- Transactions
- Handling error

### Networking

- Socket
- Socket Module
- Methods
- Client and server
- Internet modules

### Multithreading:

- Introduction Multitasking
- isAlive
- Enumerate
- Thread Class
- Demonstrate
- Running Parallel Program
- Operating Based Multithreading

### GUI Programming

- Introduction
- Tkinter Programming
- Tkinter Programming

### Data Science With Python

- Introduction
- Setting up with environment
- Basic data types
- Numpy arrays
- Exploring Pandas
- Pandas Series and Data Frames
- Statistics with Pandas

### DatFrames Projects

- Real Time Projects
- Resume Preparation

## Django with Python

### Home

- Audience
- Prerequisites

### Basics

- History of Django
- Design Philosophies
- Advantages of Django

### Overview

- MVC Pattern
- DJANGO MVC - MVT Pattern

### Environment

- Installing Python
- Installing Django
- Database Setup
- Web Server

### Creating a Project

- Create a Project
- The Project Structure
- Setting Up Your Project

### Sending E-mails

- Sending a Simple E-mail
- Sending Multiple Mails with send\_mass\_mail
- Sending Multiple Mails with send\_mass\_mail
- Sending E-mail with Attachment

### Generic Views

- Static Pages
- List and Display Data from DB

### Form Processing

- Using Form in a View
- Using Our Own Form Validation

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### **File Uploading**

- Uploading an Image

### **Apps Life Cycle**

- Create an Application
- Get the Project to Know About Your Application

### **Admin Interface**

- Starting the Admin Interface

### **Creating Views**

- Simple View

### **Template System**

- The Render Function
- Django Template Language (DTL)
- Filters
- Tags

### **Tags**

- Creating a Model
- Manipulating Data (CRUD)
- Linking Models

### **Comments**

- Dreamreal Model
- hello view
- hello.html template

### **Real Time Projects**

- E-Commerce domain applications
  - Front-End
  - Back-End
  - HTML
  - CSS
  - BOOTSTRAP
  - DJANGO
  - SQLite

### **Student Benefits**

- PROJECT TO PRACTICE
- PRACTICAL CLASSES

- RESUME PREPARATION SUPPORT
- INTERVIEW QUESTION & ANSWERS

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