- **Introduction Session**
  - ✓ What is Python
  - ✓ Python History, Introduction & Python Scope
  - ✓ Type of Application Created by Python
  - ✓ Comparison of Python with C, CPP & Java
  - ✓ Why Python is Most Popular Script

- **Python Installation and Software Tools**
  - ✓ Python Installation
  - ✓ What is Python IDLE
  - ✓ Interpreters vs Compilers
  - ✓ What is Python Shell
  - ✓ How run Python Script under Command Prompt
  - ✓ Working with Jupyter.org try
  - ✓ What is PEP and PIP
  - ✓ What is Indentation Concept in Python
  - ✓ How to Write Comment in Python
  - ✓ Create First Hello World of Program of Python

- **Operator in Python**
  - ✓ What is Operators
  - ✓ Types of Operator
  - ✓ Python Arithmetic Operators
  - ✓ Python Comparison Operators
  - ✓ Python Assignment Operators
  - ✓ Python Bitwise Operators
  - ✓ Python Logical Operators
  - ✓ Python Membership Operators (in, not in)
  - ✓ Python Identity Operators (is, is not)
  - ✓ Ternary Operator
  - ✓ Python Operators Precedence

- **Variable, Constant, Literals & Data Types**
  - ✓ What is Variables, Constant and Literals
  - ✓ Assigning Values to Variables, Constant
  - ✓ Multiple Assignment, Tuple Assignment
  - ✓ Python Numbers

- ✓ Python Strings
- ✓ Accessing Values in Strings
- ✓ String Special Operators
- ✓ String Formatting Operator
- ✓ Triple Quotes
- ✓ Built-in String Operations
- ✓ Python Lists
- ✓ Accessing Values in Lists
- ✓ Updating Lists
- ✓ Delete List Elements
- ✓ Basic List Operations
- ✓ Indexing, Slicing, and Matrixes
- ✓ Built-in List Functions & Methods
- ✓ Python Tuples
- ✓ Accessing Values in Tuples
- ✓ Updating Tuples
- ✓ Delete Tuple Elements
- ✓ Basic Tuples Operations
- ✓ Indexing, Slicing, and Matrixes
- ✓ No Enclosing Delimiters
- ✓ Built-in Tuple Functions
- ✓ Python Dictionary
- ✓ Accessing Values in Dictionary
- ✓ Updating Dictionary
- ✓ Delete Dictionary Elements
- ✓ Properties of Dictionary Keys
- ✓ Multidimensioanl Dictionary & LIST & SET & TUPLE
- ✓ LIST Comprehension
- ✓ Built-in Dictionary Functions & Methods

- **Loops and Conditional Statemments**
  - ✓ if statements
  - ✓ ..else statements
  - ✓ nested if statements, Ladder if else, Multiple If
  - ✓ while loop, while else
  - ✓ for loop, for else
  - ✓ nested loops
  - ✓ Loop Control Statements
  - ✓ break statement
  - ✓ continue statement
  - ✓ pass statement

- **Functions & Module**
  - ✓ Defining a Function
  - ✓ Syntax
  - ✓ Calling a Function
  - ✓ Pass by reference vs value
  - ✓ Function Arguments
  - ✓ Required arguments
  - ✓ Keyword arguments
  - ✓ Default arguments
  - ✓ Variable-length arguments
  - ✓ The return Statement
  - ✓ Scope of Variables

- ✓ Global vs. Local variables
- ✓ What is module, how to call function under module

• OOPs Concept in Depth

- ✓ Class and Object, Polymorphism, Encapsulation, Abstraction
- ✓ Documented String
- ✓ Access Specifier, Access Modifier(Instance, Static)
- ✓ Constructor or Init Method
- ✓ Inheritance
- ✓ Polymorphism
- ✓ Object Array

• Python Built-in Modules and Packages

- ✓ Framework vs Packages
- ✓ Why are modules used?
- ✓ Creating modules
- ✓ The import Statement
- ✓ The from...import Statement
- ✓ The from...import * Statement
- ✓ Locating Modules
- ✓ The PYTHONPATH Variable
- ✓ Namespaces and Scoping
- ✓ The dir( ) Function
- ✓ The globals() and locals() Functions
- ✓ The reload() Function
- ✓ Packages in Python

Designing:-

• Front end explanation

- ✓ What is HTML
- ✓ What is CSS, Internal, External and Inline
- ✓ What is JS, JS Events, JS DOM
- ✓ What is Jquery, Jquery Events and Selector
- ✓ What is Bootstrap, How to create Responsive Design
- ✓ Create Responsive Web Template

React Library

- ✓ Introduction to ReactJS
- ✓ Comparison of Different Version of React
- ✓ How to install React on machine
- ✓ React Project Structure
- ✓ React vs Angular
- ✓ React components
- ✓ What is Function Component and Class Component
- ✓ React Props & State
- ✓ REACT JSX
- ✓ React HOOKS
- ✓ React List and Keys
- ✓ React refs
- ✓ REACT CONSTRUCTOR

- ✓ Reacts Events
- ✓ React Internals
- ✓ Component inter communication

- ✓ Component composition
- ✓ Component styling
- ✓ Add styles to your components
- ✓ Forms in react, Template driven, reactive
- ✓ React Router and Single Page Applications
- ✓ More Redux and Client-Server Communication
- ✓ How to call REST API in React
- ✓ API using FETCH

API using AXIOX

Database MySQL

DJANGO Course Content

- **Introduction Session**
  - ✓ What is Django
  - ✓ DJANGO History, Django Architecture, Explain MVT
  - ✓ What is Static Website & Dynamic Website
  - ✓ DJANGO Version, Advance Features of Django
  - ✓ Why Django is Most Popular as compare to Flask

- **Django Installation and Software Tools**
  - ✓ Django Installation
  - ✓ Django CLI and Commands
  - ✓ What is Project vs APPS
  - ✓ Explain Project Directory
  - ✓ Explain settings.py and urls.py in depth
  - ✓ Create First App

- **Django Views and Template**
  - ✓ What is Views
  - ✓ What is Template
  - ✓ How to render template under views
  - ✓ Create Static Website using Django
  - ✓ Django Form Elements
  - ✓ What is Include and Extends in Django
  - ✓ Django Master Layout
  - ✓ HTML, CSS and JS Overview and apply in Django Web Pages
  - ✓ HTML Template to Django Template Conversion
  - ✓ How to use JINJA Tag Under Template

- ✓ Pass data from Views.py to Template Page
- ✓ Create Form with POST and GET Method using Method View and Class View
- ✓ Method View & Class View Difference

- **Django Database Connectivity**

  - ✓ What is Models, Command to migrate model class with Sqlite
  - ✓ Explain ORM, Write Django Query under CLI
  - ✓ Explain Django Insert, Update, Delete and Select Query
  - ✓ What is Sqlite
  - ✓ CRUD Operation using Sqlite
  - ✓ Create Login and Registration form using Sqlite

- **Django Database Connectivity using Generic class**

  - ✓ What is FormView
  - ✓ What is LISTVIEW & CreateView
  - ✓ What is UpdateView & DeleteView
  - ✓ Create Complete RESULT GRID using LISTVIEW, CREATEVIEW, UPDATEVIEW & DELETEVIEW
  - ✓ What is Relationship
  - ✓ How to Create Primary Key & Foreign Key
  - ✓ How to add columns after creating Model Class
  - ✓ How to manage Join Operation in Django

- **Django SuperAdmin**

  - ✓ What is Super Admin
  - ✓ How to activate Super admin & Manage Login Operation
  - ✓ How to add model class Under Super Admin
  - ✓ User Management Operation using Super Admin Dashboard
  - ✓ Customize Superadmin Template

- **Django State management**

  - ✓ What is Session in Django
  - ✓ What is Cookie in Django
  - ✓ What is Difference between Session & Cookies
  - ✓ Manage Session using Django user authentication

- **Create LIVE Project**

  - ✓ Explain Project SRS
  - ✓ CREATE DATABASE TABLES With ER-DIAGRAM
  - ✓ CREATE GUEST LAYOUT
  - ✓ CREATE USER DASHBOARD
  - ✓ MANAGE ADMIN DASHBOARD
  - ✓ Responsive Page Layout
  - ✓ Discuss SDLC