



Full stack Python Course Details

Address : Shreeram society, lane no.3 khandagle complex, kharadi bypass pune-411014

1. Introduction to Full Stack Development

- **What is Full Stack Development?**
 - Overview of Full Stack Development
 - Front-end vs. Back-end vs. Full Stack
- **Tools and Technologies Overview**
 - HTML, CSS, JavaScript
 - Python, Django, Flask
 - Databases: SQLite, PostgreSQL, MongoDB
 - Version Control: Git

2. Front-end Development

HTML and CSS

- **HTML Basics**
 - HTML Syntax and Structure
 - Elements, Attributes, and Tags
 - Forms and Input Handling
- **CSS Basics**
 - CSS Syntax and Selectors
 - Styling Text, Layouts, and Boxes
 - Flexbox and Grid Layouts

JavaScript

- **JavaScript Basics**
 - Variables, Data Types, and Operators
 - Control Structures: Conditional Statements and Loops
 - Functions and Scope
- **DOM Manipulation**
 - Selecting and Manipulating DOM Elements
 - Event Handling
- **ES6+ Features**
 - Arrow Functions
 - Promises and Async/Await
 - Modules

Front-end Frameworks and Libraries

- **Introduction to React**
 - Components and Props
 - State and Lifecycle
 - React Router for Single Page Applications
- **Introduction to Vue.js (Optional)**
 - Vue Instance
 - Data Binding and Events
 - Components

3. Back-end Development with Python

Python Basics (If Not Already Covered)

- **Python Syntax and Semantics**
 - Variables, Data Types, and Operators
 - Control Structures: Conditional Statements and Loops
 - Functions and Modules

Web Frameworks

- **Flask**
 - Setting Up Flask
 - Routing and View Functions
 - Templates with Jinja2
 - Forms and Validation
 - Working with Databases (SQLite)
 - Blueprints for Modular Applications
- **Django**
 - Setting Up Django
 - Django Project Structure
 - Models, Views, and Templates (MVT)
 - Forms and Model Forms
 - User Authentication and Authorization
 - Admin Interface
 - REST Framework for APIs

4. Databases

- **SQL Databases**
 - Introduction to SQL
 - CRUD Operations
 - Database Design and Normalization
 - Using PostgreSQL with Django
- **NoSQL Databases**
 - Introduction to NoSQL

- Working with MongoDB

5. Version Control with Git

- **Git Basics**

- Installing and Configuring Git
- Basic Commands: init, clone, add, commit, push, pull
- Branching and Merging

- **GitHub**

- Creating and Managing Repositories
- Pull Requests and Code Reviews
- Collaborating on Projects

6. Full Stack Integration

- **Connecting Front-end with Back-end**

- AJAX and Fetch API
- RESTful APIs with Flask and Django
- Handling CORS

- **Authentication**

- Implementing JWT (JSON Web Tokens)
- OAuth Authentication

7. Deployment

- **Deploying Flask Applications**

- Deploying on Heroku
- Deploying on AWS

- **Deploying Django Applications**

- Deploying on Heroku
- Deploying on AWS

8. Advanced Topics

- **Testing**

- Unit Testing with pytest
- Integration Testing

- **Web Sockets**

- Introduction to Web Sockets
- Real-time Communication with Flask-SocketIO and Django Channels

- **Task Queues**

- Background Tasks with Celery
- Scheduling Tasks

9. Project Work

- **Building Real-World Projects**

- Planning and Designing the Project

- Implementing Features
- Testing and Debugging
- Deployment and Maintenance