



**SPYPRO SECURITY SOLUTIONS Pvt. Ltd.,**

C Y B E R S E C U R I T Y

## **3-Day Workshop on Python Full Stack Development**

### **Day 1: Python & Frontend Fundamentals**

#### **Session 1: Python Programming Basics**

- Introduction to Python & its real-world applications
- Python syntax, variables, data types
- Control structures (if-else, loops)
- Functions and modules

#### **Hands-On Activity**

- Writing basic Python programs
- Building simple logic-based programs

#### **Session 2: Frontend Development Basics**

- Introduction to Web Development
- HTML structure & elements
- CSS styling & layouts
- JavaScript basics & DOM manipulation

#### **Hands-On Activity**

- Creating a simple responsive webpage
- Adding interactivity using JavaScript

## **Day 2: Backend Development with Python**

### **Session 1: Backend Framework (Django / Flask)**

- Introduction to Backend & MVC/MVT architecture
- Setting up Django/Flask environment
- URL routing & views
- Templates and static files

#### **Hands-On Activity**

- Creating a basic backend project
- Building dynamic pages using templates

### **Session 2: Database & Authentication**

- Introduction to Databases (MySQL / SQLite)
- CRUD operations
- User authentication & authorization
- Forms handling and validations

#### **Hands-On Activity**

- Connecting backend with database
- Implementing user login & registration

## **Day 3: Advanced Concepts & Project**

### **Session 1: APIs & Deployment**

- Introduction to REST APIs
- Creating APIs using Django Rest Framework / Flask
- Consuming APIs in frontend
- Basics of deployment (Local / Cloud)

#### **Hands-On Activity**

- Building and testing APIs
- Connecting frontend with backend APIs

### **Session 2: Real-World Application & Project Building**

- Understanding real-world project structure
- Best practices in Full Stack development
- Debugging & error handling

## Project

**Task:** Build a Python Full Stack Web Application

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** Python (Django / Flask)
- **Database:** MySQL / SQLite

### Tools Used:

- Python
- Django / Flask
- HTML, CSS, JavaScript
- Database
- Git & GitHub

### Closing Session:

- Presenting projects
- Q&A and feedback