



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