

15-Day Python, MongoDB, and Django Course

Day 1-2: Introduction to Python

- Overview of Python, its applications, and features
- Setting up the environment and writing the first Python script
- Variables, data types, and operators
- Conditional statements and loops

Day 3-4: Python Functions & Data Structures

- Functions (arguments, return values, scope)
- Lists, Tuples, Dictionaries, and Sets
- Comprehensions (List, Dictionary, Set)

Day 5-6: Introduction to MongoDB

- Overview of NoSQL and MongoDB
- Setting up MongoDB and connecting to it using Python (PyMongo)
- Basic CRUD operations (Create, Read, Update, Delete) with MongoDB
- Querying data and using filters in MongoDB

Day 7-9: Introduction to Django

- Setting up Django environment
- Overview of the MVC architecture (Model-View-Controller)
- Creating Django apps and projects
- Introduction to Django Models and Views

Day 10-12: Django and MongoDB Integration

- Connecting Django with MongoDB using `django` or `mongoengine`
- Performing CRUD operations using MongoDB in Django
- Querying MongoDB data in Django views
- Handling dynamic models and schemas

Day 13-14: Advanced Django Features

- Django Forms and User Input handling
- URL routing and templates in Django
- User authentication and authorization
- Building a simple web application

Day 15: Project & Review

- Final project using Python, MongoDB, and Django
- Code debugging and optimization
- Final review and Q&A session

30-Day Python, MongoDB, and Django Course

Week 1: Introduction to Python

- Overview of Python and its setup
- Variables, data types, and operators
- Conditional statements and loops
- Functions, arguments, and scope

Week 2: Python Data Structures

- Lists, Tuples, Dictionaries, Sets
- Comprehensions (List, Dictionary, Set)
- File handling (Reading/Writing files)
- Error and exception handling

Week 3: Introduction to MongoDB and Django Basics

- Introduction to MongoDB, its features, and setup
- Basic CRUD operations in MongoDB
- Django setup, views, templates, and models
- URL routing and user input handling

Week 4: Django-MongoDB Integration and Advanced Features

- Integrating MongoDB with Django using `django` or `mongoengine`
- Implementing dynamic models and querying MongoDB
- User authentication and session management
- Django Admin panel and deployment basics

Day 29-30: Project & Review

- Building a web application using Python, MongoDB, and Django
- Debugging and optimization
- Final review and project presentation

