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 `djongo` 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 `djongo` 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

45-Day Python, MongoDB, and Django Course

Week 1-2: Introduction to Python Basics

- Python syntax, variables, data types
- Functions, arguments, and return values
- Control flow (conditionals, loops)
- Data structures (Lists, Tuples, Dictionaries, Sets)
- File handling, Error handling

Week 3: Introduction to MongoDB

- MongoDB installation, CRUD operations
- Querying data in MongoDB
- Indexing and aggregation in MongoDB

Week 4: Introduction to Django

- Django architecture and MVC model
- Models, Views, and Templates in Django
- URL routing and static files in Django

Week 5: Django and MongoDB Integration

- Setting up MongoDB with Django
- CRUD operations in Django with MongoDB
- Querying MongoDB and handling dynamic schemas
- Admin interface and forms

Week 6: Advanced Django Topics

- User authentication and permissions
- Django middleware and custom views
- Working with Django REST Framework
- Deployment and optimization

Day 41-45: Project & Final Review

- Develop a project using Python, MongoDB, and Django
- Implementing features like user authentication, CRUD operations
- Debugging and testing the application
- Final presentation and Q&A session