

Django & Backend Learning Plan (12 Weeks)

Month 1: Basics & First Project

Week 1 - Introduction to Django & Backend

- ☐ Install Django and create a new project
- ☐ Understand Django project structure
- ☐ Set up URLs and Views
- ☐ Work with Templates and Static Files
- ☐ Build a simple homepage

Week 2 - Databases in Django

- ☐ Understand Django Models and ORM
- ☐ Create tables and database (PostgreSQL or SQLite)
- ☐ Perform CRUD operations
- ☐ Use Django Admin Panel

Week 3 - User Management & Data Handling

- ☐ Implement Authentication (login, logout, registration)
- ☐ Understand Sessions & Cookies
- ☐ Work with Forms and Model Forms
- ☐ Send emails in Django

Week 4 - Building the First REST API

- ☐ Introduction to Django Rest Framework (DRF)
- ☐ Create a simple API using DRF
- ☐ Understand Serializers and ViewSets
- ☐ Implement JWT Authentication
- ☐ Test API using Postman

Month 2: Intermediate Level & DevOps

Week 5 - Optimizing Django Performance

- ☐ Optimize database queries (Query Optimization)
- ☐ Implement Caching with Redis
- ☐ Understand and use Middlewares

Week 6 - Deploying the Project

- ☐ Learn Linux Basics and Server Management
- ☐ Deploy the project on DigitalOcean or Heroku
- ☐ Use Gunicorn and Nginx for deployment
- ☐ Work with Logs & Debugging

Week 7 - Security in Django

- ☐ Protect against SQL Injection, XSS, CSRF attacks
- ☐ Improve Authorization & Permissions
- ☐ Secure API Endpoints

Week 8 - Learning Docker & CI/CD

- ☐ Understand Docker and create a Dockerfile
- ☐ Work with Docker Compose
- ☐ Set up a CI/CD Pipeline for automatic deployment

Month 3: Advanced Topics & Microservices

Week 9 - WebSockets & Celery

- ☐ Learn WebSockets using Django Channels
- ☐ Implement Real-time Notifications
- ☐ Work with Celery for background tasks

Week 10 - Introduction to Microservices

- ☐ Understand Microservices vs Monolithic Architecture
- ☐ Create a separate service using FastAPI or Flask
- ☐ Use RabbitMQ/Kafka for inter-service communication

Week 11 - Building a Full-Scale Project

- ☐ Develop a complete system (Backend + API + Auth + DB)
- ☐ Deploy the project using Docker
- ☐ Improve performance with Load Balancing

Week 12 - Review & Skill Enhancement

- ☐ Review all concepts and apply them
- ☐ Contribute to open-source projects
- ☐ Prepare for Backend Developer interviews

By the end of this plan, you will be fully prepared to work as a Backend Developer!