# Django Roadmap: Beginner to Advanced

### 1. Basics & Setup

- What is Django & MVT Architecture
- Install Django & Set Up Project
- Create and Register Apps
- Project structure explained
- Run dev server

#### 2. Models & Database

- Define Models (models.py)
- Create Migrations & Apply Them
- Use Django ORM (queries like .all(), .filter(), etc.)
- Register Models in Admin
- Create Superuser
- Admin customizations

### 3. Views & Templates

- Function-Based Views
- Create Templates (.html files)
- Template Language: {% for %}, {{ variable }}
- Template Inheritance (base.html)
- Static files: CSS, JS, Images

### 4. URL Routing

- urls.py in app & project
- Named URL patterns
- Dynamic URLs with path parameters

### 5. Forms (User Input)

- Built-in Form and ModelForm

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- Handling POST requests
- Form validation
- Display errors in templates
- CSRF protection

# 6. Authentication & User Management

- User login/logout
- Signup form
- Password hashing
- @login\_required decorator
- Custom User Model (if needed)

## 7. Class-Based Views (CBVs)

- ListView, DetailView
- CreateView, UpdateView, DeleteView
- Override context, querysets
- Use with templates & URLs

## 8. Django Admin (Advanced)

- Customize list display
- Add filters & search fields
- Inline models (One-to-Many, Many-to-Many)

## 9. Django REST Framework (DRF)

- Install and setup
- Serializers
- API Views & ViewSets
- Routers
- JWT Authentication

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# 10. Advanced Topics

- Custom Middleware
- Signals (e.g. send email after saving)
- Caching
- File uploads (images, PDFs)
- Sending emails

# 11. Deployment

- Use environment variables
- Collect static files
- Use Gunicorn + Nginx or deploy on:
- Heroku, Railway, PythonAnywhere, Render

# 12. Real Projects Ideas

- Blog App
- Todo List
- E-Commerce Website
- Portfolio Site with Admin Panel
- Job Board or Social Media Clone