

An intermediate Django interview typically covers key concepts beyond the basics, focusing on real-world scenarios and in-depth knowledge of Django's features. Here's a summary of the key topics that could be covered:

1. Django Models & ORM:

- Explain Django's ORM and how to use models to interact with the database.
- Discuss how relationships like `OneToOne`, `ForeignKey`, and `ManyToMany` work.
- Explain model methods, custom queriesets, and using raw SQL with Django ORM.
- Discuss migrations, including how to handle database schema changes in production.

2. Views & URL Routing:

- Difference between function-based views (FBVs) and class-based views (CBVs).
- Understanding generic views like `ListView`, `DetailView`, `CreateView`, etc.
- Explain how Django's URL dispatcher works and how to use URL patterns effectively.

3. Forms & Validation:

- Handling forms in Django, including `ModelForm`, form validation, and custom form fields.
- Discuss handling form submissions, CSRF protection, and AJAX form handling.

4. Authentication & Authorization:

- Explain Django's built-in authentication system, user login, logout, and password management.
- Working with `User` models, permissions, groups, and custom user models.
- How to implement role-based access control and manage permissions.

5. Middlewares:

- Discuss the role of middleware in Django's request/response cycle.
- Examples of when to use custom middleware and how to write it.

6. Django REST Framework (DRF):

- Basics of Django REST framework, including serializers, viewsets, routers, and how to create APIs.
- Authentication in DRF (token-based, session-based, OAuth).
- How to handle pagination, filtering, and versioning in APIs.

7. Static & Media Files:

- How Django handles static files and media files in development and production.
- Use of `django-storages` and other tools for managing media files in cloud services like AWS S3.

8. Deployment & Performance:

- Discuss deployment strategies (e.g., using WSGI, ASGI, Gunicorn, Nginx).
- Common performance optimization techniques, including caching (Memcached, Redis), database query optimization, and static files handling (via CDN).
- How to set up Django for handling heavy traffic and scaling.

9. Testing:

- Explain unit testing in Django, using `TestCase` and `Client`.
- Discuss the importance of writing tests for models, views, and APIs.
- How to use Django's built-in testing tools and coverage reports.

10. **Security:**

- Common Django security features (CSRF protection, SQL injection prevention, XSS prevention).
- How to secure sensitive data, manage sessions, and implement secure authentication.

11. **Advanced Topics:**

- Signals and how to use them for decoupling components.
- Asynchronous views in Django (ASGI) and when to use them.
- Working with Celery for task queues and background jobs.

These topics will help gauge the candidate's proficiency in Django and their ability to handle real-world scenarios in a professional setting.