

Django Syllabus

1: Introduction to Django

1. **Overview of Django**
 - History and Features
 - Advantages of Using Django
2. **Setting Up the Environment**
 - Installing Python and pip
 - Creating a virtual environment
 - Installing Django
3. **Creating a Django Project**
 - Starting a new project
 - Project structure and files
 - Running the development server

2: Django Basics

1. **Creating Django Apps**
 - Creating a new app
 - App structure and files
 - Registering apps in settings.py
2. **URL Routing**
 - Configuring URLs in urls.py
 - Including app URLs
3. **Views**
 - Function-based views
 - Class-based views
 - Rendering templates

3: Templates and Static Files

1. **Django Template Language (DTL)**
 - Creating and extending templates
 - Template tags and filters
 - Including static files (CSS, JavaScript)

2. Static Files and Media Files

- Configuring static files
- Serving media files during development

4: Models and Databases

1. Defining Models

- Creating models in models.py
- Model fields and options

2. Database Migrations

- Creating and applying migrations

3. Django ORM

- Querying the database
- Filtering and ordering results
- Creating, updating, and deleting records

5: Forms and User Input

1. Django Forms

- Creating forms with forms.py
- Handling form submissions
- Validating form data

2. Model Forms

- Creating forms from models
- Using built-in form fields and widgets

6: Understanding CSS and Bootstrap with forms

7: Account and Authentication

1. User Authentication

- Built-in authentication system
- Login and logout views

- User registration

8: Django Admin Interface

1. Setting Up Django Admin

- Enabling the admin site
- Registering models with the admin

2. Customizing the Admin Interface

- Custom admin views and actions

9: REST APIs with Django REST Framework

10: Introduction to Git and GitHub

11: Real-World Projects

1. Project 1: Blog Application

- Building a simple blog with CRUD functionality
- Adding user authentication

2. Project 2: E-commerce Website

- Creating a product catalog