

Program 16 – Django TODO App

AIM

To develop a TODO list application backend using Django, allowing users to add, view, and manage tasks with a clean and functional web interface.

DESCRIPTION

This experiment demonstrates how to build a server-rendered TODO application using Django. The app allows users to manage tasks—such as adding new tasks and viewing task lists—using Django’s powerful Model-View-Template (MVT) architecture. It showcases key Django concepts like models, views, templates, forms, and URL routing. This project is ideal for beginners to learn about Django’s ORM, template rendering, and basic backend development.

PROJECT STRUCTURE

django_todo_app/ | ├── todo_project/ # Project settings folder | ├── init.py | ├── settings.py # Project configuration | ├── urls.py # Root URL configuration | └── wsgi.py # WSGI entry point | ├── todo/ # Main app folder | ├── migrations/ | ├── templates/ | | ├── todo/ | | └── index.html # HTML template for the app | ├── init.py | ├── admin.py # Admin interface | ├── apps.py | ├── models.py # Task model | ├── views.py # Logic for handling requests | └── urls.py # URL routing for app | ├── db.sqlite3 # SQLite database | ├── manage.py # Django management script | └── README.md # Project documentation

INSTALLATION & SETUP PREREQUISITES

- Python 3.8+
- pip (Python package installer)
- VS Code or any code editor
- Basic knowledge of Django

STEPS TO RUN THE PROJECT

1.Create Project and App `django-admin startproject todo_project`

`cd todo_project`

`python manage.py startapp todo`

2.Define Model in `todo/models.py` from `django.db import models`

```
class Task(models.Model): title = models.CharField(max_length=200) completed = models.BooleanField(default=False)
```

```
def __str__(self):
    return self.title
```

3.Create and Apply Migrations `python manage.py makemigrations`

`python manage.py migrate`

4.Set Up Views, Templates, and URLs In `views.py`, write logic to render tasks. Create `templates/todo/index.html`.

Map URLs in `todo/urls.py` and include in `todo_project/urls.py`.

5.Run the Project python manage.py runserver

6.Visit in Browser Open your browser and go to: <http://127.0.0.1:8000/>

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