**Task Management System**

**Project Overview**

The **Simple Task Management System** is a web-based application designed to simplify task management. It allows users to add, view, update, and delete tasks seamlessly. This project is built to showcase my skills in Frontend and Backend development.

**Features**

* **Add Tasks**: Create tasks with a name, description, and due date.
* **View Tasks**: Display a list of all tasks for easy tracking.
* **Update Task Status**: Mark tasks as completed or pending.
* **Delete Tasks**: Remove tasks that are no longer needed.

**Technologies Used**

* **Frontend**: HTML, CSS, JavaScript
* **Backend**: Django
* **Database**: MySQL

I implemented this project using **two methods**:

**1. Django ORM(mentioned in urls)**

Django’s built-in ORM was used for creating models and interacting with the database. ORM ensured smooth and secure data handling through the following:

* Task creation
* Querying task records
* Updating and deleting tasks

**2. Fetch API(mentioned in urls)**

The frontend interacts with the backend using the Fetch API for CRUD operations. This allows seamless communication between the frontend and the backend, ensuring real-time updates.

**API Endpoints (For Backend)**

* **GET /tasks**: Retrieve all tasks. http://127.0.0.1:8000/api/task/
* **POST /tasks**: Create a new task. http://127.0.0.1:8000/api/task/add/
* **PUT /tasks/{id}**: Update a task. http://127.0.0.1:8000/api/task/update/(id)/
* **DELETE /tasks/{id}**: Delete a task. http://127.0.0.1:8000/api/task/delete/(id)/

Installation and Setup:

Ensure you have the following installed:

* Python (for Django projects)
* MySQL

Steps to Run Locally

1.Clone the repository:

git clone [repository link]

2.Set up the virtual environment :

pip install virtualenv

python3 -m venv venv\_name

source venv/bin/activate (Linux/Mac) or venv\Scripts\activate (Windows)

3. Navigate to the project directory

cd task

4. Install the required Python packages

pip install -r requirements.txt

5. Set up the database:

* Create a MySQL database and configure it in your settings file.(in xampp set db name=taskdata)
* Upgrade version of MariaDB version 10.6.20

DATABASES = {

    'default': {

        'ENGINE': 'django.db.backends.mysql',

        'NAME': 'taskdata',

         'USER':'root',

        'PASSWORD':'',

        'HOST':'localhost',

        'PORT':'3306',

    }

}

* Run migrations:

python manage.py makemigrations

python manage.py migrate

6.1. sqlite database:

In settings sqlite db is commented (if needed use sqlite instead of mysql)

7. Start the backend server:

python manage.py runserver

(use port 8000)

Contribution:

This project was completed individually as part of an evaluation task.

**Contact**

If you have any questions or feedback, feel free to contact me:

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