**Instructions to run the task management API locally:**

**1. Clone the Repository**

git clone <github-repo-url>

cd <project-directory>

**2. Set Up a Virtual Environment**

# Create a virtual environment

python -m venv venv

# Activate the virtual environment

venv\Scripts\activate

**3. Install Dependencies**

-Install the necessary Python packages listed in the 'requirements.txt' file.

pip install -r requirements.txt

**4. Set Up the Database**

-The docker-compose.yml file is configured to set up a PostgreSQL database.

# Start the PostgreSQL database using Docker

docker-compose up -d

**5. Run Database Migrations**

-Apply the database migrations to set up the tables.

alembic upgrade head

**6. Run the Application**

-Start the FastAPI server.

uvicorn main:app --reload

The application will be running at http://localhost:8000.

**7. Access the API Documentation**

-FastAPI automatically generates API documentation. You can access it by visiting:

Swagger UI: http://localhost:8000/docs

ReDoc: <http://localhost:8000/redoc>

**8. Testing the Endpoints**

-Use a tool like Postman or the built-in Swagger UI to test the API endpoints:

Register a User: POST /api/register

Login: POST /api/login

Create a Task: POST /api/tasks

Get Tasks: GET /api/tasks

Update a Task: PUT /api/tasks/{taskId}

Delete a Task: DELETE /api/tasks/{taskId}

**9. Stopping the Application**

-When done, we can stop the application and the database container:

# Stop the FastAPI server (Ctrl+C in the terminal)

# Stop and remove Docker containers

docker-compose down

**10. Deactivating the Virtual Environment**

-Deactivate the virtual environment when done working.