Task Management System - Documentation

# 1. API Documentation (Swagger/OpenAPI)

Swagger is integrated and available at http://localhost:5296/swagger.

**Endpoints:**

|  |  |  |
| --- | --- | --- |
| **Endpoint** | **Method** | **Description** |
| /api/Tasks | GET | Get all tasks |
| /api/Tasks/{id} | GET | Get task by ID |
| /api/Tasks | POST | Create a new task |
| /api/Tasks/{id} | PUT | Update a task by ID |
| /api/Tasks/{id} | DELETE | Delete a task by ID |

# 2. Setup Instructions

**Backend:**

cd backend-folder

dotnet build

dotnet run  
dotnet ef database update

**Frontend:**cd frontend-folder  
npm install

ng build  
ng serve

# 3. Database Schema

**Entity: Tasks**

|  |  |  |
| --- | --- | --- |
| **Column** | **Type** | **Constraints** |
| Id | int | Primary Key |
| Title | string | Required |
| DueDate | DateTime | Required |
| Priority | string | Required (Low, Medium, High) |
| Status | string | Required (Pending, InProgress, Completed) |

# 4. Migration Guide

* **To create or update the database:**dotnet ef migrations add InitialCreate  
  dotnet ef database update
* **To re-run from scratch:**  
  dotnet ef database drop  
  dotnet ef database update

# 5. Environment Configuration

**Backend (appsettings.json):**  
"ConnectionStrings": {  
 "DefaultConnection": "Server=localhost;Database=TaskManagerDb;Trusted\_Connection=True;TrustServerCertificate=True"  
}

**Frontend (environment.ts):**  
export const environment = {  
 production: false,  
 apiUrl: 'http://localhost:5296/api/Tasks'  
};

# 6. API Endpoints Documentation

**Create a Task (POST /api/Tasks):**  
{  
 "title": "Buy groceries",  
 "dueDate": "2024-04-15T00:00:00",  
 "priority": "Medium",  
 "status": "Pending"  
}

**Get All Tasks (GET /api/Tasks):** with query params like title, status, sortBy, desc, page, pageSize

**Get Task by ID (GET /api/Tasks/{id})**

**Update Task (PUT /api/Tasks/{id}):**  
{  
 "title": "Buy milk",  
 "dueDate": "2024-04-16T00:00:00",  
 "priority": "High",  
 "status": "InProgress"  
}

**Delete Task (DELETE /api/Tasks/{id})**