Techprimelab Project

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Project Overview

Project Name: Techprimelab

Description:
This project is a web application designed to manage project details efficiently. It includes functionalities such as user authentication, project management, UI validations and interactive dashboards. The frontend is developed using Angular 17, and the backend is developed by ASP.Net Core Web API. The data is stored in a SQL Server database.

Technologies Used

- **Backend:** ASP.Net Core Web API

- **Frontend:** Angular 17

- **Database:** SQL Server

- **Charting Library:** Chart.js

Project Setup - Back End

- Project Template   – ASP.Net Core Web API
- Framework   – .Net 6.0(LTS)
- Install NuGet Packages   – Microsoft.EntityFrameworkCore.Tools v6.0.0
                              Microsoft.EntityFrameworkCore v6.0.0
                              Microsoft.EntityFrameworkCore.SqlServer v6.0.0
                              Microsoft.AspNetCore.Authentication.JwtBearer v6.0.0

API Endpoints

User Authentication
- **POST**   /api/User/Login   - Authenticate a user and return a JWT token.
- **POST**   /api/User/Logout   - Logs out a user by removing the token.

Projects Management
- **POST**   /api/Project/AddProject   – To Add a new project to the system.
- **GET**   /api/Project/GetAllProjects   – Retrieves a list of all projects.
- **GET**   /api/Project/GetProjectById/{id}   – Retrieves the details of a specific project by its id.
- **PUT**   /api/Project/UpdateProjectStatus/{id}   – Updates the status of a specific project.
- **GET**   /api/Project/Category   – Retrieves a list of all categories.
- **GET**   /api/Project/Department   – Retrieves a list of all departments.
- **GET**   /api/Project/Division   – Retrieves a list of all divisions.
- **GET**   /api/Project/Location   – Retrieves a list of all location.
- **GET**   /api/Project/Priority   – Retrieves a list of all priority.
- **GET**   /api/Project/Reason   – Retrieves a list of all reason.
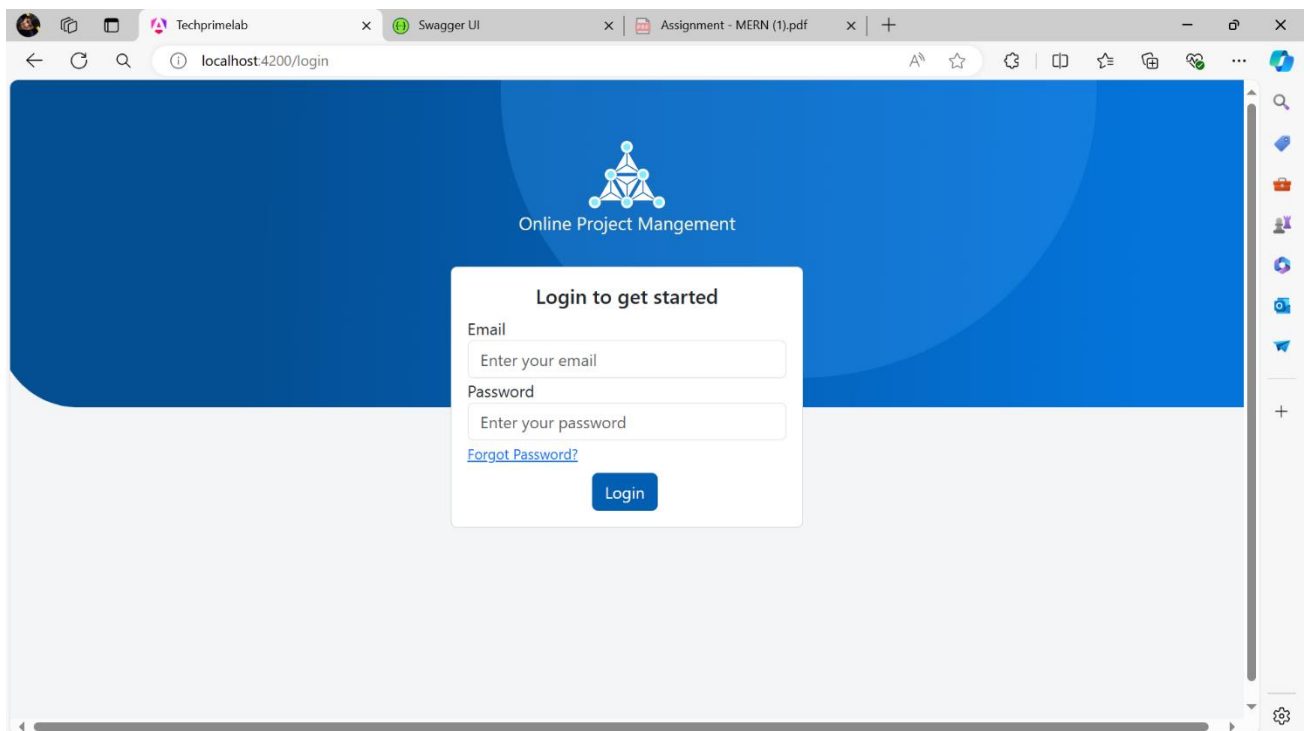- **GET**   /api/Project/Types   – Retrieves a list of all types.

Dashboard

- **GET** /api/ Dashboard/ TotalProjects – Retrieves the total count of projects.
- **GET** /api/Dashboard/CountByStatusName/{statusName} – Retrieves the count of projects by a specific status name.
- **GET** /api/ Dashboard/DelayedProjectsCount – Retrieves the count of Closure delayed projects
- **GET** /api/ Dashboard/ChartData – Retrieves data for department-wise success rates for visualization.
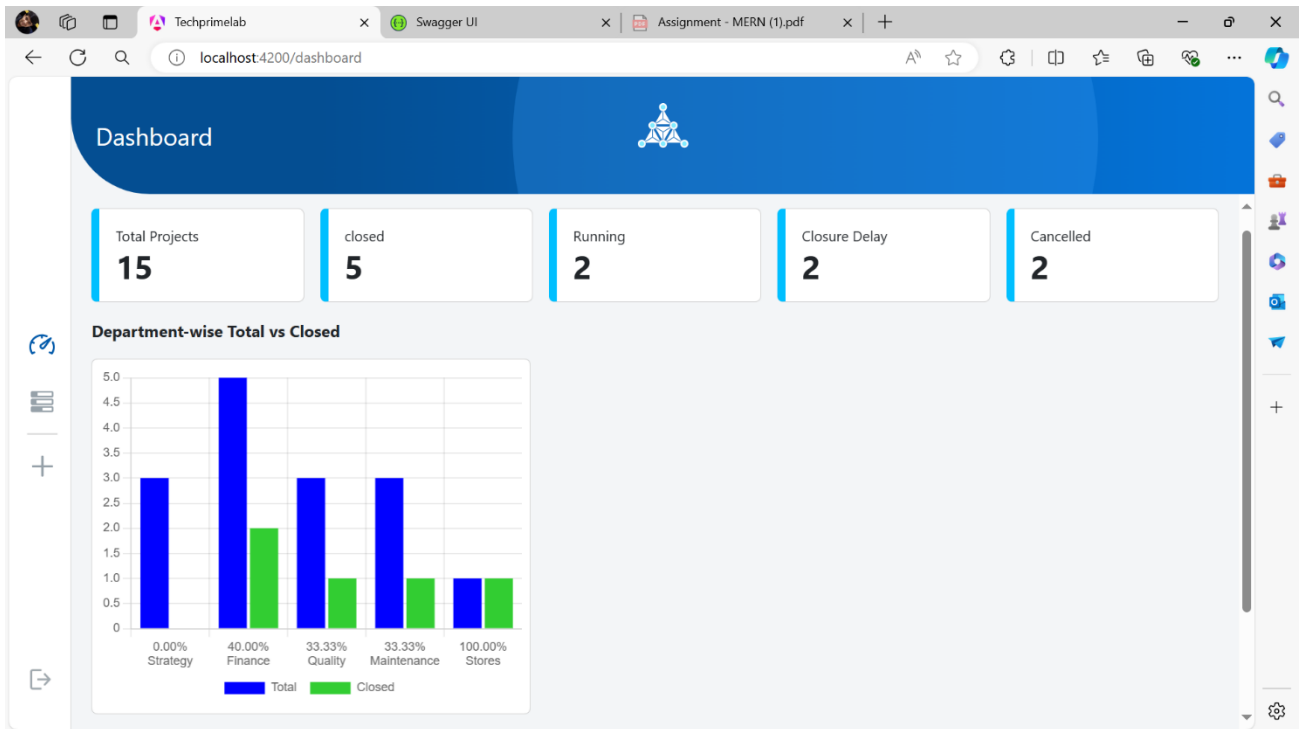
Frontend Components

Login page:

- UI validation
- Authenticates user and return JWT token.

Dashboard

- Displaying counters for different project statuses like Total Projects, Closed Projects, Running Projects, Closure Delay Projects, Cancelled Projects.
- Chart shows department wise success percentage of projects.

Insert project page

- Add new Project.
- Dropdown for all other values
- Use can select date for Project Start date and End date.
- UI validations to all fields
- Validations on date that end date cannot be smaller than start date
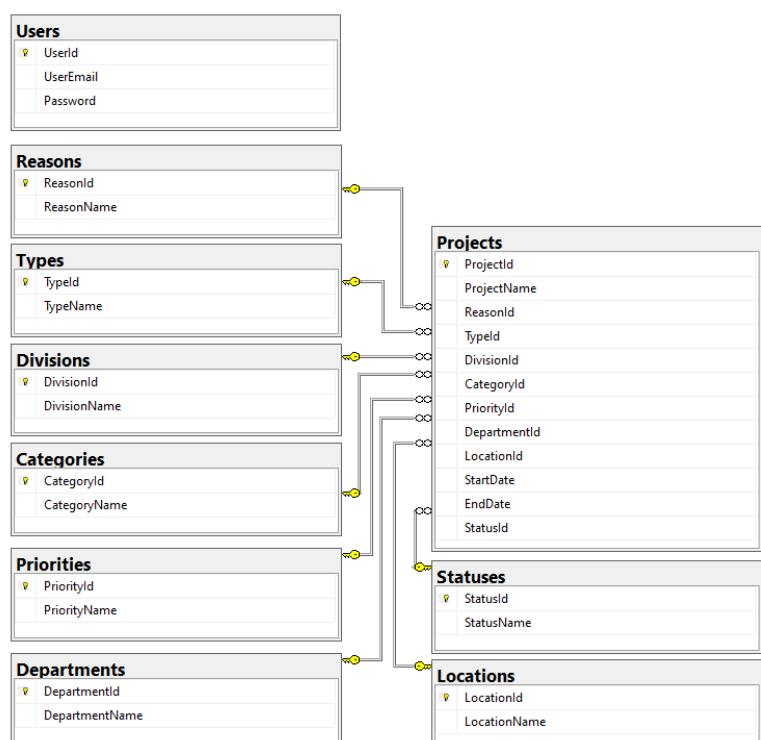
Project listing page

- On clicking the buttons status will be updated.
- User can search for text in any column.
- User can sort entire project list.
- Pagination is applied on project list.

Database - SQL Server

Database Name : TechprimelabDb

Database Diagrams :

References

- Angular Documentation
- ASP.NET Core Documentation :
- Chart.js Documentation
- Bootstrap Documentation
- SQL Server Documentation
- Current working project at ThinkQuotient Pvt. Ltd : Drive Calender Project.
- Previous Projects : E-Commerce Website, Employee Management.
- Implementation of JWT Auth : YouTube Tutorial and Medium
- Errors and Exceptions: https://stackoverflow.com/