

Project Collaboration Tool

Project Title: Project Collaboration Tool

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1. Problem Definition and Objectives

Brief Overview

The Project Collaboration Tool is a task management system that allows users to create tasks, assign them to team members, and track progress with real-time updates.

Project Goals and Objectives

- Provide an intuitive UI for users to create and manage tasks.
- Assign tasks to specific users with role-based access.
- Track the status of tasks (To Do, In Progress, Completed, Failed).
- Store and retrieve data efficiently using MS SQL Server.

2. Frontend & Backend Architecture

Chosen Technology Stack

- Frontend: React (with Redux for state management)
- Backend: ASP.NET Core Web API
- Database: Microsoft SQL Server

3. Component Breakdown & API Design

Frontend Components

- **State Management:** Managed using Redux.
- **Routing:** React Router for navigation.
- **UI Components:** Login, Signup, Dashboard, Create task, Manage Task, Update Status, Change Password, Forgot Password, Task History, Task Feedback/comments.

API Design & Endpoints

1. Authentication Purpose

- /api/auth/signup – POST: For registration of user and Project Managers
- /api/auth/login – POST: Login
- /api/auth/change-password – POST: change password using old password
- /api/auth/forgot-password – POST: forgot password using email otp verification
- /api/auth/toggle-approval – POST: make user active or deactivate
- /api/auth/project-managers – GET: Fetch all project managers

2. Tasks Management Purpose

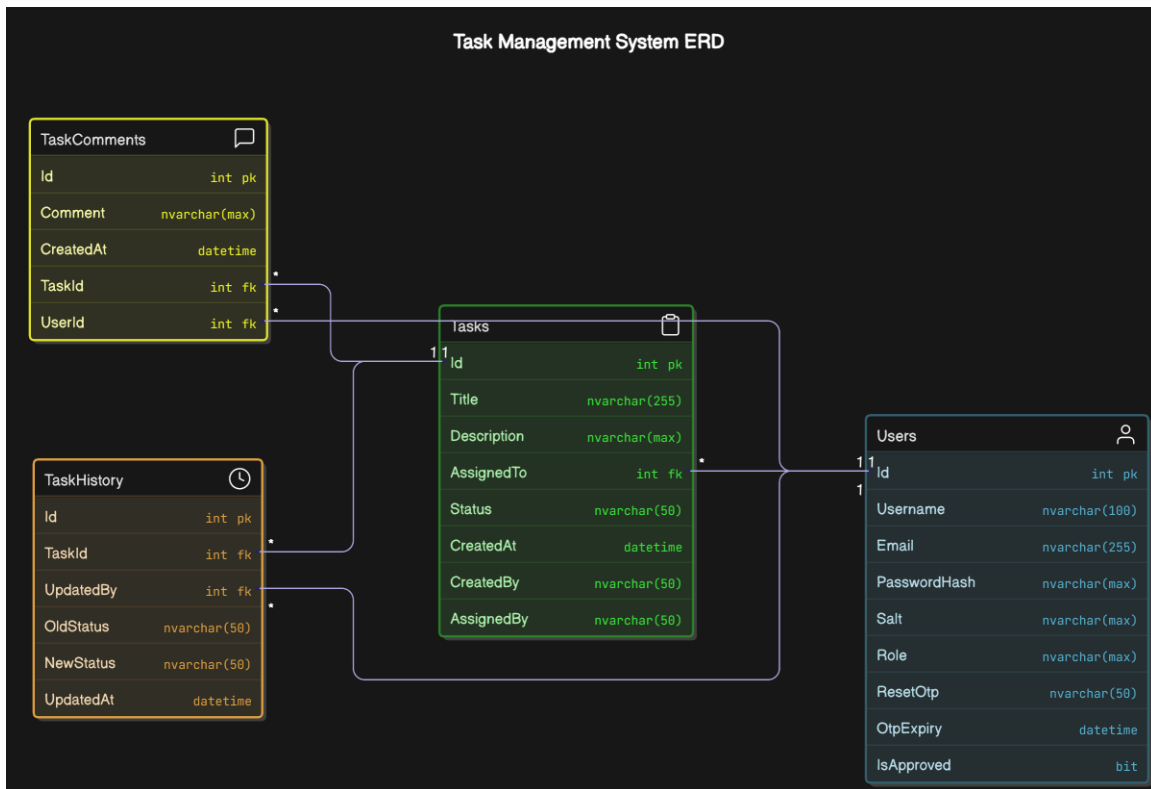
- /api/tasks/all- GET: Fetch all tasks
- /api/tasks/create - POST: Create a new task
- /api/tasks/update-status - PUT: Update task status
- /api/tasks/my-tasks – GET: specific user assigned tasks
- /api/tasks/delete-all – DELETE: Remove all tasks in bulk
- /api/tasks/delete/{task-id} - DELETE: Remove a task
- /api/tasks/addComment – POST: add comment to a task
- /api/tasks/tasks/comments/{taskId} – GET: Fetch comments of a task
- /api/tasks/history/{taskId} – GET: Fetch history of a task and status

Authentication Mechanism

- Token-based authentication using JWT (JSON Web Token).
- Role-based access control (Admin, Project Manager, User).

4. Database Design

Below is detailed Diagram and database design is given for project collaboration tool –



5. Project Directory Structure

/FullStackApp

- /client (React Frontend)
- /server (ASP.NET Core API)
- /database
- README.md

6. Instructions/steps to run the project

1. Database Setup

- Find the Database schema named setup.sql in database folder.
- open this file in SSMS and execute.

2. Backend Setup

- Find the backend file named server and solution file of server means server.sln
- Open Visual Studio 2022 and click on open solution and open the server.sln file
- Go to server/appsetting.json and find Connection string looks like below –

```
"DefaultConnection": "Server=<YOUR_SERVER_NAME>;Database=FullStackAppDB;Trusted_Connection=True;TrustServerCertificate=True;"
```

- Enter your server name on the space of <YOUR_SERVER_NAME>, and then dotnet build, dotnet run.

3. Frontend Setup

- After running the server open client folder in visual studio code.
- Then type **npm install** to install all used libraries/modules
- after installation type **npm start** to start the frontend of project.

Note – Only Roles (User & Project Manager) is open for registration, for Admin either request from API and Role must be Admin or use below login id passwords to login.

For Admin –

Username – ajay

Email – ajaypandey91700@gmail.com

Password – a

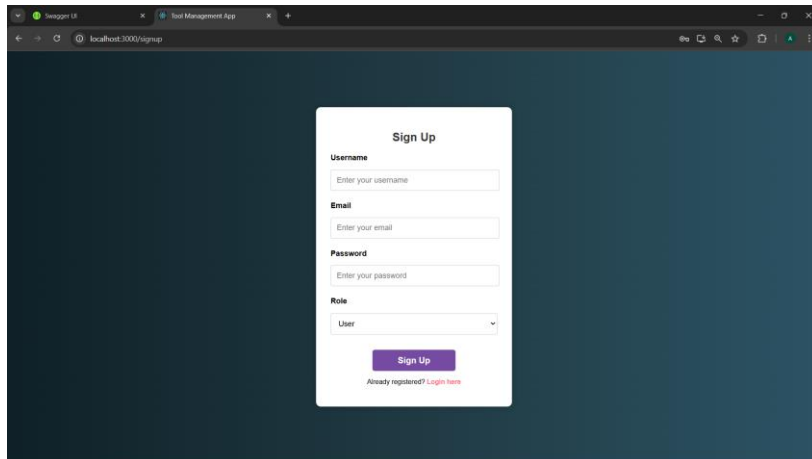
For project manager you can signup directly by selecting **Role**.

7. Github link of publish project

Github Repository Link - <https://github.com/panditajay73/FullStackApp>

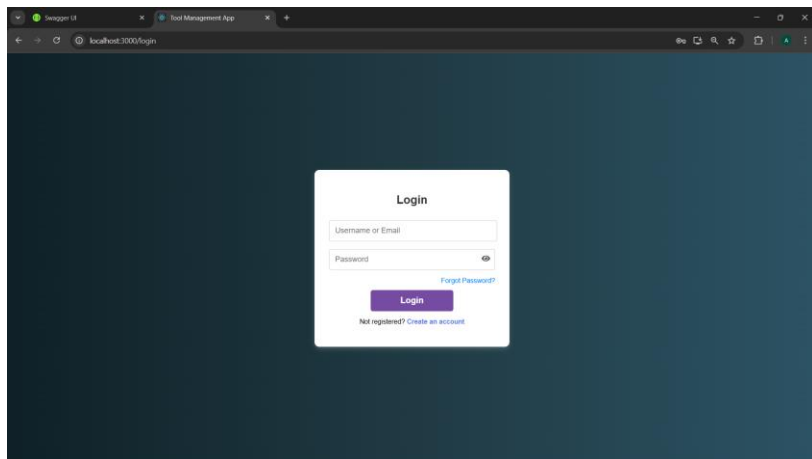
8. Preview of Projects

1. Signup Page



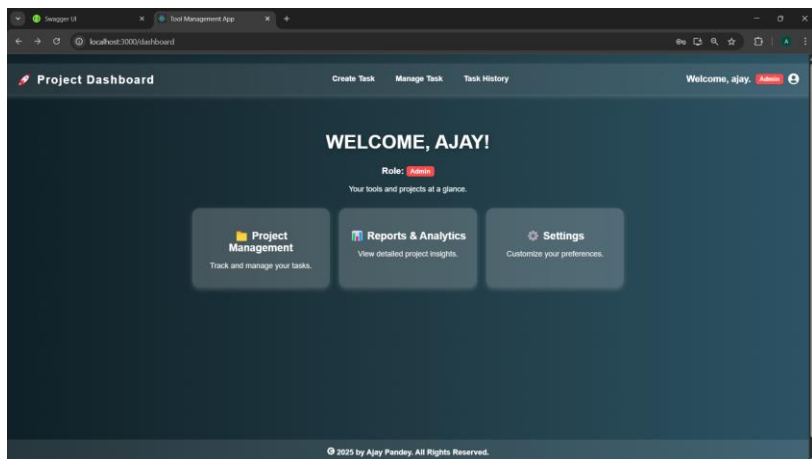
A screenshot of a web browser showing the 'Signup' page of a 'Task Management App'. The browser's address bar shows 'localhost:3000/signup'. The page has a dark blue background. In the center, there is a white card with the title 'Sign Up'. Below the title, there are four input fields: 'Username' (placeholder: 'Enter your username'), 'Email' (placeholder: 'Enter your email'), 'Password' (placeholder: 'Enter your password'), and 'Role' (a dropdown menu with 'User' selected). Below these fields is a purple 'Sign Up' button. At the bottom of the card, there is a link: 'Already registered? [Login here](#)'.

2. Login Page



A screenshot of a web browser showing the 'Login' page of a 'Task Management App'. The browser's address bar shows 'localhost:3000/login'. The page has a dark blue background. In the center, there is a white card with the title 'Login'. Below the title, there are two input fields: 'Username or Email' and 'Password' (with an eye icon for toggling visibility). Below these fields is a purple 'Login' button. Above the 'Login' button is a link: 'Forgot Password?'. Below the button is a link: 'Not registered? [Create an account](#)'.

3. Dashboard



A screenshot of a web browser showing the 'Dashboard' page of a 'Task Management App'. The browser's address bar shows 'localhost:3000/dashboard'. The page has a dark blue background. At the top, there is a header with 'Project Dashboard' on the left and 'Welcome, ajay.' on the right. Below the header, there are three tabs: 'Create Task', 'Manage Task', and 'Task History'. The main content area has a large 'WELCOME, AJAY!' greeting, followed by 'Role: Admin' and 'Your tools and projects at a glance.' Below this, there are three cards: 'Project Management' (Track and manage your tasks.), 'Reports & Analytics' (View detailed project insights.), and 'Settings' (Customize your preferences.). At the bottom, there is a footer: '© 2025 by Ajay Pandey. All Rights Reserved.'

4. Change -Password

The screenshot shows the 'Change Password' form in the Project Dashboard. The form has three input fields: 'Current Password', 'New Password', and 'Confirm Password'. Each field has a toggle icon on the right. Below the fields is a purple 'Update Password' button. The dashboard header includes 'Project Dashboard', navigation links 'Create Task', 'Manage Task', and 'Task History', and a user greeting 'Welcome, ajoy.' with a profile icon. The footer states '© 2025 by Ajay Pandey. All Rights Reserved.'

5. Create Task (Admin, Project Manager only)

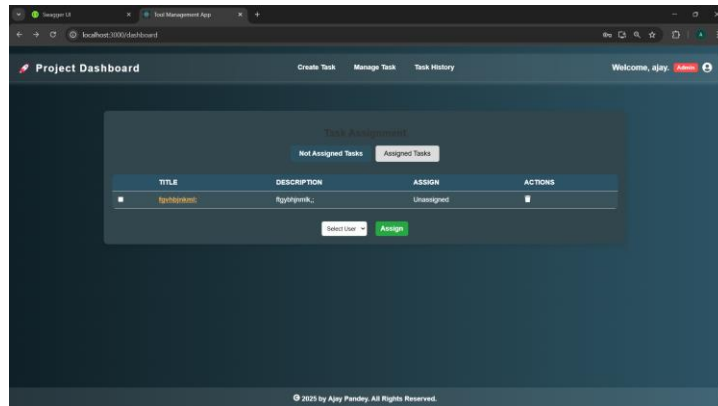
The screenshot shows the 'Create Task' form in the Project Dashboard. The form has two input fields: 'Title' and 'Description'. Below the fields is a green 'Create Task' button. The dashboard header includes 'Project Dashboard', navigation links 'Create Task', 'Manage Task', and 'Task History', and a user greeting 'Welcome, ajoy.' with a profile icon. The footer states '© 2025 by Ajay Pandey. All Rights Reserved.'

6. Update Task Status

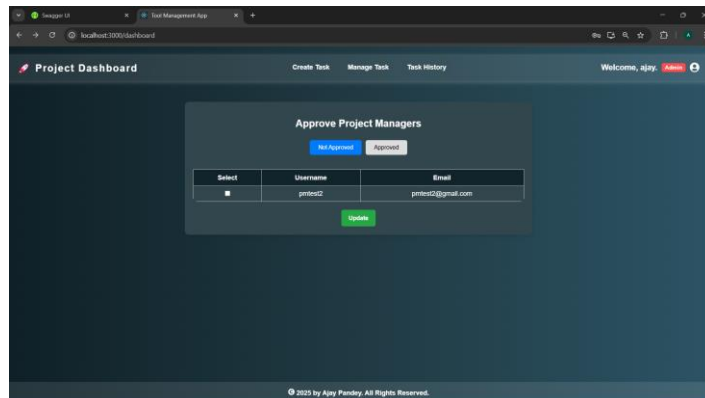
The screenshot shows the 'Update Task Status' table in the Project Dashboard. The table has columns: TITLE, DESCRIPTION, CREATED AT, CREATED BY, ASSIGNED BY, ASSIGNED TO, and STATUS. Below the table is a 'Select Status' dropdown and an 'Update' button. The dashboard header includes 'Project Dashboard', navigation links 'Create Task', 'Manage Task', and 'Task History', and a user greeting 'Welcome, ajoy.' with a profile icon. The footer states '© 2025 by Ajay Pandey. All Rights Reserved.'

TITLE	DESCRIPTION	CREATED AT	CREATED BY	ASSIGNED BY	ASSIGNED TO	STATUS
x 3456789	video	3/17/2025, 9:30:21 AM	ajayj	string	babu	In Progress
yolo	yolo	3/17/2025, 10:23:30 AM	string	ajayj	shani	To-DO
figydrpnmk	figydrpnmk	3/18/2025, 5:44:21 AM	ajayj	N/A	N/A	To-Do
Ekadum latest	New one desc	3/18/2025, 8:38:57 PM	prateek	ajayj	babu	Completed

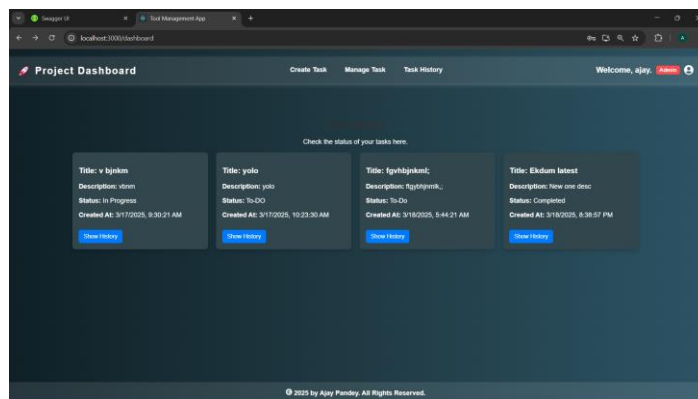
7. Assign Task (Admin, Project Manager only)

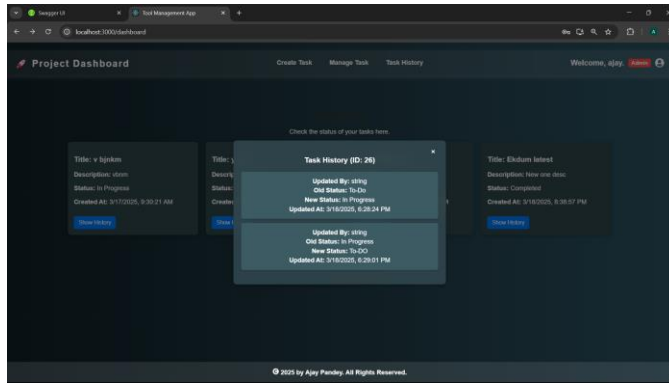


8. Approve Registration of Project Managers (Admin only)



9. Task History





10. Task Feedback/Comments

