



TASKMANAGEMENTSYSTEM (SPA)

Marwa bani fadil / Batool juma / Lara Amer



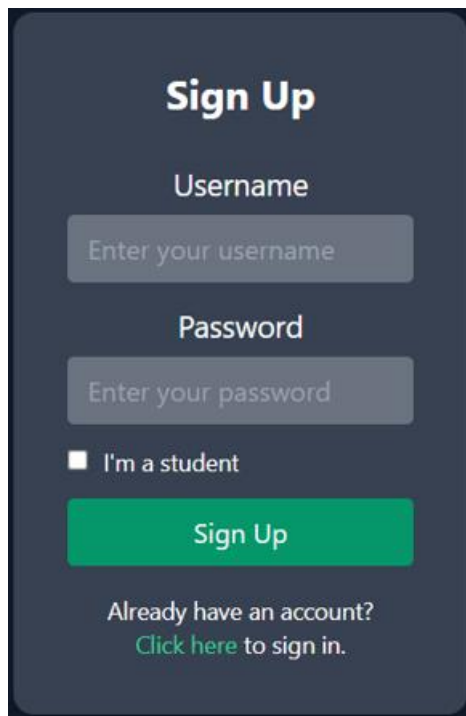
Introduction

This project is a web-based Task Management System designed to help users organize, track, and manage tasks efficiently. It aims to improve productivity and collaboration among students and administrators. The system will be developed as a Single Page Application (SPA) and implemented in three main phases: front-end development with fake data, UI refactoring using React and Tailwind CSS, and full integration with a Node.js backend and database.

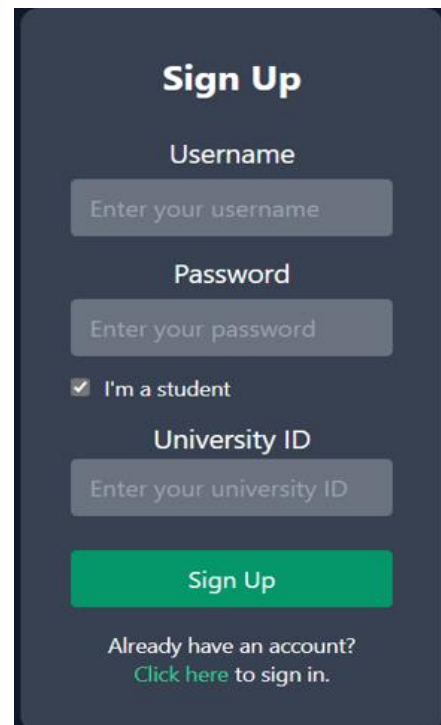
Features

Signup

The application allows new users to create an account by signing up. During registration, users provide basic information to access the system. If the user is a student, they will also be asked to enter their university ID for identification and task assignment.



A dark-themed sign-up form with the title "Sign Up" in white. It contains two input fields: "Username" with placeholder text "Enter your username" and "Password" with placeholder text "Enter your password". Below these is a checkbox labeled "I'm a student". At the bottom is a green "Sign Up" button and a link "Click here to sign in." in green text.



A dark-themed sign-up form with the title "Sign Up" in white. It contains three input fields: "Username" with placeholder text "Enter your username", "Password" with placeholder text "Enter your password", and "University ID" with placeholder text "Enter your university ID". The "I'm a student" checkbox is checked. At the bottom is a green "Sign Up" button and a link "Click here to sign in." in green text.

Login

Registered users can log in to the system using their credentials. The login page includes an option to **stay signed in** for future convenience. After logging in, users are redirected to their dashboard based on their role (student or administrator).

Sign In

Username

Enter your username

Password

Enter your password

☐ Remember Me

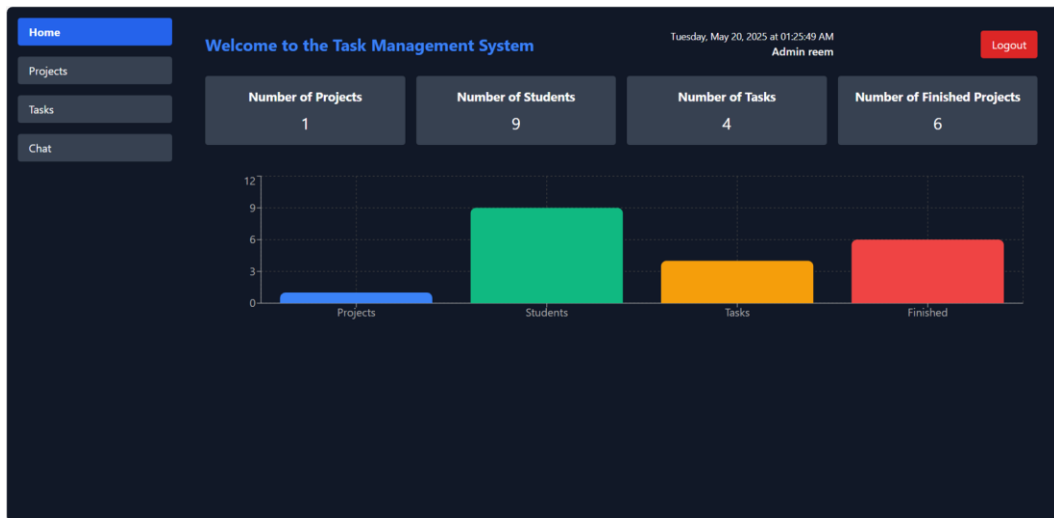
Sign In

Don't have an account?
[Click here](#) to sign up.

Home

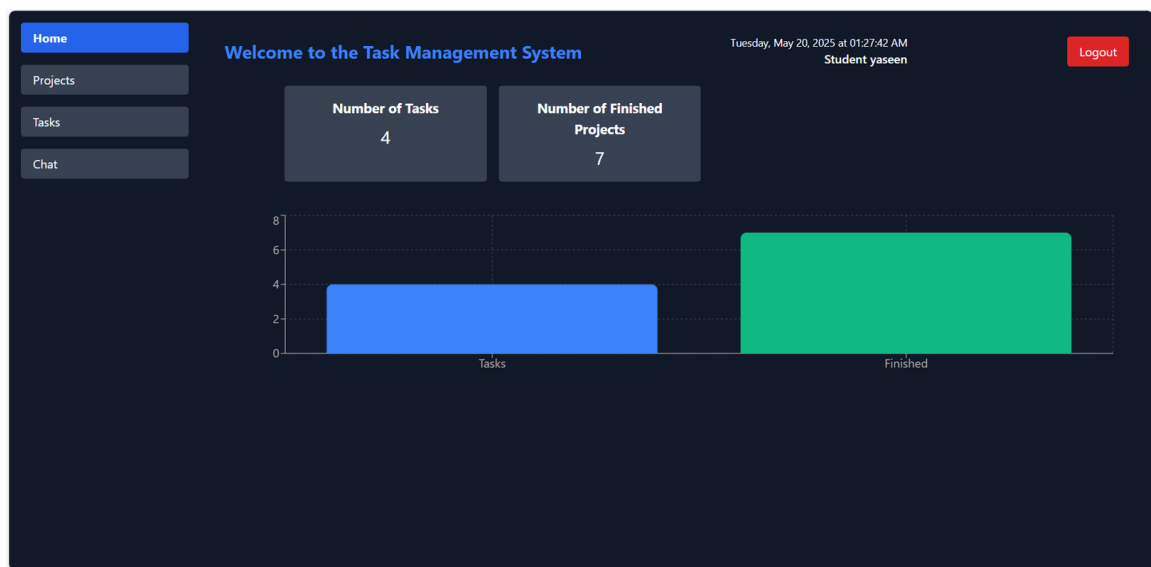
The admin homepage displays an overview of the system, including:

- Total number of projects, students, tasks, and finished projects.
- A bar chart visualizing these statistics.
- Navigation sidebar (Home, Projects, Tasks, Chat).
- Logout button and admin name shown at the top.



The student homepage shows a simplified view with:

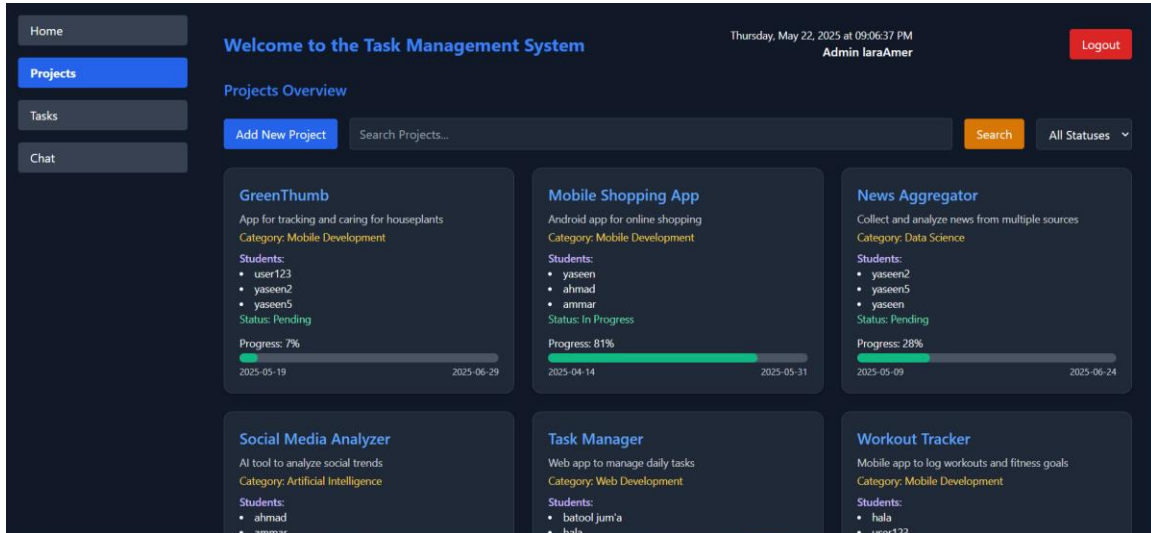
- Number of assigned tasks and finished projects.
- A bar chart summarizing these two statistics.
- Navigation sidebar (Home, Projects, Tasks, Chat).
- Logout button and student name at the top.



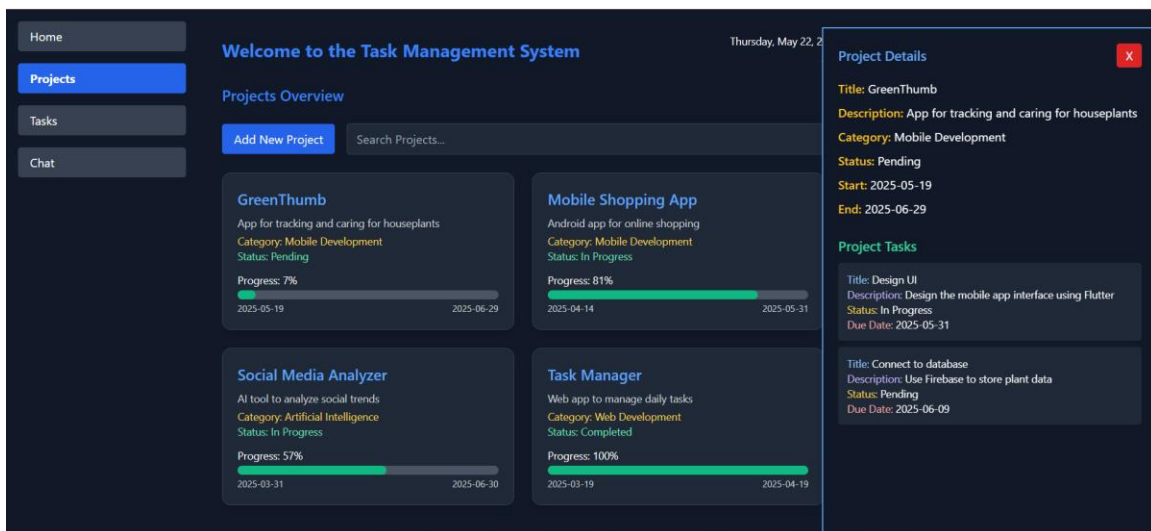
Projects

For Admin :

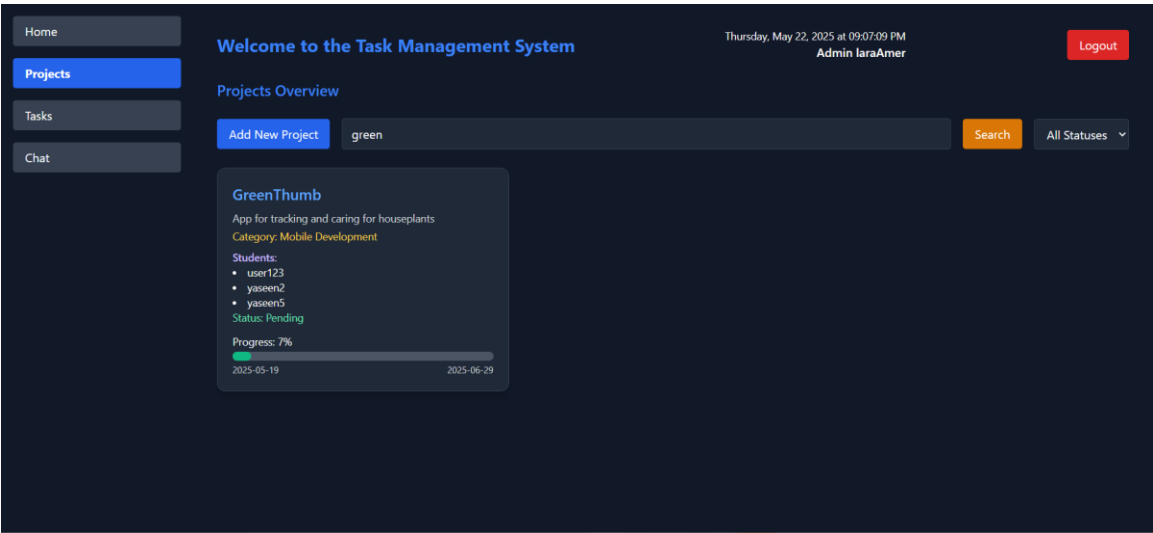
This page displays the projects associated with the currently logged-in admin.



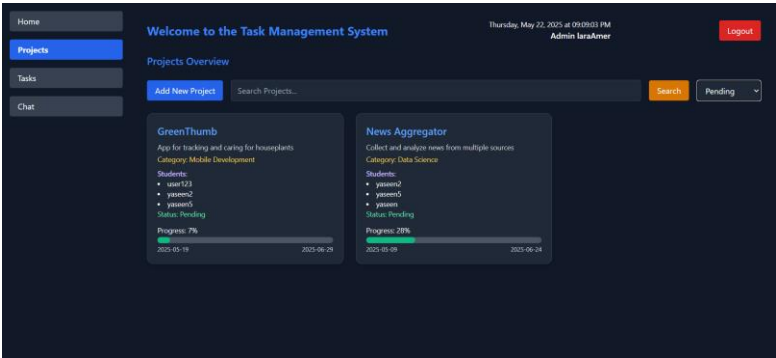
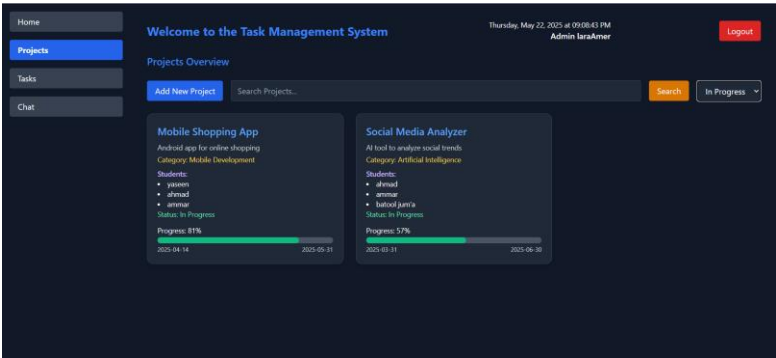
When clicking on a project, it displays the project details and the tasks associated with it.



This is the result of searching for a project either by its title or its description.



There is also a search functionality based on the project status, such as Pending, In Progress, and so on.



Another feature available to the admin is the ability to add a new project.

Project Title:
TaskNest

Project Description:
task management system

Students List:
ahmad
ammar
batool jum'a
hala
user123
yaseen2

Project Category:
Web Development

Start Date:
05/23/2025

End Date:
05/30/2025

Project Status:
In Progress

Add Project

Home Add New Project Search Projects... Search Pending

Projects

Tasks

Chat

GreenThumb
App for tracking and caring for houseplants
Category: Mobile Development
Students: user123, yaseen2, yaseen5
Status: Pending
Progress: 7%
2025-05-19 2025-06-29

Mobile Shopping App
Android app for online shopping
Category: Mobile Development
Students: yaseen, ahmad, ammar
Status: In Progress
Progress: 81%
2025-04-14 2025-05-31

News Aggregator
Collect and analyze news from multiple sources
Category: Data Science
Students: yaseen2, yaseen5, yaseen
Status: Pending
Progress: 28%
2025-05-09 2025-06-24

Social Media Analyzer
AI tool to analyze social trends
Category: Artificial Intelligence
Students: ahmad, ammar, batool jum'a
Status: In Progress
Progress: 57%
2025-03-31 2025-06-30

Task Manager
Web app to manage daily tasks
Category: Web Development
Students: batool jum'a, hala, user123
Status: Completed
Progress: 100%
2025-03-19 2025-04-19

TaskNest
task management system
Category: Web Development
Students: ahmad, ammar, batool jum'a
Status: In Progress
Progress: 0%
2025-05-22 2025-05-29

For Student :

It displays all the projects the student is involved in.



Tasks

For Admin :

This page displays all the tasks from the different projects managed by the admin. Tasks can be sorted based on various criteria, including the due date.

Home Projects Tasks Chat

Welcome to the Task Management System

Tuesday, May 20, 2025 at 11:05:12 PM
Admin IaraAmer Logout

Sort By: Due Date

Delete Task by ID Create a New Task

ID	Project	Name	Description	Student	Status	Due Date	Actions
25	Mobile Shopping App	Create login page	Develop user login screen and validation	hala	completed	2025-04-29T21:00:00.000Z	
29	GreenThumb	Design Logo	Create an eco-friendly themed logo for the GreenThumb brand.	yaseen2	In Progress	2025-05-26T21:00:00.000Z	
26	Mobile Shopping App	Integrate payment gateway	Connect PayPal to the app for transactions	ammar	In Progress	2025-06-04T21:00:00.000Z	

The admin can also delete tasks based on their task ID.

The screenshot shows a web application interface with a sidebar on the left containing links for Home, Projects, Tasks (highlighted), and Chat. The main content area has a 'Welcome to th' header and a 'Sort By: Due Date' dropdown. A modal dialog is open in the center, titled 'localhost:3000 says', with the prompt 'Enter task ID to delete:'. The modal has an input field and 'OK' and 'Cancel' buttons. Below the modal, there is a table of tasks and two buttons: 'Delete Task by ID' and 'Create a New Task'.

ID	Project	Name	Description	Student	Status	Due Date	Actions
25	Mobile Shopping App	Create login page	Develop user login screen and validation	hala	completed	2025-04-29T21:00:00.000Z	
29	GreenThumb	Design Logo	Create an eco-friendly themed logo for the GreenThumb brand.	yaseen2	In Progress	2025-05-26T21:00:00.000Z	
26	Mobile Shopping App	Integrate payment gateway	Connect PayPal to the app for transactions	ammar	In Progress	2025-06-04T21:00:00.000Z	

The admin can also add new tasks.

The screenshot shows the same web application interface, but with the 'Create New Task' modal open. The modal has a close button (X) and contains the following fields: 'Project Title:' with a dropdown menu showing 'Select a project'; 'Task Name:' with a text input field; 'Description:' with a text input field; 'Assigned Student:' with a dropdown menu showing 'Select Student'; 'Status:' with a dropdown menu showing 'Select a status'; and 'Due Date:' with a date input field showing 'dd/mm/yyyy' and a calendar icon. At the bottom of the modal is a green 'Add Task' button. The background shows the same sidebar and task table as the previous screenshot.

Can also edit task details.

The screenshot shows the 'Edit Task' modal in a task management system. The modal is titled 'Edit Task' and has a close button (X). It contains the following fields and controls:

- Project Title:** A dropdown menu showing 'Mobile Shopping App'.
- Task Name:** A text input field containing 'Create login page'.
- Description:** A text area containing 'Develop user login screen and validation'.
- Assigned Student:** A dropdown menu showing 'hala'.
- Status:** A dropdown menu showing 'Pending'.
- Due Date:** A date input field showing '29/04/2025'.
- Save Changes:** A green button at the bottom.

On the right side of the modal, there is a table with the following columns: Status, Due Date, and Actions. The table contains three rows of data:

Status	Due Date	Actions
completed	2025-04-29T21:00:00.000Z	
In Progress	2025-05-26T21:00:00.000Z	
In Progress	2025-06-04T21:00:00.000Z	

At the top right of the modal, there is a 'Logout' button and a timestamp: 'May 20, 2025 at 11:08:06 PM Admin laraAmer'.

For Student :

This page displays the tasks that the student is involved in.

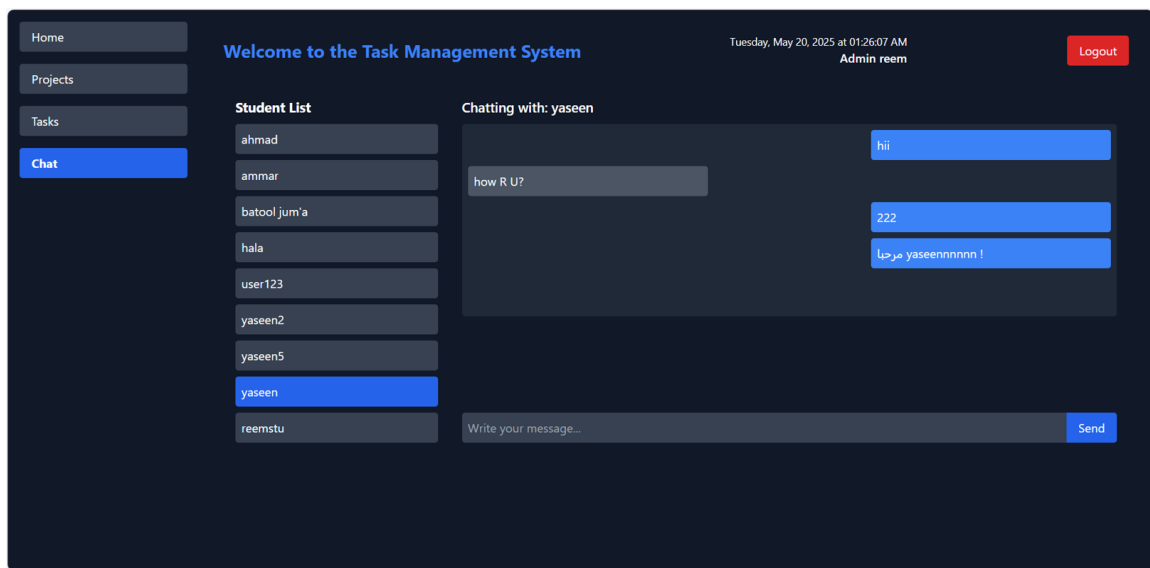
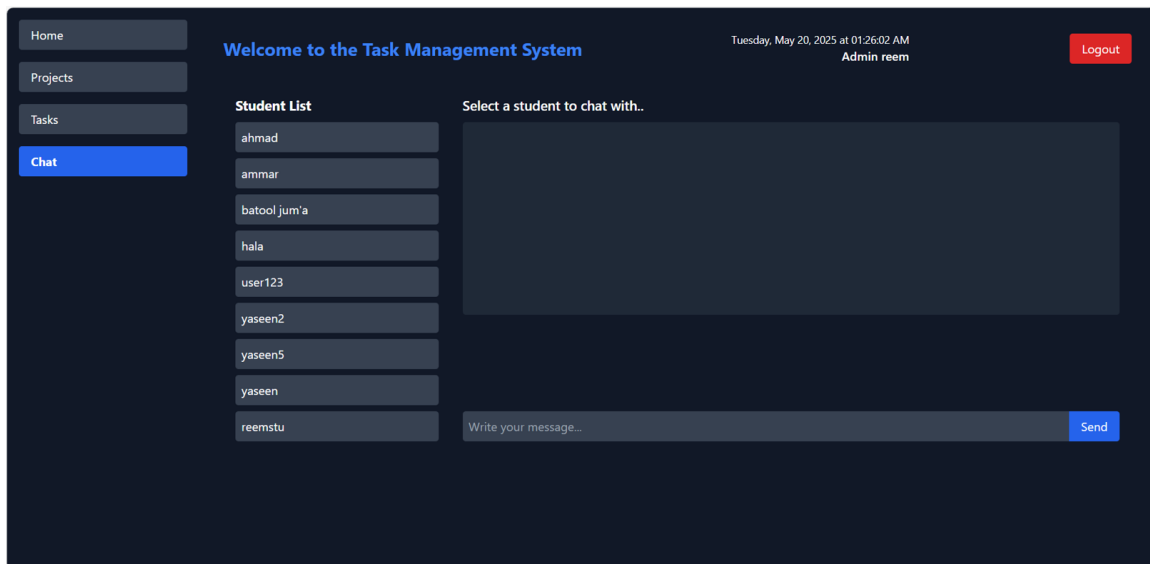
The screenshot shows the 'My Tasks' page in a task management system. The page has a sidebar with navigation links: Home, Projects, Tasks (highlighted), and Chat. The main content area is titled 'My Tasks' and displays a list of tasks. The first task is:

- Design Logo**
 - Project:** GreenThumb
 - Description:** Create an eco-friendly themed logo for the GreenThumb brand.
 - Status:** In Progress
 - Due Date:** 2025-05-26

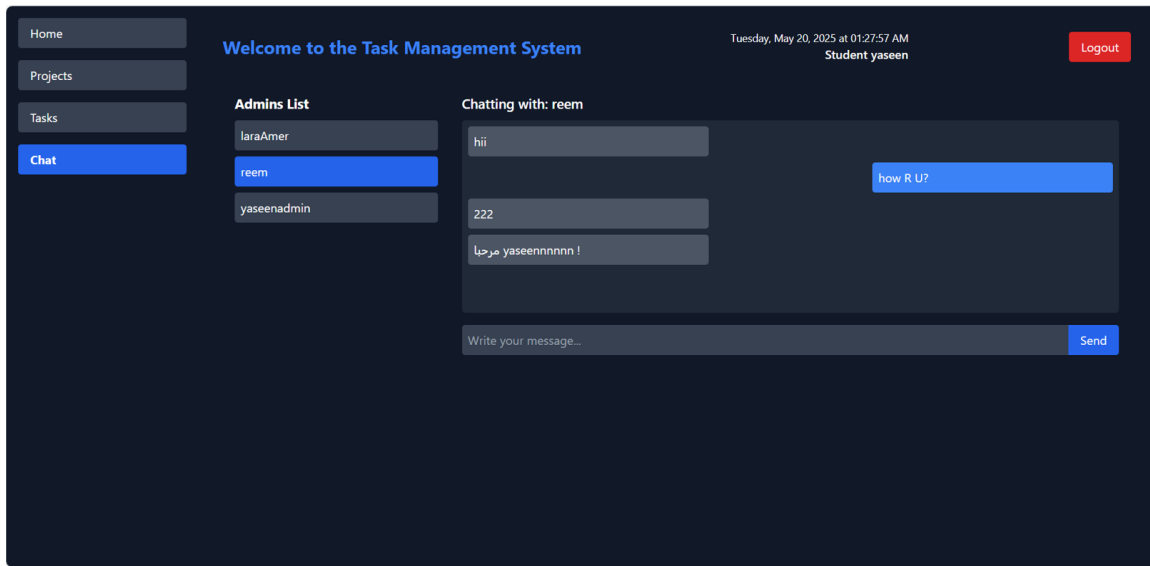
At the top right of the page, there is a 'Logout' button and a timestamp: 'Tuesday, May 20, 2025 at 11:22:40 PM Student yaseen2'.

Chat

The chat feature in this system is implemented using **GraphQL** with the help of the apollo-server-express library, connected to a **MySQL** database. It defines a **Message** type with fields for sender, receiver, and message content. Users can send messages using the **sendMessage** mutation, which stores the message in the chats table, and retrieve the conversation history with the **getMessages** query, which fetches all messages exchanged between two users. The system supports basic chat functionality by enabling message exchange and storing conversations in the database. This setup allows easy integration with a front-end and provides a structured way to manage user communication. **This chat is from the admin's side.**



And this chat is from the student's side.



Conclusion

The Task Management System provides an efficient and user-friendly solution for organizing and tracking tasks and projects. By supporting multiple user roles, real-time communication, and a responsive single-page interface, the system enhances collaboration between students and administrators. Through its three development phases, the project demonstrates the integration of modern web technologies and best practices in full-stack development. This system not only meets the functional requirements but also serves as a practical example of building scalable web applications.