**TaskTrackr: Student Productivity and Project Management Tool**

**System Overview**

TaskTrackr is a web-based project and productivity management tool designed specifically for students. It helps users organize academic responsibilities, track tasks efficiently, and collaborate seamlessly on group projects. By addressing common challenges such as missed deadlines, poor group coordination, and overwhelming workloads, TaskTrackr offers a structured yet flexible system that enhances productivity.

**Core Features**

TaskTrackr integrates intuitive interfaces, smart notifications, and seamless connectivity to ensure a smooth academic workflow. Its primary features include:

* **My Task:** Mark tasks as Pending, In Progress, Done, or Overdue. Reopen completed tasks if needed.
* **My Project:** Develop academic projects, manage milestones, and delegate tasks to team members.
* **My Groups:** Form study or project groups, invite members via email, and work together effortlessly.
* **Dashboard:** Track task completion rates, upcoming deadlines, and project status at a glance.
* **Customization & Usability**:
  + **Settings:** Enables users to set task reminders, personalize notifications, and switch to dark mode.
  + **Smart Notifications:** Ensures users stay informed of project updates, upcoming deadlines, and changes within team collaborations.
  + **User Bar:** Provides access to profile settings, account management, and security features.
  + **Real-Time Updates:** Ensures changes are synchronized across all team members' accounts instantly.

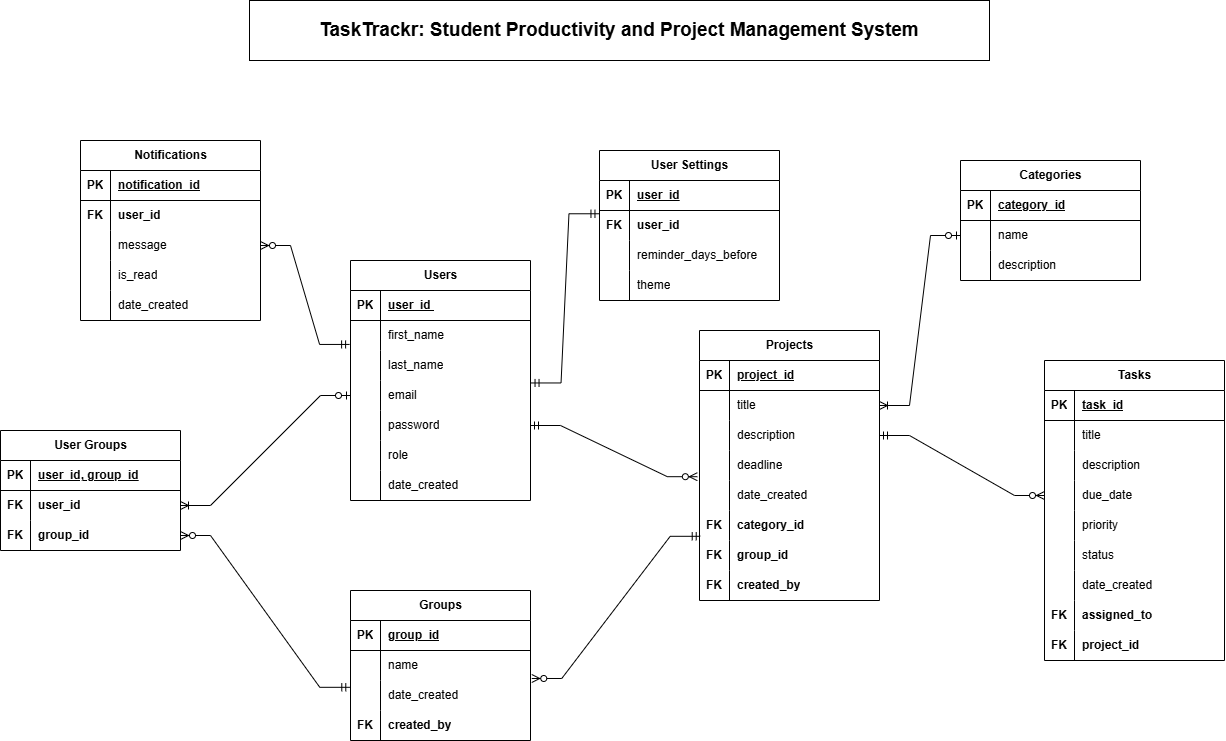
**How TaskTrackr Enhances Academic Productivity**

By offering integrated tools for organization, accountability, and teamwork, TaskTrackr fosters an environment where students can:

* Effectively manage workloads, reducing stress from overlapping assignments.
* Improve time management skills with deadline tracking and prioritization.
* Strengthen collaboration through streamlined communication and task delegation.
* Increase efficiency with real-time updates, ensuring smooth project execution.

With smart integrations and an intuitive interface, TaskTrackr transforms academic project management into a well-structured, adaptable, and efficient experience for students.

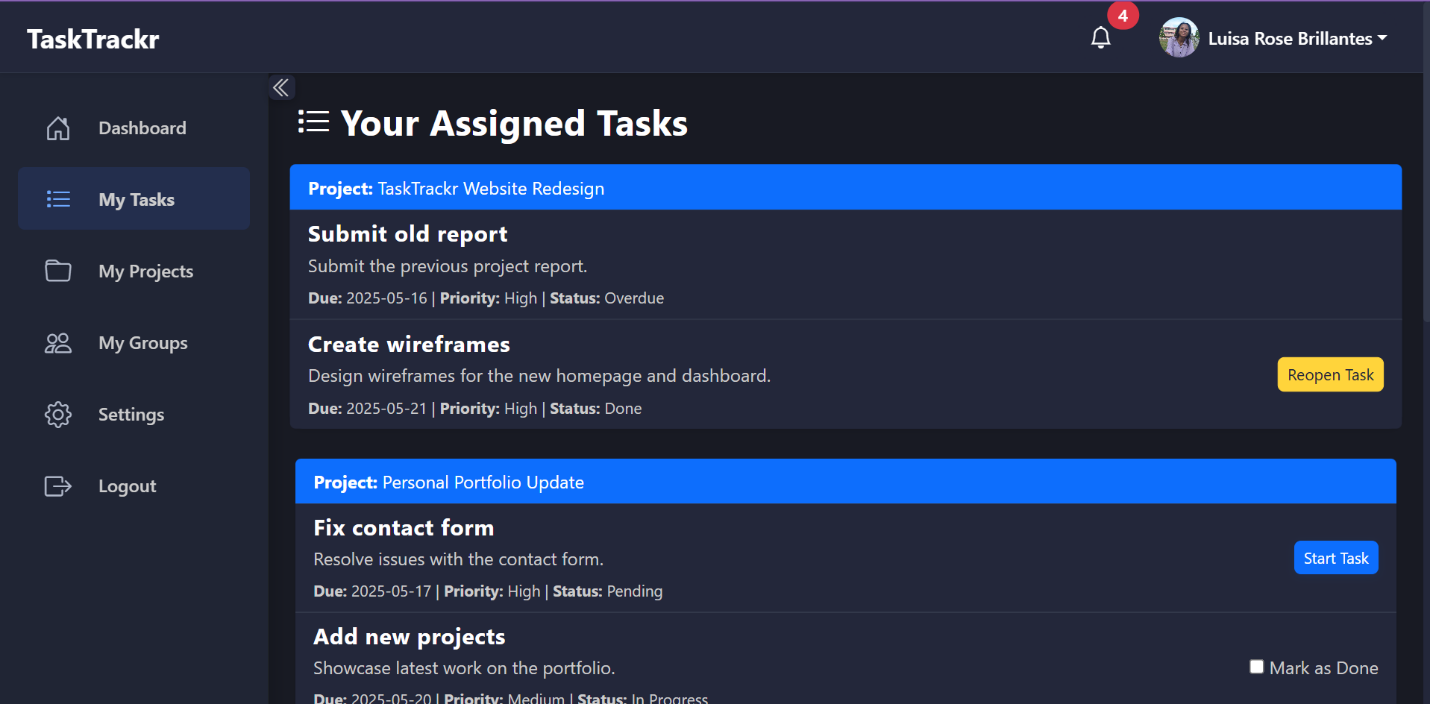
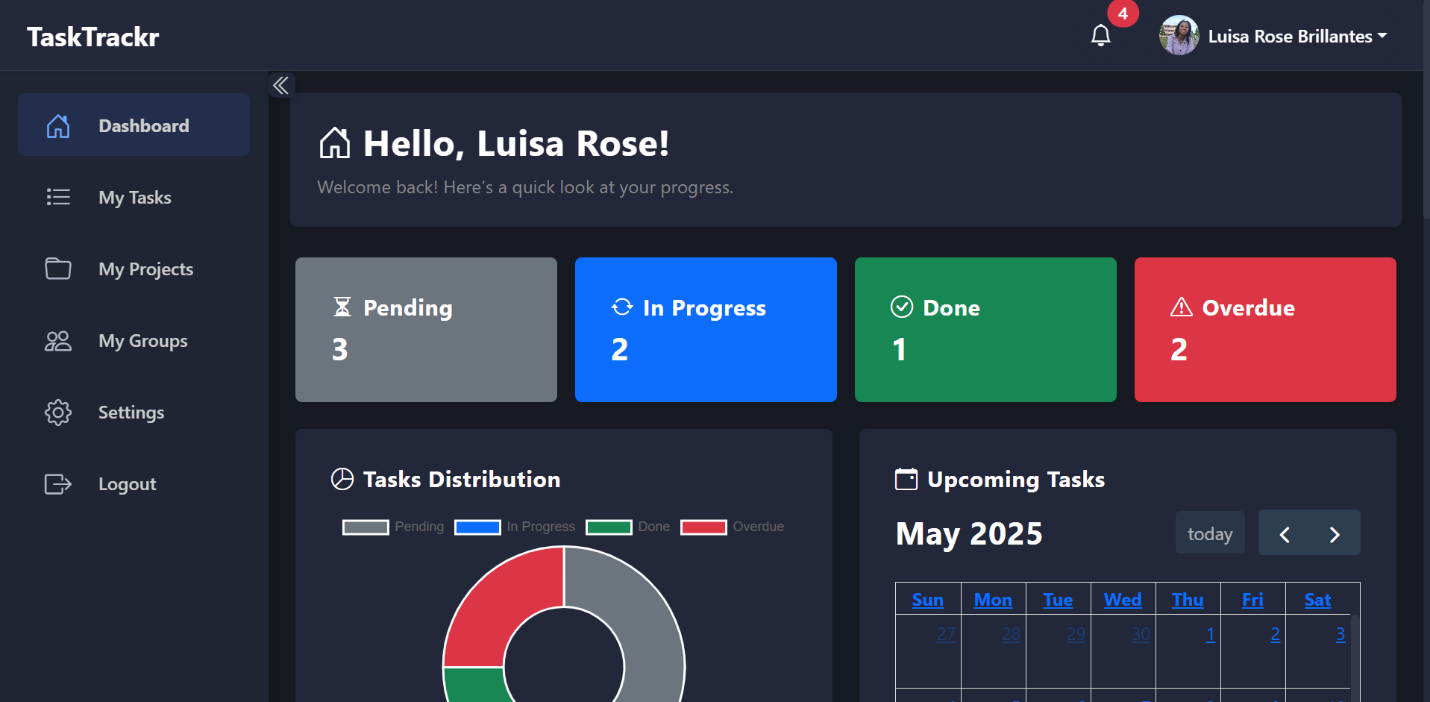
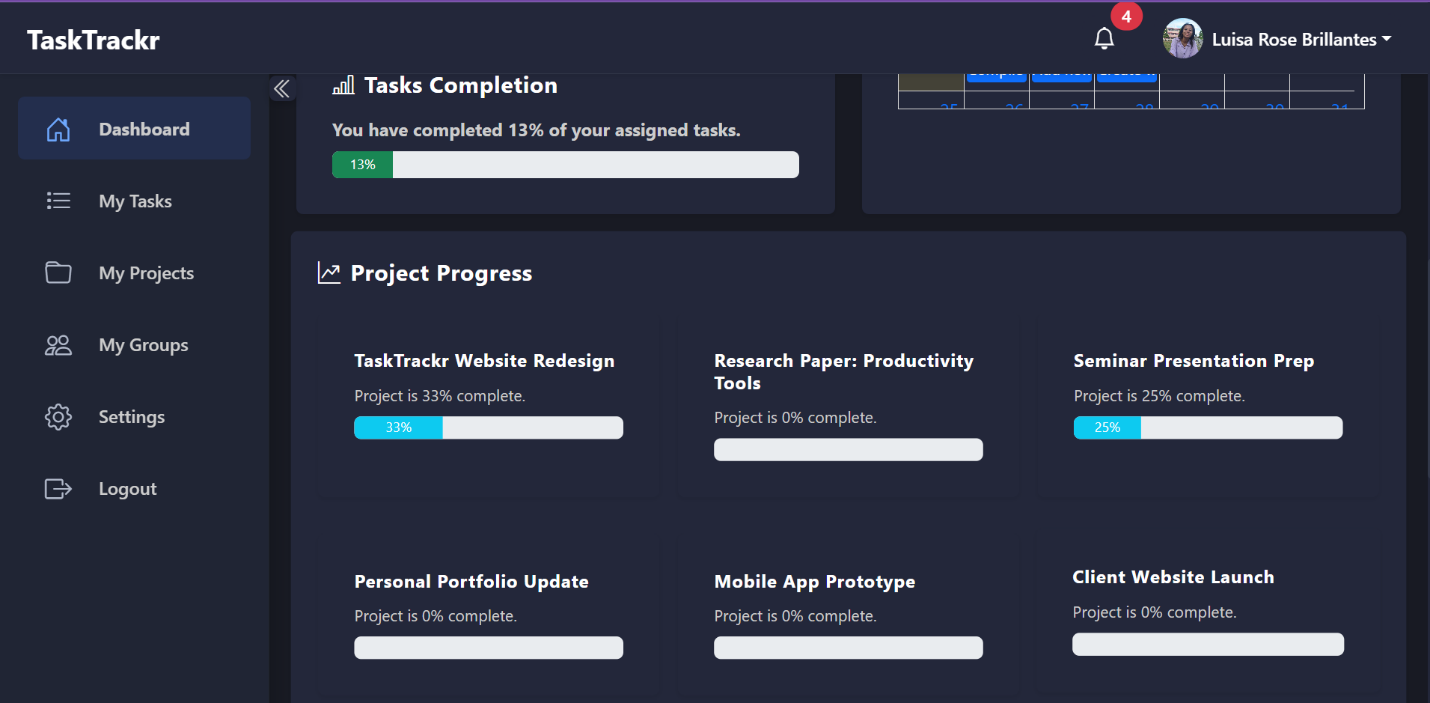
**Database Schema**

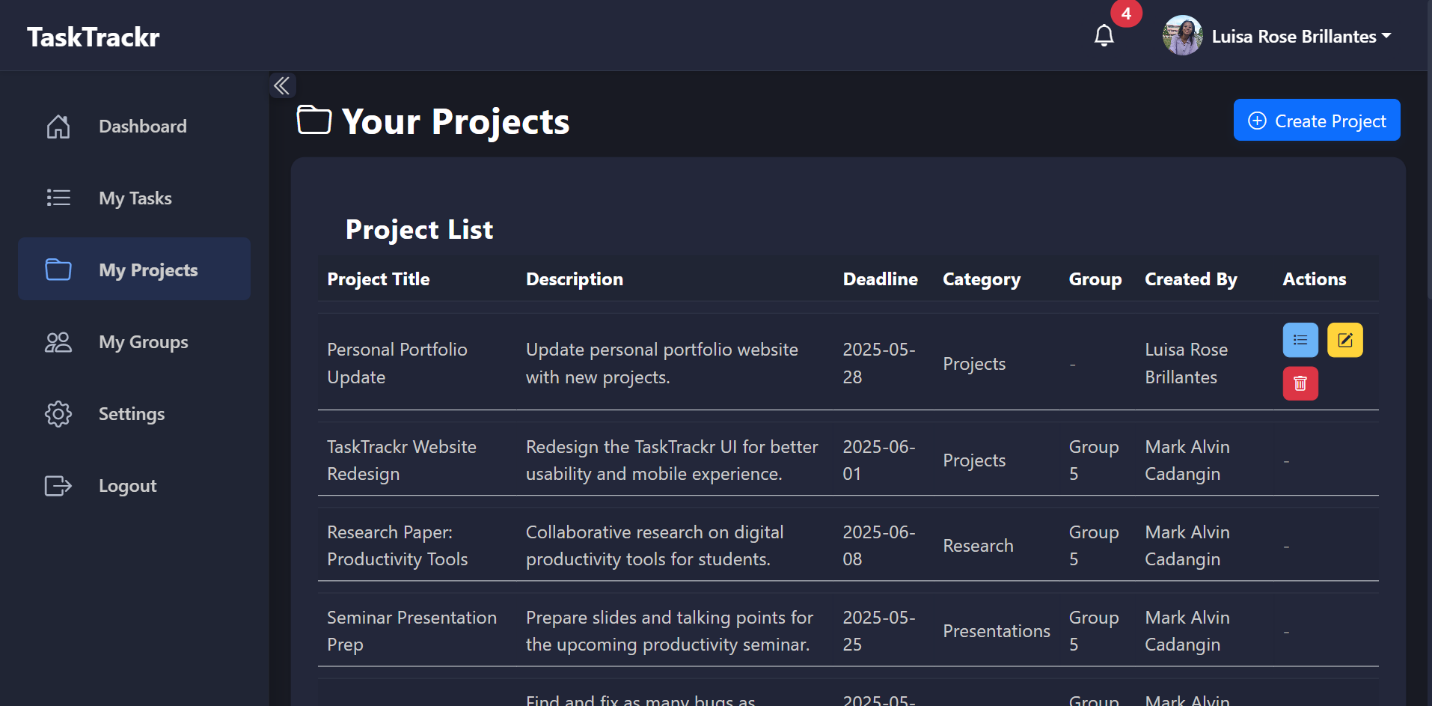


* **Users** (user\_id as primary key) – Stores user details like name, email, password, role, and account creation date.
* **Notifications** (notification\_id, user\_id as foreign key) – Holds alerts and messages for users.
* **User Settings** (user\_id as primary & foreign key) – Manages personal preferences like reminders and theme selection.
* **Categories** (category\_id) – Defines classifications for organizing projects.
* **Projects** (project\_id, category\_id, group\_id, created\_by as foreign keys) – Stores project details like title, description, deadline, and assigned group.
* **Tasks** (task\_id, assigned\_to, project\_id as foreign keys) – Represents individual tasks within projects, including status, priority, and due date.
* **Groups** (group\_id, created\_by as foreign key) – Enables team collaboration by storing group data.
* **User Groups** (user\_id\_group\_id, user\_id, group\_id as foreign keys) – Links users to groups for teamwork.

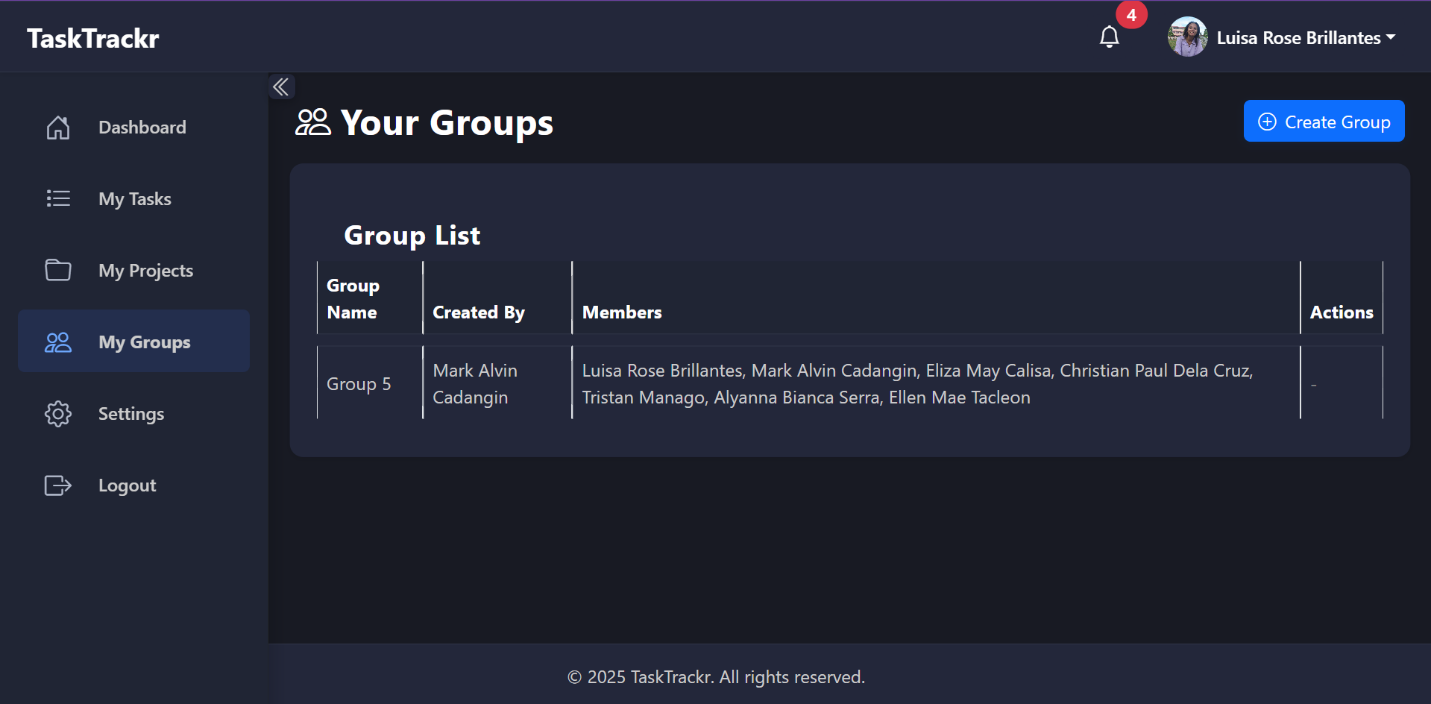
**Screenshot of Each Functionality**

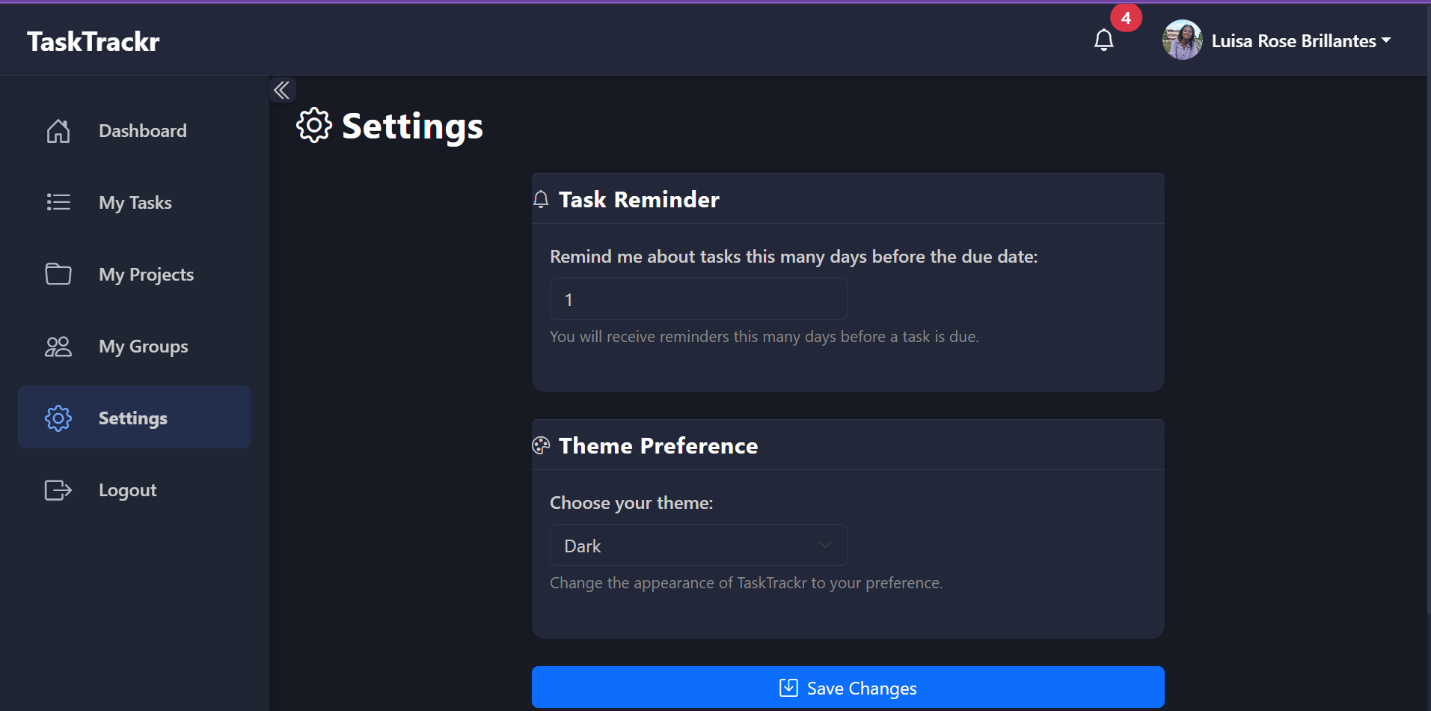
**Dashboard**

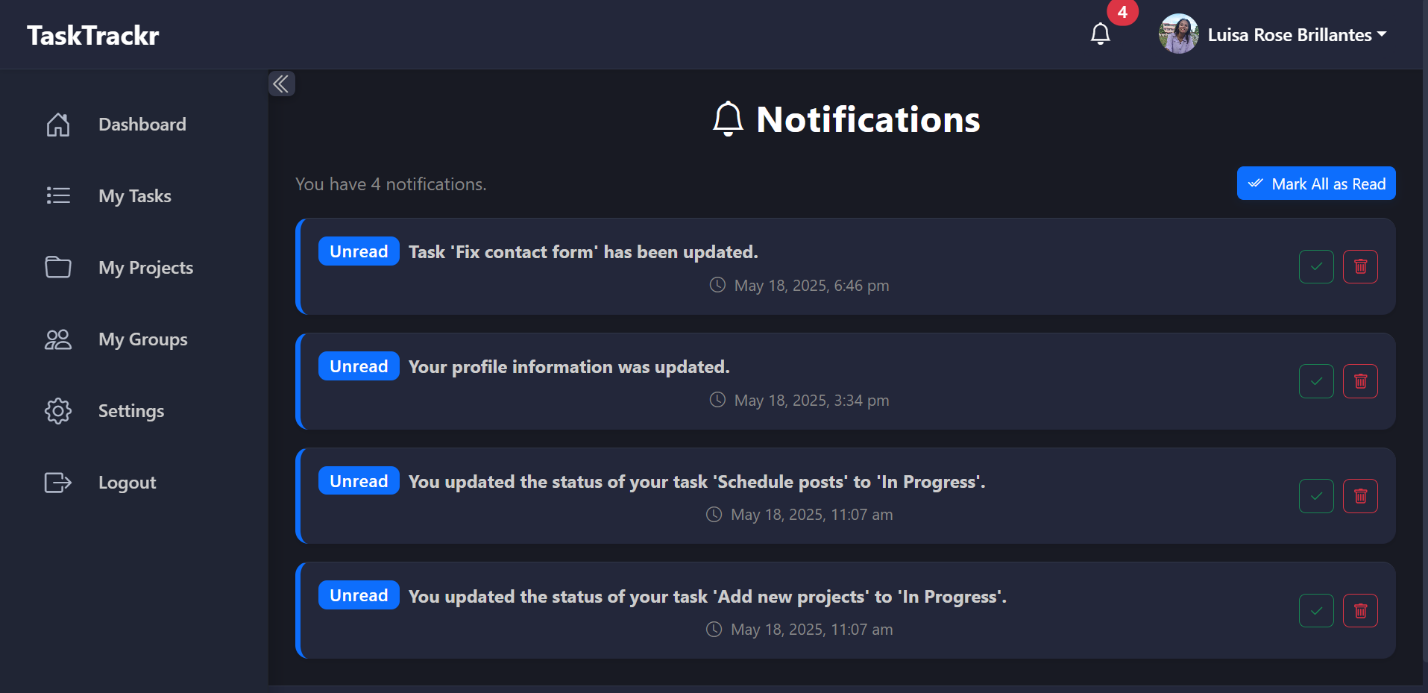
**My Task**

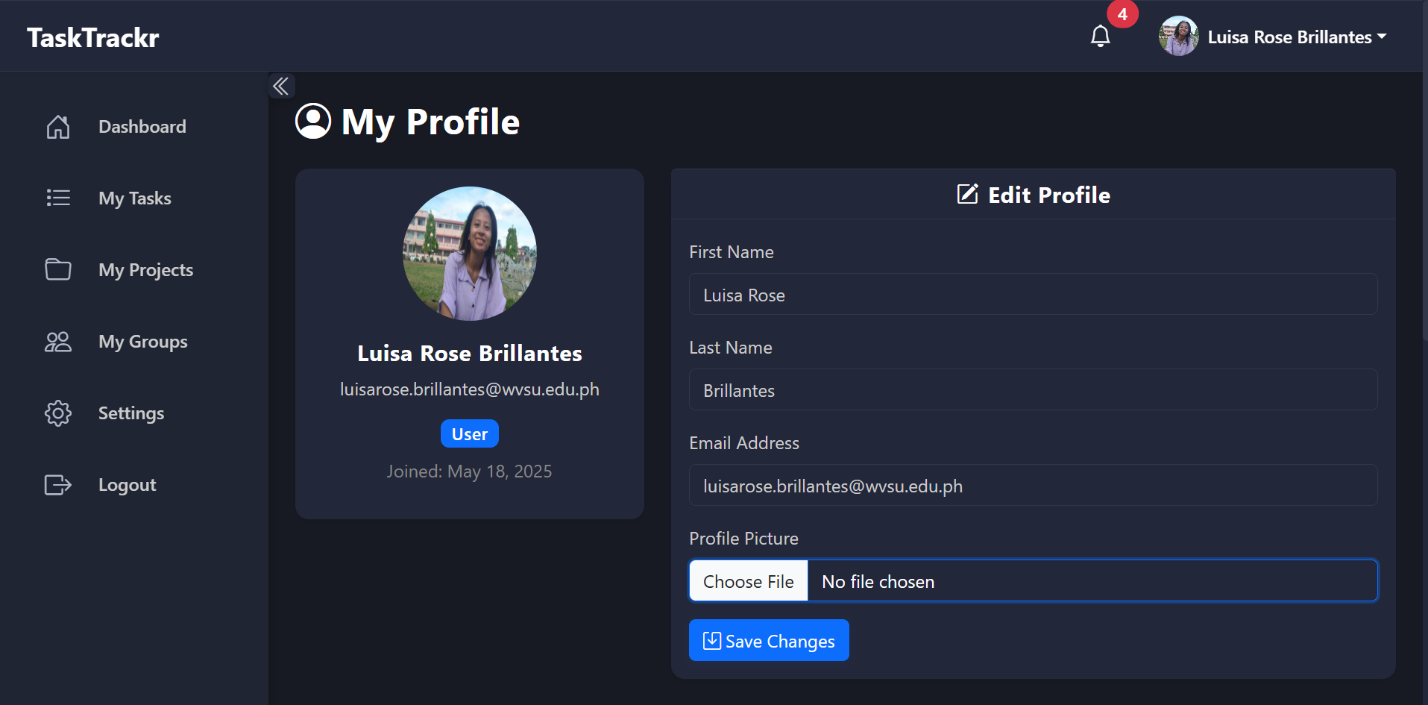
**My Projects**

**My Groups**

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**Settings**

**Notification**

**User Profile**

**Sample SQL Queries Used**

|  |  |
| --- | --- |
| **Task Summary** | SELECT  CASE  WHEN t.status = 'Done' THEN 'Done'  WHEN t.due\_date < CURDATE() THEN 'Overdue'  ELSE t.status  END AS status\_group,  COUNT(\*) AS count  FROM Tasks t LEFT JOIN Projects p  ON t.project\_id = p.project\_id  WHERE t.assigned\_to = ? AND t.project\_id IS NOT NULL  GROUP BY status\_group; |
| **Upcoming and Overdue Tasks** | SELECT  t.title AS task\_title,  t.due\_date,  CASE  WHEN t.due\_date < CURDATE() AND t.status != 'Done' THEN 'Overdue'  ELSE 'Upcoming'  END AS task\_status  FROM Tasks t  LEFT JOIN Projects p ON t.project\_id = p.project\_id  WHERE t.assigned\_to = ? AND t.project\_id IS NOT NULL  ORDER BY t.due\_date ASC; |
| **Project Progress** | SELECT COUNT(\*) AS total, SUM(status = 'Done') AS done FROM Tasks WHERE project\_id = ? |
| **Fetch Group Members** | SELECT u.name  FROM Users u  JOIN User\_Groups ug ON u.user\_id = ug.user\_id  WHERE ug.group\_id = ?; |
| **Fetch User's Projects** | SELECT p.\*, c.name AS category\_name, g.group\_name, u.name AS creator\_name  FROM Projects p  JOIN Categories c ON p.category\_id = c.category\_id  LEFT JOIN `Groups` g ON p.group\_id = g.group\_id  JOIN Users u ON p.created\_by = u.user\_id  WHERE p.created\_by = ?  OR p.group\_id IN (  SELECT group\_id FROM User\_Groups WHERE user\_id = ?); |
| **Insert New Task** | INSERT INTO Tasks (title, description, due\_date, priority, status, project\_id, assigned\_to)  VALUES (?, ?, ?, ?, ?, ?, ?); |
| **Update Task Status** | UPDATE Tasks SET status = ? WHERE task\_id = ? AND assigned\_to = ?; |
| **Delete Task** | DELETE FROM Tasks WHERE task\_id = 10; |

**Reflection**

By creating TaskTrackr, we were able to incorporate relational modeling, database design, and CRUD activities in a practical context. This project enabled us to apply our theoretical knowledge to a working system by giving us a great deal of practical experience with SQL, backend integration, and web development.

Beyond technical implementation, we prioritized flexibility, user-centered design, and system analysis to make sure TaskTrackr tackles important student issues including missed deadlines, task overload, and inefficient group collaboration. We developed an application that promotes accountability, organization, and teamwork in educational settings by creating an intuitive user experience with features like intelligent notifications, real-time updates, and smooth group administration.

In the end, TaskTrackr is more than simply a productivity tool, it is an example of our capacity to use IT concepts to address actual issues, showcasing both technical expertise and creativity. Our skill set has grown as a result of this project, and we are now more equipped to handle challenges with programming and web development in the future.