LOOMIO

Threads of effort, woven into outcomes

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Objective

The objective of the *Loomio* project is to design and implement a web-based **Community-Based Task Management System with Contribution Assessment**, aimed at enabling structured collaboration, transparent task delegation, and active contribution tracking within community environments.

Loomio will feature:

- A **centralized task board** where tasks can either be assigned by leaders or requested by members and approved.
- A **shared community calendar** for managing events and deadlines.
- A **contribution points system** to recognize and quantify individual involvement.
- **Leave and attendance tracking** to manage availability.
- An **email notification system** to remind users of deadlines, approvals, and updates.
- A **dashboard** to visualize individual and collective progress.

The system will be developed using a **modern full-stack architecture** (React, Express.js, MySQL, Tailwind CSS) and deployed using **free hosting platforms** (e.g., Vercel, Render, Railway) to ensure cost-effectiveness and scalability.

Loomio is targeted at student bodies, volunteer groups, and professional communities, with the goal of transforming collective effort into **trackable, measurable outcomes**.

Technologies Used

The Loomio platform is built using a modern and cost-effective tech stack, optimized for continuous free hosting and efficient development.

Component	Technology	Purpose
Frontend	React.js	Building dynamic, component-based user interfaces
	Tailwind CSS	Utility-first CSS framework for styling and layout
Backend	Express.js (Node.js)	RESTful API server and application logic
Database	MySQL	Relational database for persistent data storage
Authentication	JSON Web Tokens (JWT)	Secure user authentication and session management
Notifications	Nodemailer (with Gmail SMTP or Mailgun API)	Email-based task and event notifications
Deployment	- **Frontend**: Vercel or Netlify (Free Tier) - **Backend**: Render, Railway, or Cyclic (Free Tier)	Hosting and deployment of services
Version Control	Git + GitHub	Code versioning and collaboration

Expected Outcomes

The Loomio platform is expected to deliver the following outcomes upon successful implementation:

1. **A Fully Functional Web Platform**
    - A responsive and user-friendly interface accessible on all modern web browsers.
    - Separate access roles for community leaders and participants to manage tasks and contributions.
2. **Community Task Management**
    - Centralized task board to create, assign, or approve tasks based on member interest.
    - Task status updates, progress tracking, and deadline-based visibility.
3. **Contribution Assessment Mechanism**
    - Point-based system to quantify each member's involvement in tasks.
    - Real-time dashboards and summary views to identify active contributors.
4. **Integrated Calendar System**
    - A shared calendar to manage events, task deadlines, and milestones.
    - Visual indicators of ongoing and upcoming responsibilities.
5. **Leave and Attendance Module**
    - Leave request and approval system integrated into the workflow.

- Attendance marking and history tracking for transparency.

6. **Email Notification System**
    - Automated email alerts for task assignments, updates, approvals, and approaching deadlines.
    - Keeps all participants informed and engaged without relying on third-party chat tools.
7. **Administrative Dashboards**
    - Insightful visual dashboards for community leaders to monitor overall activity.
    - Charts and summaries of attendance, participation, and performance trends.
8. **Modular, Cost-Effective Deployment**
    - Built using React, Express.js, MySQL, and Tailwind CSS.
    - Deployed on free hosting platforms (e.g., Vercel, Render, Railway) ensuring low-cost scalability.
    - Easily maintainable codebase for future feature expansion.