

Advanced Task Board Enhancement Project

Expected Feature Set

User Authentication and Authorization

- Implement secure user authentication using JWT.
- Add role-based access control:
- Admin: Manage all tasks, users, and boards.
- Manager: Manage team-specific tasks.
- User: Manage their assigned tasks.

Task Dependencies and Notifications

- Mark tasks as dependent on other tasks.
- Restrict tasks from being marked 'Complete' until dependencies are resolved.
- Implement a notification system:
- Notify users about task updates, dependency resolutions, and deadline reminders.

File Attachments

- Allow users to upload and attach files to tasks.
- Use Multer for backend handling of file uploads.

Analytics Dashboard

- Display project progress and statistics:
- Tasks completed vs. pending.
- Tasks by priority (High, Medium, Low).
- Weekly performance trends.
- Use Chart.js or Recharts for dynamic chart rendering.

Activity Logs

- Maintain an activity log for each task board.
- Track events such as task creation, updates, and deletions.
- Display logs in a timeline format.

Board Customization

- Allow renaming of columns (e.g., 'Backlog' to 'Ideas').
- Add or remove columns dynamically.
- Apply color codes or themes for columns.

Comments and Mentions

- Add a comment section for each task..

Backend Enhancements

- Optimize database queries for complex operations.
- Implement API rate limiting and request validation for security.

Task Prioritization and Search

- Add priority levels to tasks (High, Medium, Low).

- Implement a search bar to find tasks by name, description, or priority.

Dark Mode and Accessibility Features

- Add a toggle for light/dark mode for better user experience.

Tools and Technologies

- Frontend: React, Chakra UI
- Backend: Node.js, Express, MongoDB, Mongoose
- Others: Chart.js/Recharts (for analytics)

Notes:

- Focus on modular and reusable code while implementing features.
- Maintain proper documentation for all APIs in Postman and modules.
- Ensure thorough testing of each feature before moving to the next.