HINTRO

FULL STACK ENGINEER INTERVIEW ASSIGNMENT

Problem Statement

Build a Real-Time Task Collaboration Platform (similar to a lightweight Trello/Notion hybrid). Users should be able to create boards, lists, tasks, assign members, and see real-time updates.

Functional Requirements

- User authentication (signup/login).
- Create Boards with multiple Lists.
- Create, update, delete Tasks inside lists.
- Drag and drop tasks across lists.
- Assign users to tasks.
- Real-time updates across multiple users.
- Activity history tracking.
- Pagination and search functionality.

Technical Requirements

- Frontend: SPA using any modern framework (React/Vue/Angular).
- Backend: REST or GraphQL APIs.
- Database schema design required.
- Real-time communication (WebSockets or similar).
- Proper state management.
- Basic test coverage.
- Deployment-ready structure.

Expected Deliverables

- Frontend architecture explanation.
- Backend architecture explanation.
- Database schema diagram.

• API contract design.
• Real-time sync strategy.
• Scalability considerations

EXECUTION GUIDE

Mandatory Implementation Requirement

• You MUST implement working frontend and backend code.
• UI must be functional and interactive.
• Backend APIs must be fully implemented and connected.
• Real-time features must work practically (WebSocket or equivalent).
• The application must run locally with documented setup steps

Submission Instructions

• Push complete project (frontend + backend) to a Git repository.
• Provide detailed README with setup instructions.
• Include architecture explanation.
• Provide API documentation.
• Mention assumptions and trade-offs.
• Provide demo credentials.

Evaluation Focus

• Frontend architecture and state management.
• Backend API correctness.
• Real-time synchronization working properly.
• Database modeling and indexing.
• Code quality and maintainability.
• End-to-end integration quality.