

## Assignment: Issue Tracker with CRUD Operations

This assignment focuses on building a simple issue tracker application with functionalities for creating, reading, updating, and deleting (CRUD) issues.

### Technologies:

- Frontend: React / Vite.js
- Backend: Express.js
- Database: MySQL or MongoDB.

### Core Functionality:

- **Issue Management:**
  - Create new issues with a title, description, and optional fields (e.g., severity, priority).
  - View a list of all issues with basic details (title, status, etc.).
  - Display counts of issues by status (Open, In Progress, Resolved).
  - Visual indicators for issue status and priority (badges, colors, icons).
  - View detailed information for a specific issue.
  - Edit and update existing issue details.
  - Mark issues as “Resolved” or “Closed” with confirmation prompts.
  - Implement search and filter functionality for issues (by title, priority, etc.) while optimizing API requests during user input to improve performance.
  - Pagination or infinite scrolling for handling larger issue lists.
- **User authentication and authorization:**
  - User registration and login using email and password.
  - Secure password handling (hashing and validation).
  - Authentication using JWT or session-based authentication.

### Bonus Points:

- Deploy the application to a cloud service (e.g., Vercel, Netlify, AWS) and share a live demo link.
- Pay extra attention to the user interface and user experience (UI/UX).
- Reusable Component Design.
- Use TypeScript in the frontend for better type safety and maintainable code (optional).
- Use a state management solution (e.g., Redux, Zustand) efficiently.
- Export the issue list to CSV or JSON.

**Deliverables:**

- A functional web application with CRUD operations for issues.
- Submit your code via a public Git repository or a zipped folder.
- Include a README file that details setup instructions, dependencies, and usage.

**Evaluation Criteria:**

- Code quality, readability, maintainability, and use of best practices.
- Completeness of CRUD functionality and user experience.
- Bonus points will be awarded for additional features and robust system design.

**Additional Notes:**

- You can initially focus on core functionalities and consider adding bonus features later.
- We are interested in your problem-solving approach to data management and user interaction.

**Next Steps:**

Once you have completed the assignment, submit it as a reply email. We will then schedule a technical interview to discuss your code and the thought process behind the issue tracker application.

This assignment allows you to showcase your skills in building a data-driven application with CRUD operations. We look forward to seeing your work!