

Leadership & Planning Document

1. Tailwind Configuration & Design Integration

- a. Define global tokens: colors, spacing, typography, and responsive breakpoints.
- b. Integrate with an existing Figma design system (if available), ideally including a link to the style guide.

2. System Component Implementation

- a. Build reusable foundational components: Modal, Button, and Toggle.
- b. Ensure accessibility and theme compatibility (e.g., dark mode support using Tailwind's dark variant).

3. State Management Setup

- a. Integrate Redux Toolkit and define the initial store structure.
- b. Create slices for authentication and user data, applying good separation of concerns.

4. Routing Architecture

- a. Set up react-router-dom with route-based code splitting.
- b. Define public and protected routes based on user roles.

5. User Dashboard Logic

- a. Fetch and display user-specific data.
- b. Ensure the layout is modular and the dashboard supports additional widgets in the future.

Patterns, Hooks, and Context

- **Custom Hooks**

Move business logic into reusable custom hooks to keep components clean and declarative.

- **Middleware for Side Effects**

Create Redux middleware to handle side effects such as error handling, API logging, and toast notifications.

- **Best Practices**

- Keep components atomic: one component per file.
- Avoid deeply nested prop drilling by introducing React context where appropriate.
- Write **JSDoc** and meaningful inline **comments** where necessary to improve clarity and maintainability.

Testing Strategy

- **Unit Tests**
 - Write unit tests for system components and utilities using React Testing Library.
 - Focus on props rendering, interaction behavior, and edge cases.
- **Integration Tests**
 - Cover major user flows and API interaction scenarios.
 - Test conditional rendering and route-based guards.

Extensibility & Scalability

- **Themes**

Tailwind already supports theming via the dark variant and custom themes through the configuration file. Consider dynamic class toggling via a ThemeContext.
- **Roles & Permissions**

Implement role-based access using Higher-Order Components (HOCs) or custom hooks like usePermissionGuard.

If roles are stored in Redux, HOCs are preferred to avoid limitations with Storybook and testing isolated components.