Advanced Task Management System Project Requirement Document

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# 1. Project Overview

The aim of this project is to develop an advanced task management system using Angular 17, focusing on providing a comprehensive solution for task creation, assignment, tracking, and reporting. The system will incorporate advanced features such as real-time updates, task collaboration, and sophisticated search capabilities to enhance user productivity and team efficiency. This project will be a frontend-only application, showcasing the capabilities of Angular 17 without requiring backend integration.

# 2. Key Features

- User Authentication and Authorization: Implement a simulated authentication mechanism with role-based access control (RBAC).

- Dashboard and Task Views: Design dynamic dashboard and multiple task views including list, grid, and calendar.

- Task Management: Enable task creation, update, delete, assignment, and prioritization with drag-and-drop functionality.

- Real-time Updates: Simulate real-time task updates and notifications using Angular's state management.

- Task Collaboration: Support comments, file attachments, and mentions for task collaboration among team members.

- Advanced Search and Filtering: Develop advanced search mechanism with support for complex queries and boolean operators.

- Reporting and Analytics: Generate comprehensive reports and analytics on task performance and team efficiency.

- Internationalization and Localization: Support multiple languages and locales with localization for date formats and text translations.

- Responsive Design: Ensure full responsiveness across devices and screen sizes for seamless user experience.

# 3. Technical Requirements

- Frontend Framework: Angular 17 with TypeScript

- State Management: NgRx for efficient state management

- Authentication: Simulated JWT for authentication and authorization

- Real-time Communication: Simulate real-time updates using Angular's reactive programming capabilities

- UI/UX Design: Angular Material or custom CSS for responsive design

- Testing: Jasmine, Karma, and Protractor for unit and end-to-end testing

# 4. Deliverables

- Fully functional Angular 17 application with all specified features implemented.

- Source code hosted on Git with regular commits and meaningful messages.