Project Proposal: Social Media Dashboard

1. Overview

The Social Media Dashboard is a web application designed to provide real-time insights into social media analytics. The dashboard will display key metrics, trends, and user engagement statistics across various platforms, helping users monitor and optimize their social media performance.

2. Objectives

- Develop a user-friendly dashboard using React for seamless user interaction.
- Integrate with a backend API to fetch and display real-time social media data.
- Implement Context API for efficient state management and dynamic data updates.
- Ensure responsiveness and accessibility for different devices and screen sizes.
- Optimize performance to reduce API load and improve user experience.

3. Scope

- **Frontend Development**: Using React, HTML, CSS, and JavaScript for UI components and layout.
- **Backend Integration**: Connecting to APIs to retrieve and display social media analytics.
- **State Management**: Using Context API to manage application state effectively.
- **UI/UX Design**: Creating an intuitive and visually appealing user interface.
- **Performance Optimization**: Ensuring quick load times and smooth interactions.
- **Deployment**: Hosting the application on a cloud platform.

4. Project Plan (Timeline & Milestones)

Week 1: Initial Setup and Planning

- Setup project environment (React, NodeJS, Context API, dependencies)
- Create wireframes for the dashboard layout
- Identify backend API(s) for social media analytics
- Set up the basic project structure
- **Milestone**: Project setup complete, wireframes ready, API documentation prepared

Week 2: Implement Core Features

- Develop the dashboard layout with HTML, CSS, and React components
- Implement core components (charts, tables, key stats)
- Integrate backend APIs to fetch real-time data

- Implement Context API for State Management
- **Milestone**: Functional dashboard with real-time data display

Week 3: Advanced Features & Testing

- Implement sorting, filtering, and search functionality
- Conduct unit testing of components (Jest, React Testing Library)
- Add proper error handling for API requests
- Refine UI with animations and responsive design
- **Milestone**: Fully functional dashboard with advanced features and tested components

Week 4: Final Touches & Deployment

- Optimize app performance (reduce API call load, improve response time)
- Conduct end-to-end testing for functionality and user experience
- Deploy the application on a cloud platform
- Complete project documentation (API endpoints, system architecture, user guide)
- **Milestone**: Deployed dashboard with finalized documentation

5. Key Performance Indicators (KPIs)

To measure the success and efficiency of the Social Media Dashboard, the following KPIs will be used:

- **System Performance:**
    - API response time (target: < 500ms)
    - Page load time (target: < 2 seconds)
    - System uptime (target: 99.9%)
- **User Engagement:**
    - Daily active users (DAU) and monthly active users (MAU)
    - Average session duration
    - Number of reports or analytics viewed per session
- **Data Accuracy & Reliability:**
    - Percentage of successfully retrieved API data
    - Frequency of data synchronization updates
- **Usability & Accessibility:**

    - User satisfaction score (based on surveys)
    - Compliance with accessibility standards (WCAG 2.1)
    - Number of UI/UX-related complaints or issues
- **Deployment & Maintenance:**
    - Number of post-deployment bugs
    - Deployment success rate
    - Average time to resolve issues (MTTR - Mean Time To Repair)

By tracking these KPIs, we can continuously assess and improve the dashboard's performance, user experience, and reliability.

6. Expected Outcomes

- A fully functional social media analytics dashboard.
- Real-time data visualization through charts, tables, and key performance metrics.
- A responsive and accessible UI design.
- A documented API integration for seamless data retrieval.

7. Constraints & Assumptions

- API availability and limitations may affect real-time data retrieval.
- Performance may vary based on network conditions and server load.
- Users require authentication to access personalized analytics.

8. Tasks Assignment

- **Wassem Ali** → Landing Page
- **Omar Gehad, Abdullah Ali Abd Elnaby** → Dashboard
- **Anas Ahmed Mohamed** → Authentication