Personal Expense Tracker App Requirements

Overview

The Personal Expense Tracker App is a web application built using the React JavaScript library. The primary goal of this app is to help users manage and track their personal expenses, enabling them to gain better control over their finances. The app will provide a user-friendly interface for users to record, categorize, and analyze their expenses.

Features

User Authentication

User Registration: Users should be able to create an account by providing their email address and password.
User Login: Registered users should be able to log in securely using their email and password.
Password Reset: Users should have the option to reset their password via email if they forget it.

Expense Management

Add Expenses: Users can manually add new expenses, specifying the date, amount, category, and a brief description.
Edit Expenses: Users can edit or delete previously entered expenses.

Expense Categories: Users can categorize expenses into predefined categories (e.g., groceries, transportation, entertainment).
Expense Filters: Users can filter and view expenses based on date range and categories.
Expense Summary: Users can view a summary of their total expenses for a selected date range and see category-wise spending breakdown.

Budget Tracking

Set Budgets: Users can set monthly or weekly budgets for different expense categories.
Budget Notifications: Users should receive notifications or alerts when they exceed their budget for a specific category.

Reports and Analytics

Expense Trends: Users can view graphical representations (e.g., charts) of their expense trends over time.
Income Tracking: Users can track their income and view their income versus expenses.

User Profile

User Profile Page: Users can update their personal information, change their password, and manage their account settings.
Logout: Users should be able to log out securely.

Technical Requirements

React: The app should be built using React and follow best practices for component-based architecture.
State Management: Implement a state management library like Redux or React Context API to manage application state efficiently.
Backend API: Develop a backend API (RESTful or GraphQL) to handle user authentication and data storage.
Database: Use a database system (e.g., MongoDB, PostgreSQL) to store user data and expense information securely.
Authentication: Implement user authentication using JWT (JSON Web Tokens) for secure user sessions.

Responsive Design: Ensure the app is responsive and works on various devices and screen sizes.
Security: Implement security best practices to protect user data and prevent common vulnerabilities (e.g., Cross-Site Scripting, SQL Injection).
Testing: Write unit tests and integration tests to ensure the reliability and correctness of the app.
Deployment: Deploy the app on a cloud hosting platform (e.g., AWS, Heroku) with proper scaling and monitoring.
Documentation: Provide clear and comprehensive documentation for developers and users, including setup instructions and user guides.

Optional Features (Future Enhancements)

Currency Conversion: Allow users to record expenses in different currencies and perform automatic currency conversion.
Expense Receipts: Enable users to upload and attach receipts to their expenses.
Multi-Language Support: Provide support for multiple languages.
Integration with Financial APIs: Integrate with financial institutions' APIs to fetch transaction data automatically.
Data Export: Allow users to export their expense data in various formats (e.g., CSV, PDF).

Conclusion

The Personal Expense Tracker App aims to provide