Authentication and CRUD with React Native and

Firebase

This project is designed to develop a reliable login and registration system utilizing React Native, with Firebase as the backend API. The project was built using the Ionic framework. To enhance accessibility, OAuth authentication has been implemented exclusively for Google and Facebook. Furthermore, the home page will support full CRUD functionality, enabling users to Create, Read, Update, and Delete tasks in a Todo list. This all-encompassing system will ensure secure user authentication while delivering an efficient and user-friendly interface for managing daily tasks.

Key Features
1. User Authentication
- User Registration: New users can create an account using their email and password. Their information is securely stored in Firebase Firestore.
- User Login: Registered users can log in with their credentials. Successful login displays a welcome message and redirects the user to the home page.
- User Logout: Users can log out of their account, with a confirmation alert to prevent accidental logouts.
- Authentication State Management: The application redirects unauthenticated users to the login page and fetches user-specific data upon authentication.

2. ToDo List Management
- Add ToDo: Users can add new tasks to their ToDo list. Each task is stored in the Firebase Firestore database associated with the user's ID.
- Edit ToDo: Users can edit existing tasks. Changes are updated in the Firebase Firestore database.
- Delete ToDo: Users can delete tasks from their list. The deletion is reflected in the Firebase Firestore database.

3. Real-Time Data Synchronization
- Fetch ToDo Items: The application fetches and displays ToDo items from the Firebase Firestore database in real-time, ensuring users always see the most up-to-date information.

4. User Interface and Experience
- Responsive Design: The application is designed to work well on various screen sizes and devices, providing a consistent user experience.
- Alerts and Notifications: The application uses IonAlert to display messages and confirmations, enhancing user interaction and feedback.
- Navigation: Smooth navigation between login, signup, and home pages, with appropriate redirects based on user actions and authentication state.

5. Technology Stack
- Frontend: React and Ionic are used for building the user interface, ensuring a responsive and interactive experience.
- Backend: Firebase provides authentication and Firestore database services, enabling secure user management and real-time data handling.
- TypeScript: TypeScript is used to add type safety and improve code reliability, with defined interfaces for ToDo items and user data.

Description

The ToDo List application is a comprehensive task management tool designed to help users organize their daily tasks efficiently. Built using React and Ionic, it provides a seamless and responsive user experience across various devices. The application leverages Firebase for backend services, including user authentication and real-time database management.

How It Works:

User Authentication:

Users register or log in using their email and password. Authentication state is monitored to manage user sessions and data access.

ToDo List Management:

Users can add, edit, delete, and mark tasks as completed. Task data is synchronized with Firebase Firestore, providing real-time updates.

User Interaction:

The application features intuitive UI elements, customized for a pleasant user experience. Alerts and confirmations guide users through various actions, such as logging out or handling errors.

Screenshots