

## **Introduction**

The developed app is a simple ToDo list application built using the React and Ionic frameworks. It allows users to create, edit, and delete ToDo items, and includes user authentication functionalities for sign-up, login, and logout. Firebase Authentication and Firestore are used for user management and data storage.

## **Features**

### **User Authentication:**

- Sign Up: Users can register for an account by providing their name, email, and password.
- Login: Users can log in to their accounts using their email and password.
- Logout: Users can log out of their accounts.

### **ToDo List Management:**

- Add ToDo Items: Users can add new ToDo items to their list.
- Edit ToDo Items: Users can edit existing ToDo items.
- Delete ToDo Items: Users can delete ToDo items from their list.

## **Description of Your Works (Systems)**

### **Login System (Login.tsx):**

- Provides a login interface where users can input their email and password.
- Authenticates users using Firebase Authentication.
- Checks if the user exists in Firestore, and redirects to the home page upon successful login.

### **Sign-Up System (SignUp.tsx):**

- Provides a sign-up interface where users can register by providing their name, email, and password.
- Validates user inputs and displays appropriate error messages.
- Stores user data in Firestore upon successful sign-up.

### **ToDo List Management System (ToDoList.tsx):**

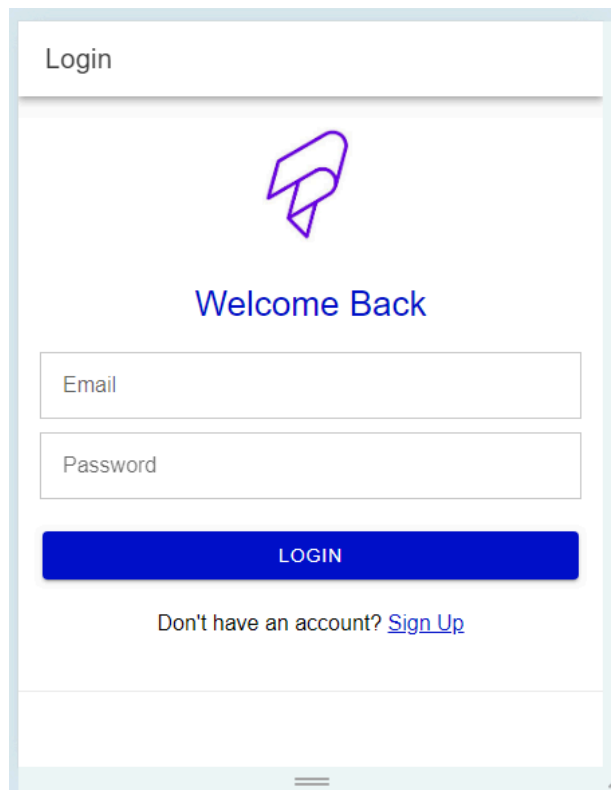
- Displays a list of ToDo items fetched from Firestore.
- Allows users to add new ToDo items.
- Allows users to edit existing ToDo items.
- Allows users to delete ToDo items.
- Provides a logout button to allow users to log out of their accounts.

## **Conceptual Framework**

The app utilizes a client-server architecture where the client-side is implemented using the React and Ionic frameworks, and the server-side functionalities such as authentication and data storage are handled by Firebase services (Authentication and Firestore). The client


communicates with the server to perform authentication tasks and CRUD operations on ToDo items.

### The System (Screenshot of your Output) Mobile View



A screenshot of a mobile application's login screen. The screen is framed by a light blue border. At the top, a white header bar contains the word "Login". Below the header, a purple icon of two overlapping speech bubbles is centered. Underneath the icon, the text "Welcome Back" is displayed in a blue font. Below this, there are two white input fields with light gray borders; the first is labeled "Email" and the second is labeled "Password". A solid blue button with the word "LOGIN" in white capital letters is positioned below the input fields. At the bottom of the form area, the text "Don't have an account? [Sign Up](#)" is shown, with "Sign Up" as a blue hyperlink. The bottom of the screen features a light blue footer bar with a white hamburger menu icon on the left and a small white icon on the right.

Login



Welcome Back

Email

Password

LOGIN

Don't have an account? [Sign Up](#)

## Sign Up



### Create Account

**SIGN UP**

## ToDo List

**LOGOUT**

New ToDo  
Enter ToDo item

**ADD TODO**

hehehe



## Desktop View

Login



Welcome Back

Email

Password

LOGIN

Don't have an account? [Sign Up](#)

ToDo List

LOGOUT

New ToDo

Enter ToDo item

ADD TODO

hehehe



Sign Up



Create Account

Name

Email

Password

SIGN UP

Already have an account? [Login](#)