

Exercise 2

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Course Name: Mobile Programming

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Messages Directory App

Overview:

The Messages Directory App is a cross-platform mobile application developed using React Native (JavaScript). The app allows users to view and manage categorized messages under directories such as:

- You
- Home
- Love
- Family
- Friends
- School

Each directory functions like an inbox, and users can view, add, edit, and delete messages in each category.

The application provides a clean and responsive interface with simple navigation and user interaction, making it suitable for mobile and web platforms including Android, iOS, and web browsers.

Project Structure:

Message_Directory_app/

```
|
|
|— node_modules/
|— assets/           // Folder for images
|— app/
|  |— screens/
|  |  |— HomeScreen.js    // Displays message category buttons
|  |  |— MessagesScreen.js // Shows messages + Add/Edit/Delete features
|  |— navigation/
```

```
|   └─ AppNavigator.js    // Configures screen-to-screen navigation
|
|─ App.js                 // Root file, initializes app & loads navigator
|─ package.json           // Metadata & list of dependencies used
|─ README.md
```

App.js

This is the main entry point of the application. It:

- Initializes the navigation system using `@react-navigation/native` and `@react-navigation/native-stack`
- Defines two screens: `HomeScreen` and `MessagesScreen`
- Hides the default header on the home screen for a cleaner UI

HomeScreen.js

This file handles the display of the main category grid. It:

- Shows six message directories (You, Home, Love, Family, Friends, School)
- Uses circular buttons with icons for each category
- Navigates to the Messages screen when a category is tapped
- Uses a `FlatList` with a 2-column layout for responsive design

MessagesScreen.js

This screen is responsible for handling the content of each directory. It:

- Loads and displays the stored messages of the selected category
- Allows users to:
 - Add a new message
 - Edit an existing message
 - Delete a message with confirmation
- Updates messages in local state using `useState`
- Uses a `TextInput`, buttons, and styled card layout for better UX

Dependencies Used:

This project uses several widely adopted React Native libraries to handle navigation, layout, gestures, and icons. These dependencies are declared in the package.json file and were installed using the terminal or dependency manager.

The major libraries used include:

- **@react-navigation/native** – Navigation container for managing screens
- **@react-navigation/native-stack** – Stack navigator for screen transitions
- **react-native-screens** – Improves performance of screen rendering
- **react-native-safe-area-context** – Ensures content respects safe areas (e.g., notches)
- **react-native-gesture-handler** – Handles gestures like taps and swipes
- **react-native-reanimated** – Enables smooth animations
- **@expo/vector-icons** – Used for clean, platform-friendly icon support

```
1  ∨ {
2  ∨   "dependencies": {
3      "@expo/vector-icons": "^14.0.2",
4      "react-native-screens": "~4.4.0",
5      "react-native-animated": "^1.3.3",
6      "react-native-reanimated": "~3.16.1",
7      "@react-navigation/native": "^6.1.7",
8      "react-native-gesture-handler": "~2.20.2",
9      "@react-navigation/native-stack": "^6.9.12",
10     "react-native-safe-area-context": "4.12.0"
11   }
12 }
```

Features Implemented:

Feature	Description
Category Layout	Circular buttons for You, Home, Love, Family, Friends, and School
Navigation	Tapping a category opens its respective message screen
Predefined Messages	Each category is loaded with 2 example messages
Add Messages	Users can type and add custom messages using a TextInput field
Edit Messages	Allows editing of existing messages inline
Delete Messages	Messages can be deleted after confirmation

How to Run the App (Using Android Studio):

Follow these steps to run the app locally on your machine using Android Studio and React Native CLI:

Prerequisites:

Make sure the following are installed and set up:

- Node.js and npm
- Android Studio with Android Virtual Device (AVD)
- Java Development Kit (JDK)
- React Native CLI
- Environment variables configured (JAVA_HOME, ANDROID_HOME, etc.)

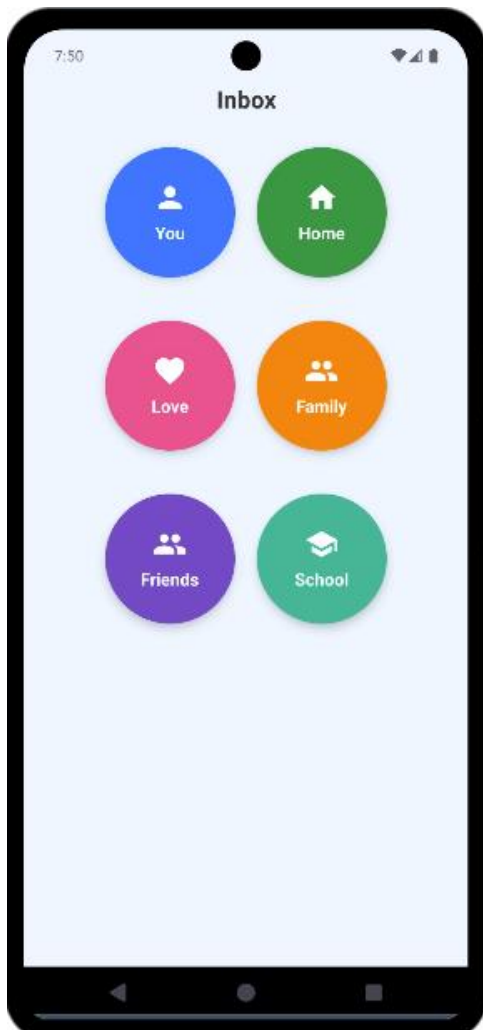
Steps to Run the App:

- Open Android Studio.
- Open message_directory_app folder in Android Studio.
- **Install dependencies**
 - Open terminal in the project folder and run
 - npm install
 - npx react-native start
- **Open another terminal window** (inside the same project folder), then run:
npx react-native run-android

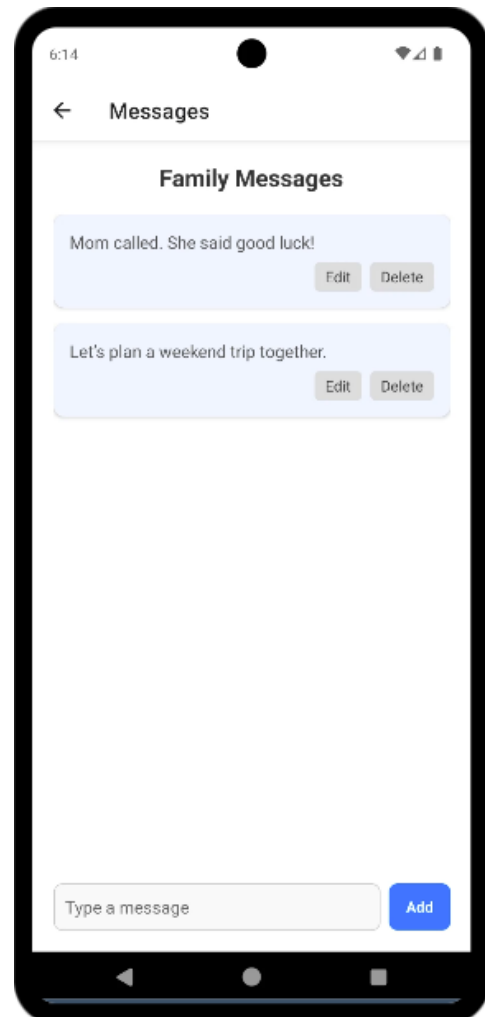
Screenshots:

Android Preview:

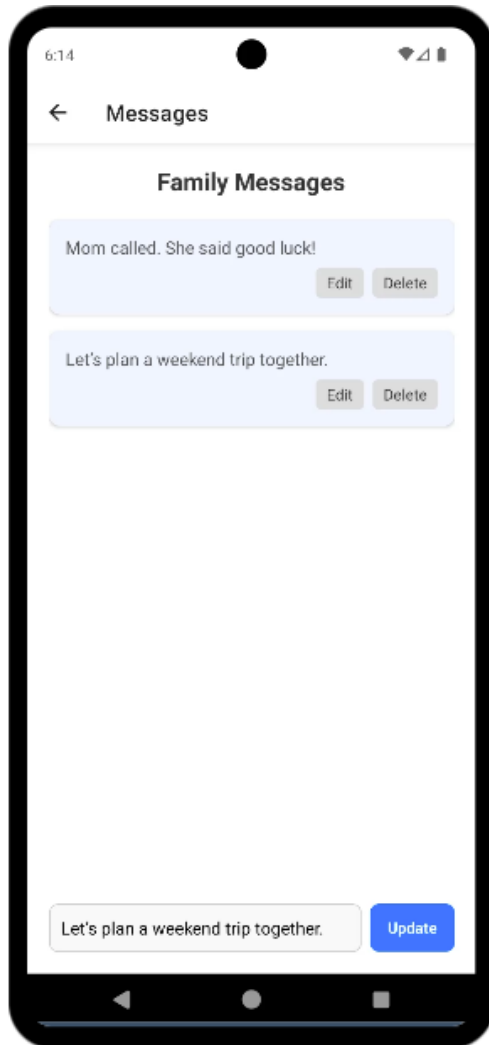
Home Screen



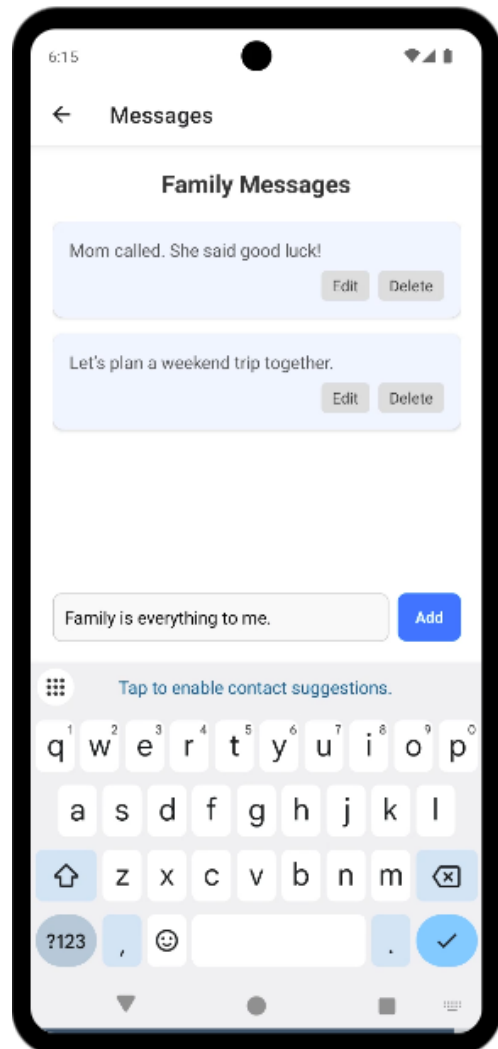
Messages Screen

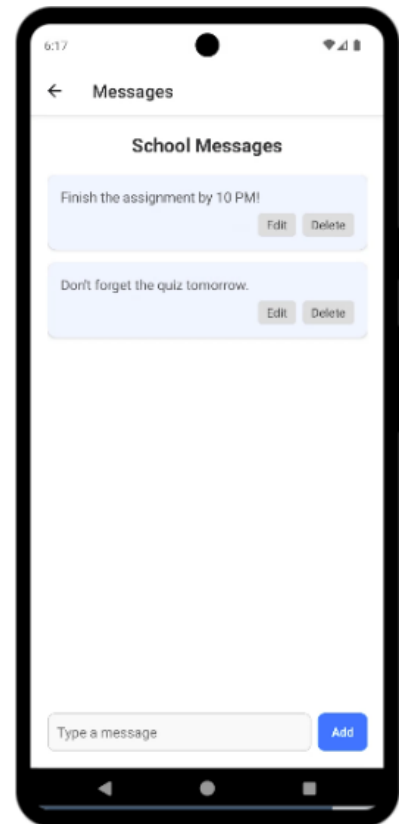
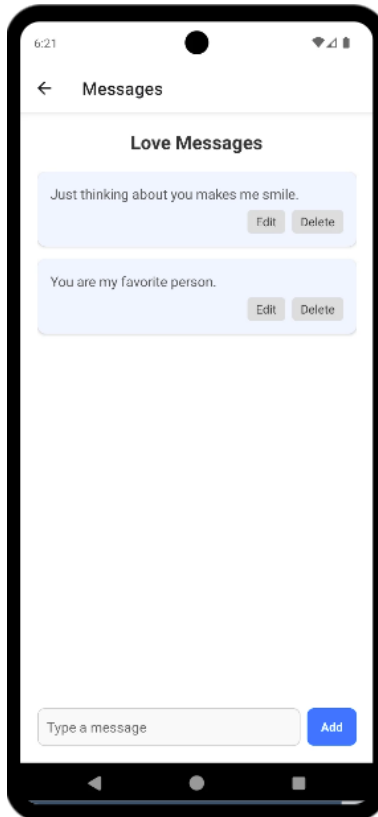
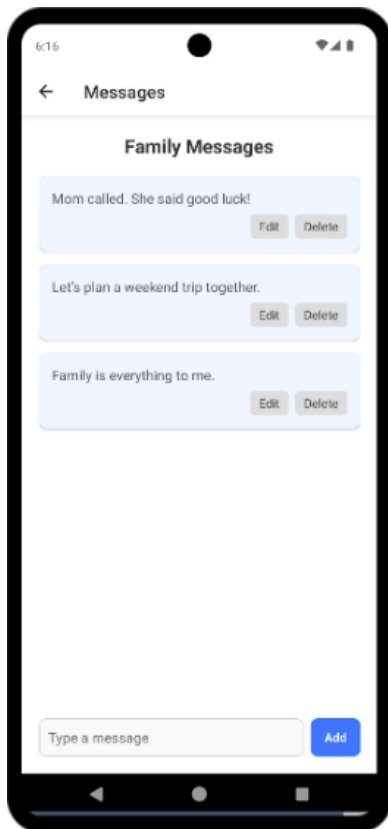


Update messages

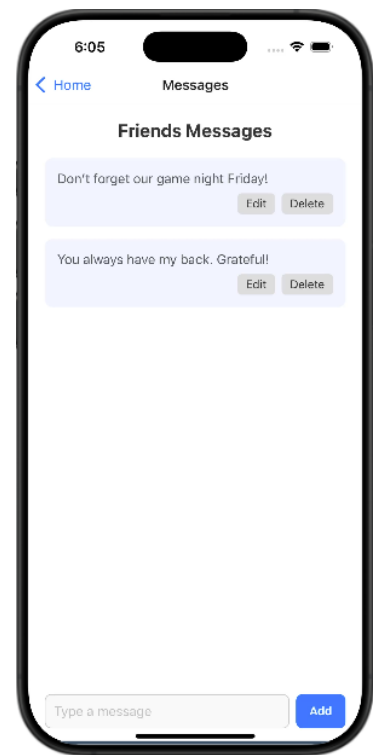
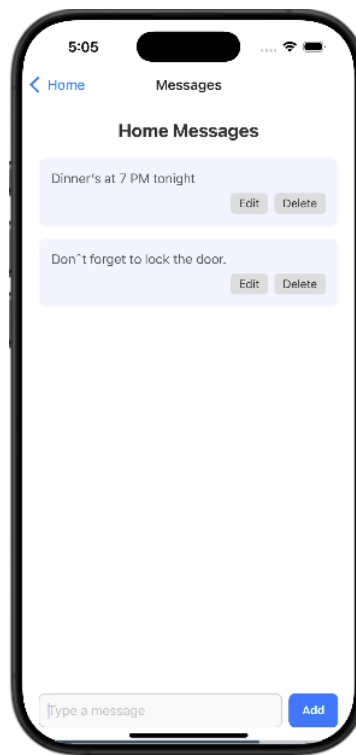
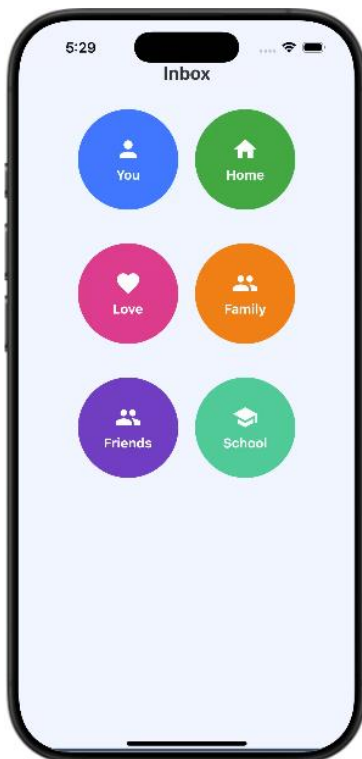


Add message

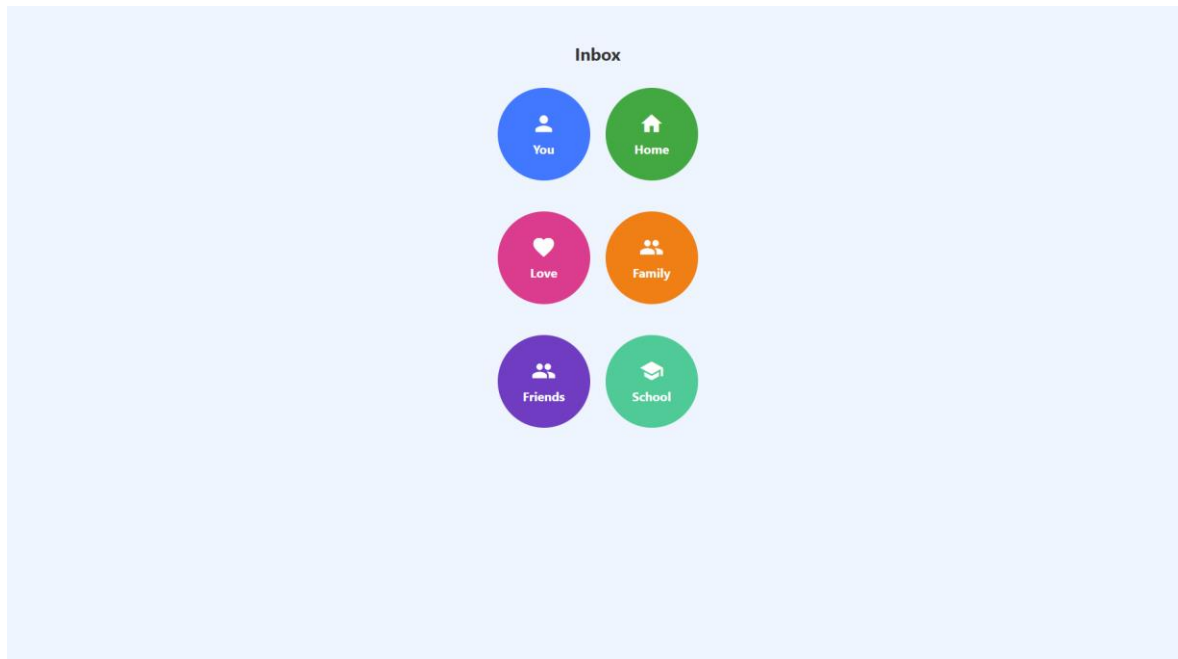




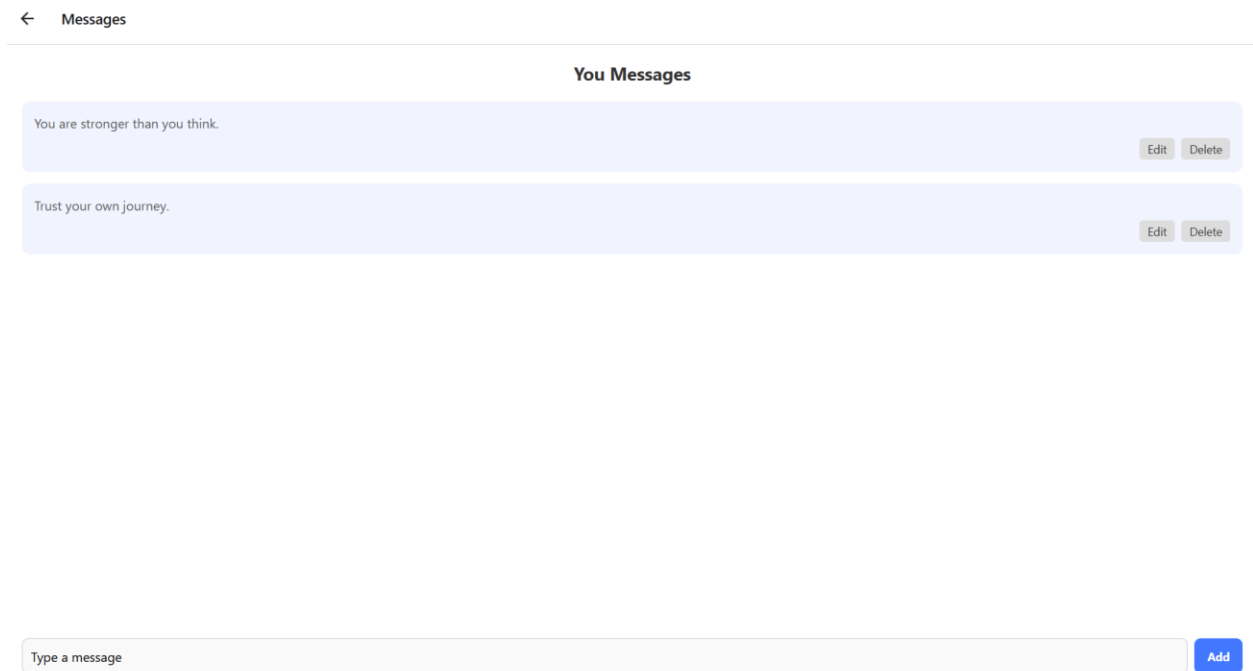
iOS Preview:



Web Preview – Home Screen



Web Preview – Messages Screen



GitHub Repository:

You can view the full source code and project files on GitHub:

<https://github.com/PritPatel450/MessageDirectoryApp>