Smartphones Based Web Development Final Project Report

CHAT APP

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INDEX

<u>CHAT APP</u>

1.1   Problem Statement

Private messaging and even group conversations are too necessary in today's world. A chat app where people can share their ideas and communicate would be really helpful. In this project, I will build a real-time chat application.

1.2   Description

This application provides a convenient mode to users for communication. Chatting over messages is always more convenient that talking on phone. In this application, following activities are performed by user:

➢ The user will be able to register himself in the chat application. At the time of registration, he will even have an option to add his profile picture.

➢ Once the user is registered, he can login to the app by inserting respective username and password.

➢ User will also have an option to login through Facebook.

➢ After login, the logged in user will be able to view list of all the users available.

➢ One can then select any user from list of users. After that the specific user will be visible in recent chat list of logged in user.

➢ Then the logged in user can continue to chat and send messages.

➢ Various types of messages sent in this app are text messages, picture messages and share location.

➢ Every message will be associated with a timestamp and status. Possible status of messages is 'READ' or 'DELIVERED'.

➢ One can also load previous messages in collection view by clicking on *'Load Earlier messages' text.*

➢ User can logout of the application by clicking on Logout button in navigation bar of Recents table view.

1.3   Application Flow
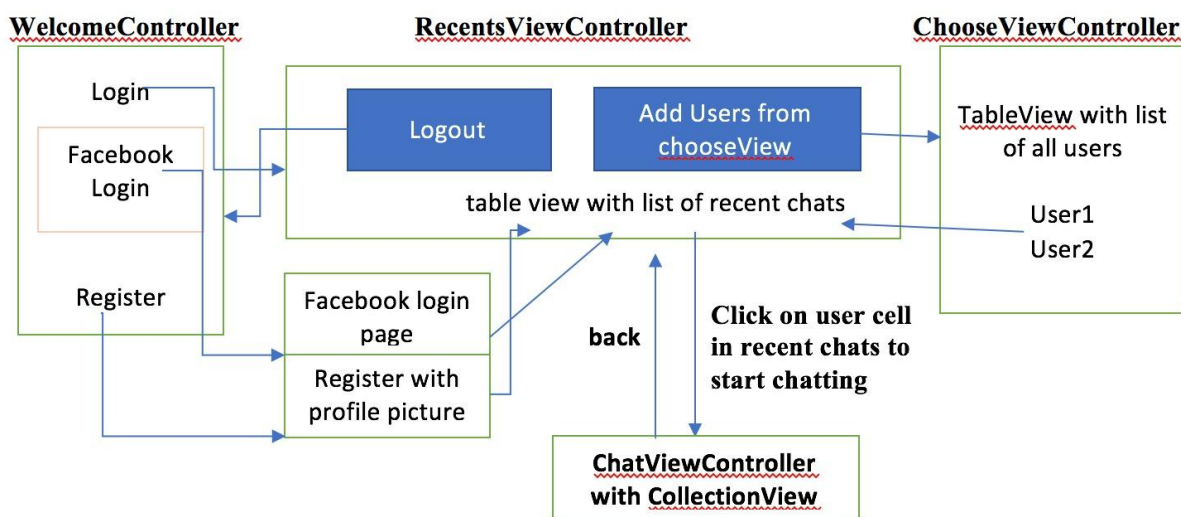
1.4   Storyboard Screenshot
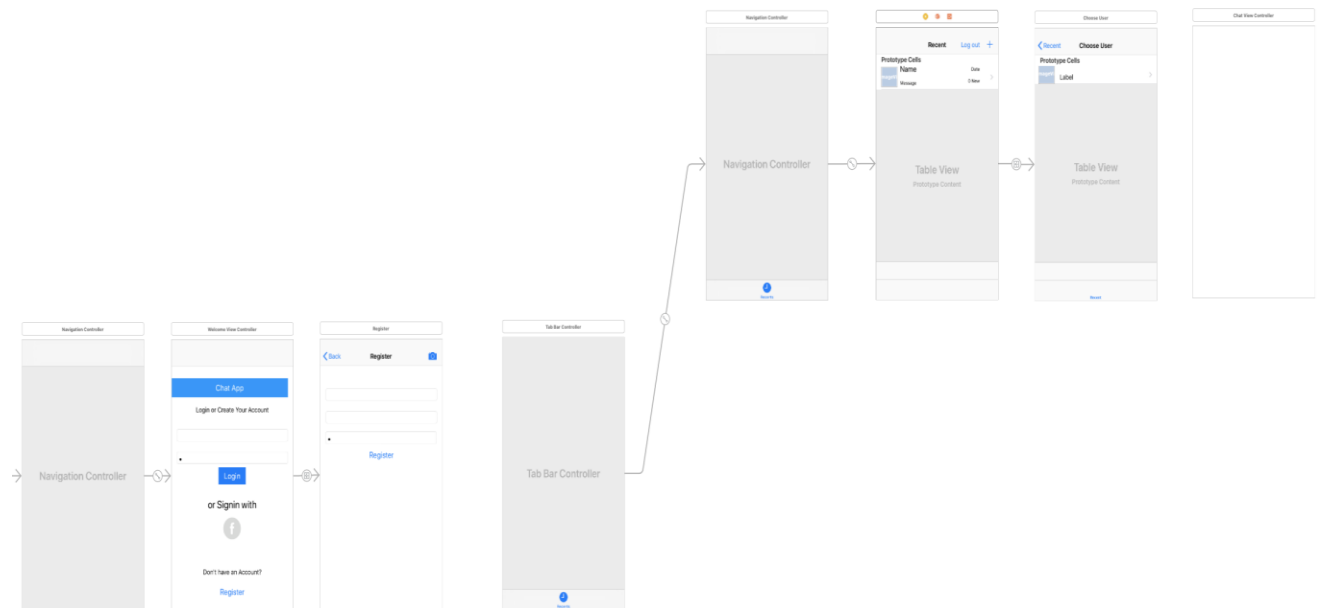
1.5   Technologies Used

➢ XCODE

➢ FIREBASE – MOBILE BACKEND FOR APIS, PROVIDES AUTHENTICATION
   AND ALSO AS HOSTING PLATFORM

➢ COCOAPODS – DEPENDENCY MANAGER FOR SWIFT
   Various dependencies included are:
   'Firebase/Database' – For storing recent chats and also users in recent
   chats
    'Backendless' – For storage and authentication of user.
   'JSQMessageViewController' – to control look and feel of messages

➢ BACKENDLESS – MOBILE BACKEND AND API SERVICES PLATFORM

➢ FACEBOOK SDKs

➢ COCOA CONTROLS

ProgressHUD – to show error pop ups

1.6   Salient Features
➢ Login
➢ Register
➢ Facebook login
➢ Add profile image during register
➢ Recent chats
➢ List of available users
➢ Custom message data (pictures, location and text)
➢ Timestamp
➢ Logout
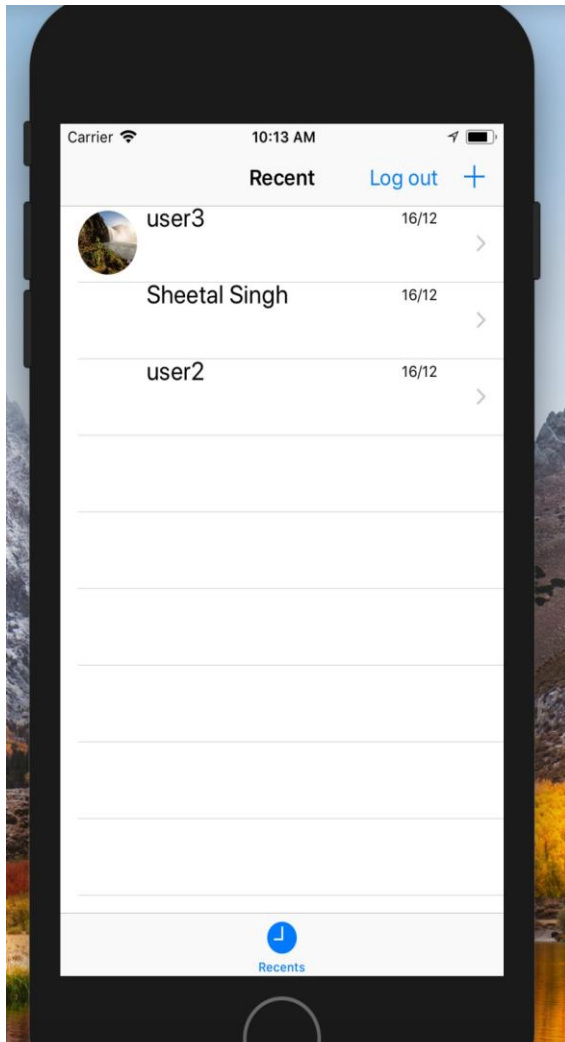
1.7   Application Screenshots
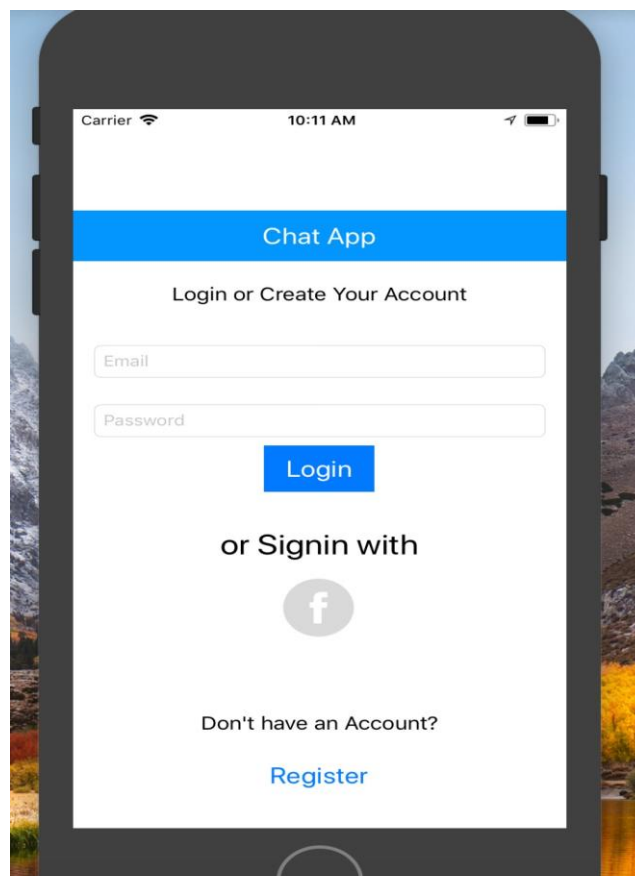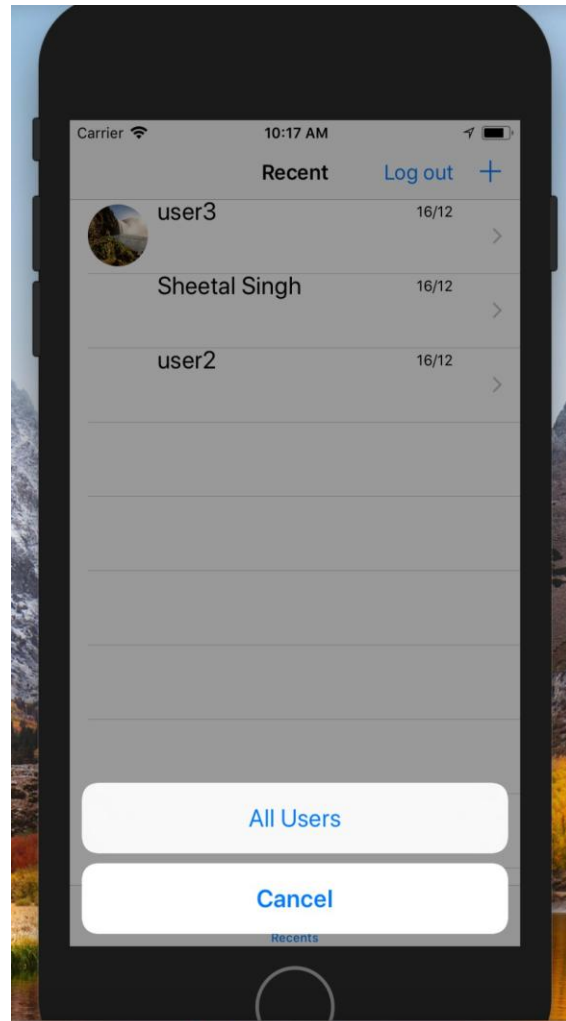

Login Screen
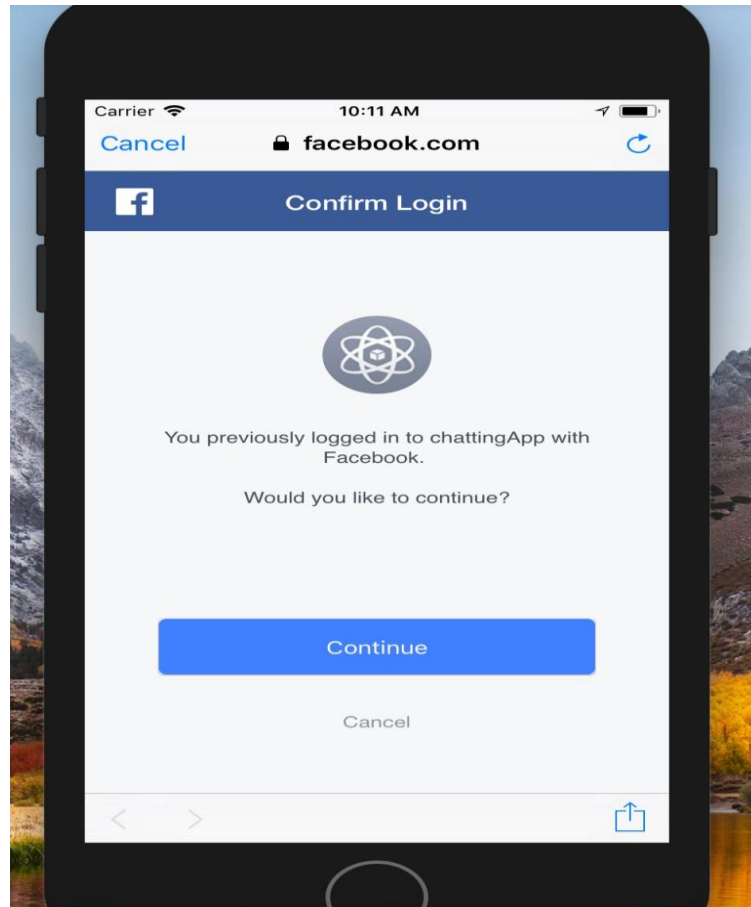
Facebook Login
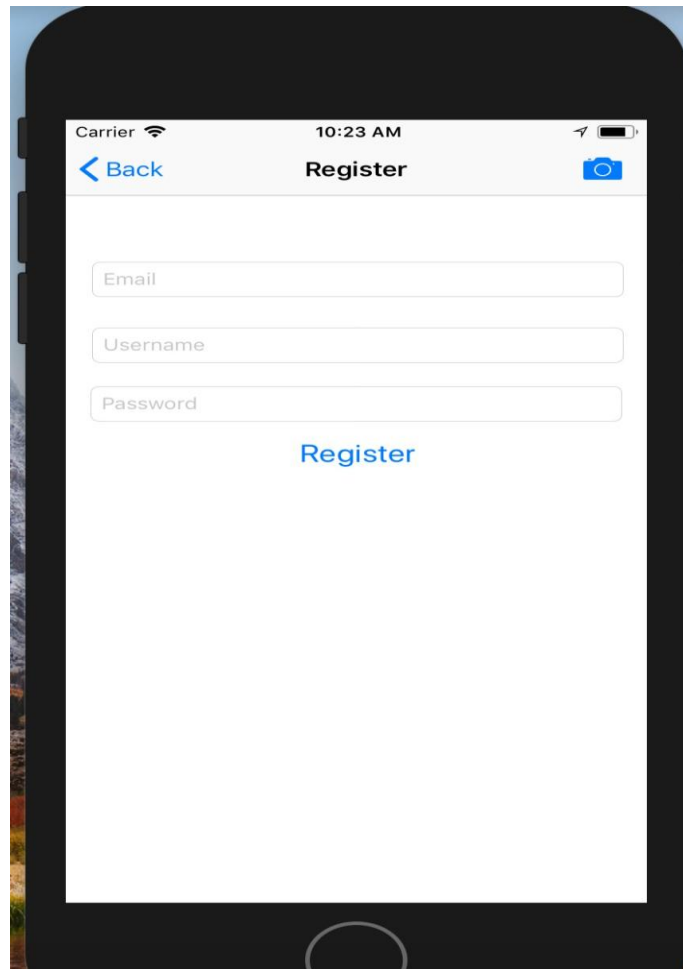
Register Screen

While registering an account, user can insert his profile picture by clicking on camera button in navigation bar.
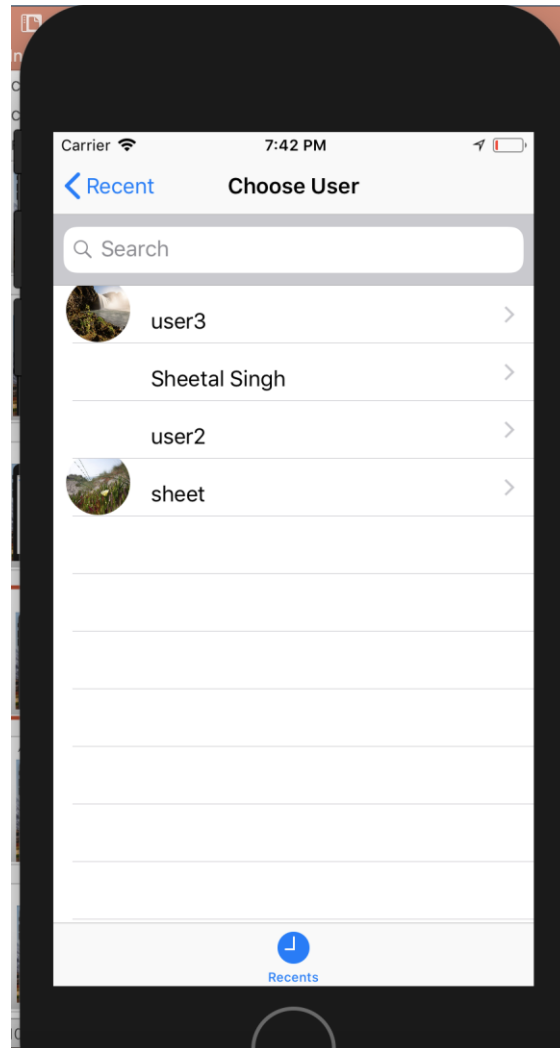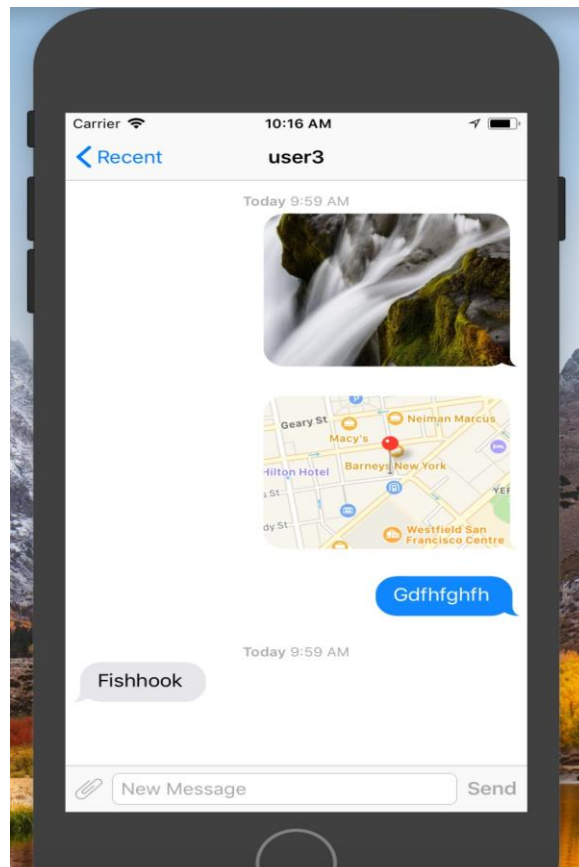
RecentViewController

Recent Chats

This table view controller contains users after selecting specific user from available users list. This table view will contain a record only when user will click on '+' button in navigation bar and go to all users list in ChooseViewController's table and select user and comes back to this controller(RecentViewController)

Every cell has a datestamp associated with it as per the last conversation with that user

ChooseUserViewController

All Available users

This ChooseUserViewController lists all the available users in our backendless database.

Chat Window

Click on specific cell (user) of table view of RecentsViewController to open this chat window and to start chatting.

One can also click on 'Recent' button in navigation bar to go back to RecentsViewController.

In this chat window, there is timestamp associated with every message. Also, there is a status associated with every message.
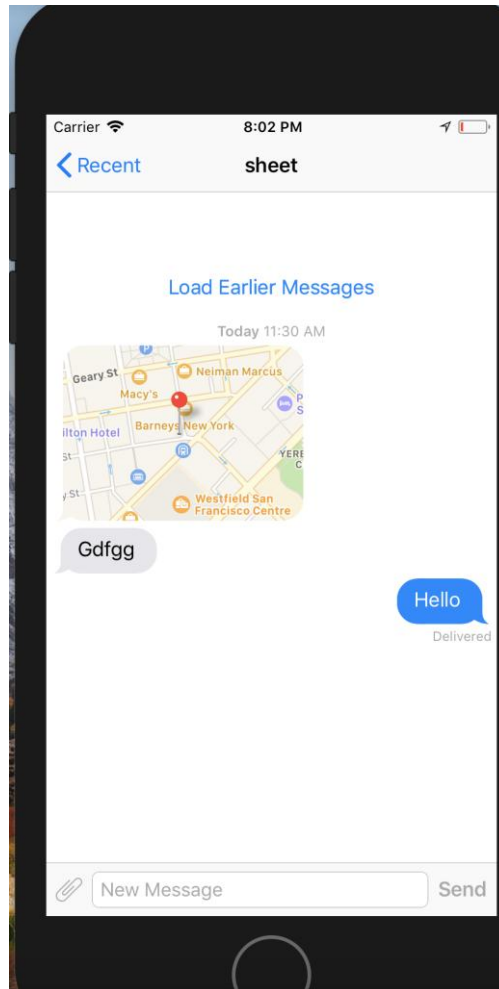
When user sends the message, the status is Delivered and when it is read by the person receiving the message, the status changes to Read in firebase.
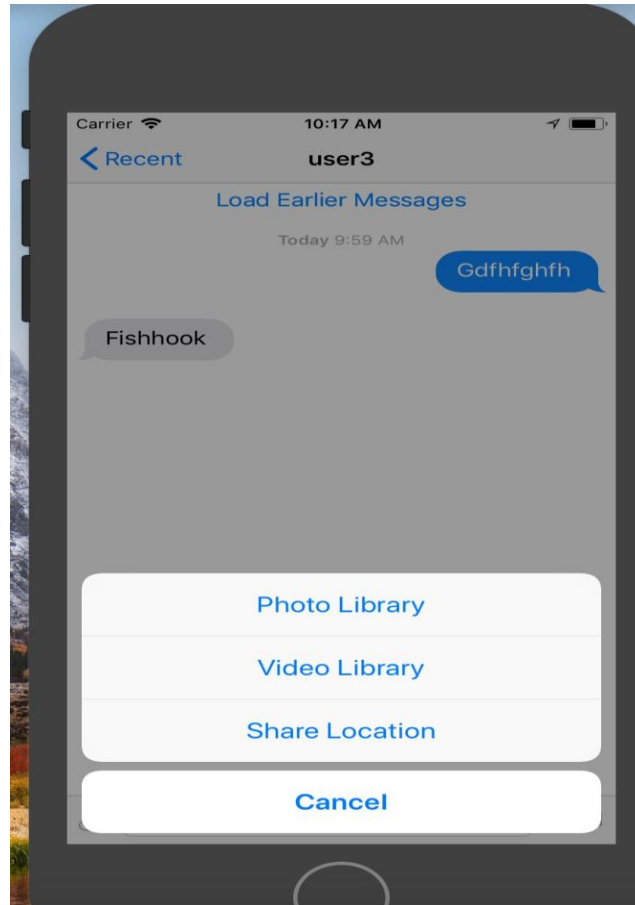
Message Types

One can send basically four types of messages in this app. These four types are video message, picture message, location message and text message. User gets to select these option through UIAlertViewController as shown in screenshot above.
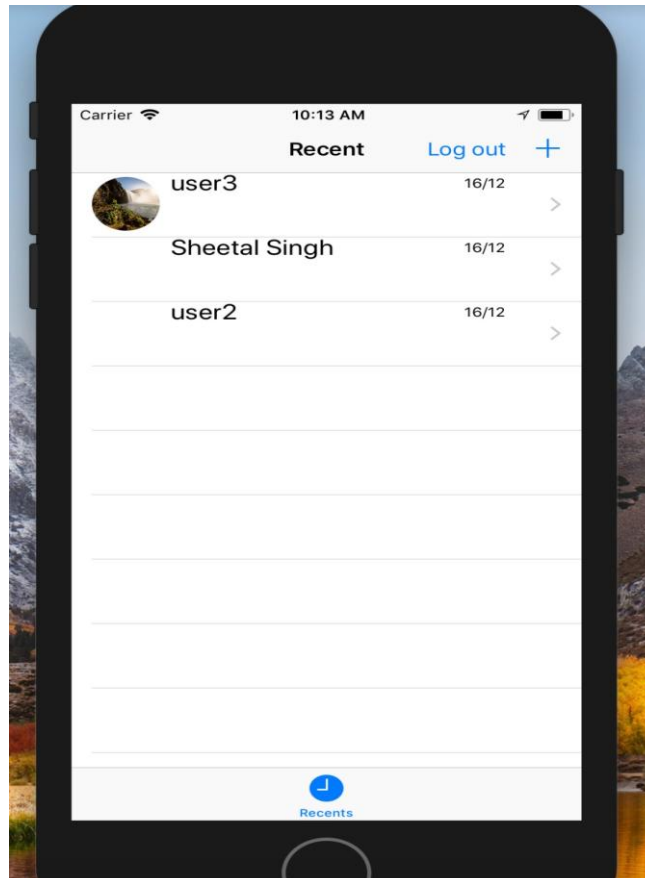
Logout Screen

User can logout from the application by clicking on Logout button in RecentViewController as shown in the screenshot above.

User can use this Logout button to log out of both custom account and Facebook account.

1.8 Database

Backendless:

In Backendless, all the images are stored in img folder as shown below and the Avatar field will contain the url to those images.

Firebase:

Firebase stores details of all recent tableview users and also all the chat messages.

chattingapp-efbc9
- **Message**
  - **2F013E95-594C-E23A-FF9F-B3E93CBA2E004086CF9B-C4B8-1E39-FFD2-A24316066C00**
  - **2F013E95-594C-E23A-FF9F-B3E93CBA2E00A7A8511D-3107-59B7-FF40-2A420DDFE400**
    - **-L0V9VXti-SaymVdLhXY**
    - **-L0V9WTK-nkoMR75vPuH**
    - **-L0V9XbFMYPkATOq2WE3**
    - **-L0WzUSInsyQ84HgSpX1**
      - **Message:** "Hello"
      - **date:** "20171216200202"
      - **messageId:** "-L0WzUSInsyQ84HgSpX1"
      - **senderId:** "2F013E95-594C-E23A-FF9F-B3E93CBA2E00"
      - **senderName:** "user3"
      - **status:** "Delivered"
      - **type:** "text" ✕
- **Recent**
  - **-L0V7K-TaKtovKPY9ktt**
    - **chatRoomID:** "2F013E95-594C-E23A-FF9F-B3E93CBA2E004086CF9B-C4..."
    - **counter:** 0
    - **date:** "20171216112124"
    - **lastMessage:** ""
    - **members**
    - **recentId:** "-L0V7K-TaKtovKPY9ktt"
    - **type:** "private"
    - **userId:** "2F013E95-594C-E23A-FF9F-B3E93CBA2E00"
    - **withUserUserID:** "4086CF9B-C4B8-1E39-FFD2-A24316066C00"
    - **withUserUserName:** "Sheetal Singh"

1.9 Future Scope

- ➢ Add group chat functionality
- ➢ Enable a user to have his Friend list
- ➢ Application settings page
- ➢ Calling functionality