

Project Report  
On  
**Group Chat App**  
(IOS Development)

by

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## Summary

This application is similar to a chat application where you can register yourself as a user using an email address and password and start interacting with friends and family. In this iOS application, Firebase is used to store cloud-based data storage. Firebase is also used for user Authentication. Once you are registered, you can login using id password and start using application.

As soon as you log in you can start the conversation with others users. Firebase database is used to store all the messages that are collected during user interaction in the group.

## Technology used

IDE:	Xcode
Language:	Swift4
Database:	Google Firebase Real-time Database
Authentication:	Firebase Auth
Design Pattern:	Model-View-Controller

## **Xcode**

Xcode is an integrated development environment (IDE) for macOS containing a suite of software development tools developed by Apple for developing software for macOS, iOS, watchOS, and tvOS. First released in 2003, the latest stable release is version 9.3 and is available via the Mac App Store free of charge for macOS High Sierra and macOS Sierra users. Registered developers can download preview releases and prior versions of the suite through the Apple Developer website.

## **Swift4**

Swift is a general-purpose, multi-paradigm, compiled programming language developed by Apple Inc. for iOS, macOS, watchOS, tvOS, and Linux. Swift is designed to work with Apple's Cocoa and Cocoa Touch frameworks and the large body of existing Objective-C (ObjC) code written for Apple products. It is built with the open source LLVM compiler framework and has been included in Xcode since version 6. On platforms other than Linux, it uses the Objective-C runtime library which allows C, Objective-C, C++ and Swift code to run within one program.

## **Firebase**

Firebase is both web and mobile platform that provides developers tools and service that help them to build high-end apps and increase the number of users.

### **Firebase Authentication**

Firebase Authentication is used to authenticate genuine user among fake user. For signing a user into the app, Firebase Auth access credentials from the user. These credentials are user's email address and password. Then, these credentials to the Firebase Authentication SDK. Firebase's backend services will then verify those credentials and return a response to the client.

Once you successfully sign in, we can access the profile information and we can control the user's access to data stored in other Firebase products.

### **Firebase Realtime Database**

Firebase Real-time Database allows you to build rich, collaborative application by allowing secure access to the database directly from client-side code. Data is stored locally, and even while offline, real-time events continuous to fire and provides the end user a responsive experience. When the device regains connection, the Real-time Database synchronizes the local data changes with the remote updates that occurred while the client was offline, merging any conflicts automatically.

## CocoaPods

CocoaPods is an application level dependency manager for the Objective-C, Swift and any other languages that run on the Objective-C runtime, such as RubyMotion, that provides a standard format for managing external libraries. It was developed by Eloy Durán and Fabio Pelosin, who continue to manage the project with the help and contributions of many others. They began development in August 2011 and made the first public release on September 1, 2011.

CocoaPods is strongly inspired by a combination of the Ruby projects RubyGems and Bundler.

Podfile of the project:

```
platform :ios, '9.0'

target 'Flash Chat' do

  use_frameworks!

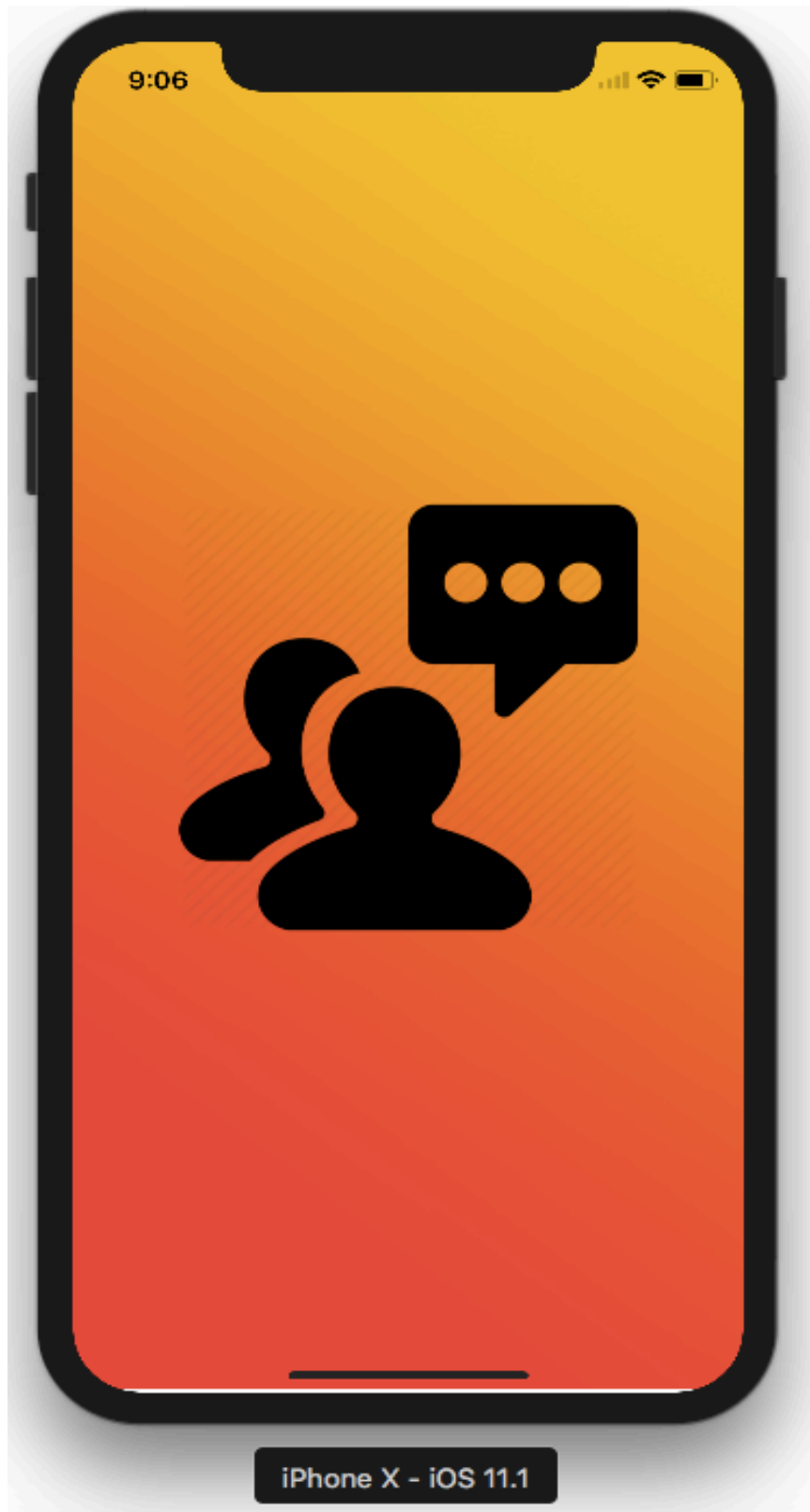
  pod 'Firebase'
  pod 'Firebase/Auth'
  pod 'Firebase/Database'
  pod 'SVProgressHUD'
  pod 'ChameleonFramework'

end

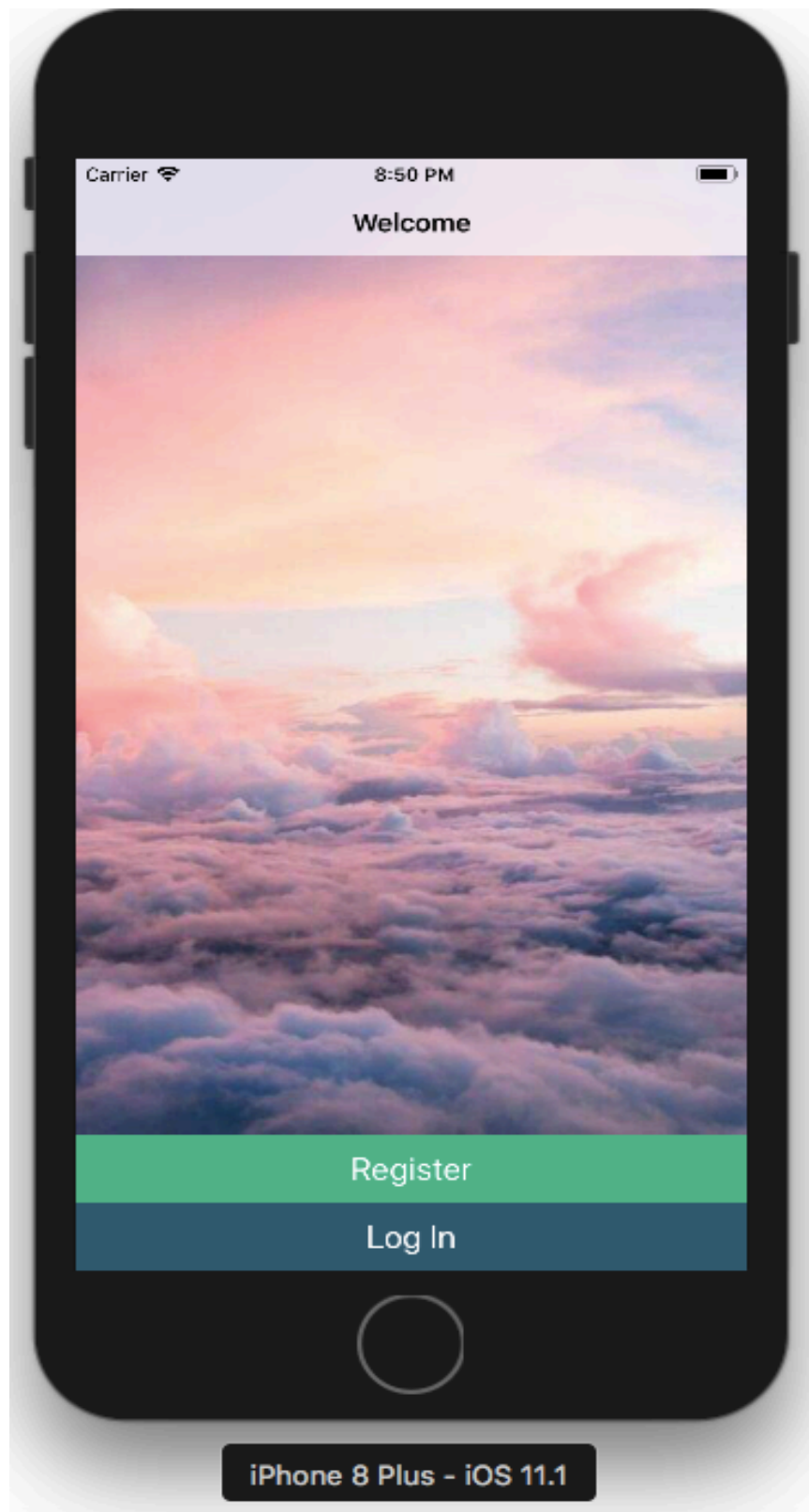
post_install do |installer|
  installer.pods_project.targets.each do |target|
    target.build_configurations.each do |config|
      config.build_settings['CLANG_WARN_DOCUMENTATION_COMMENTS']
= 'NO'
    end
  end
end
```



main.storybord

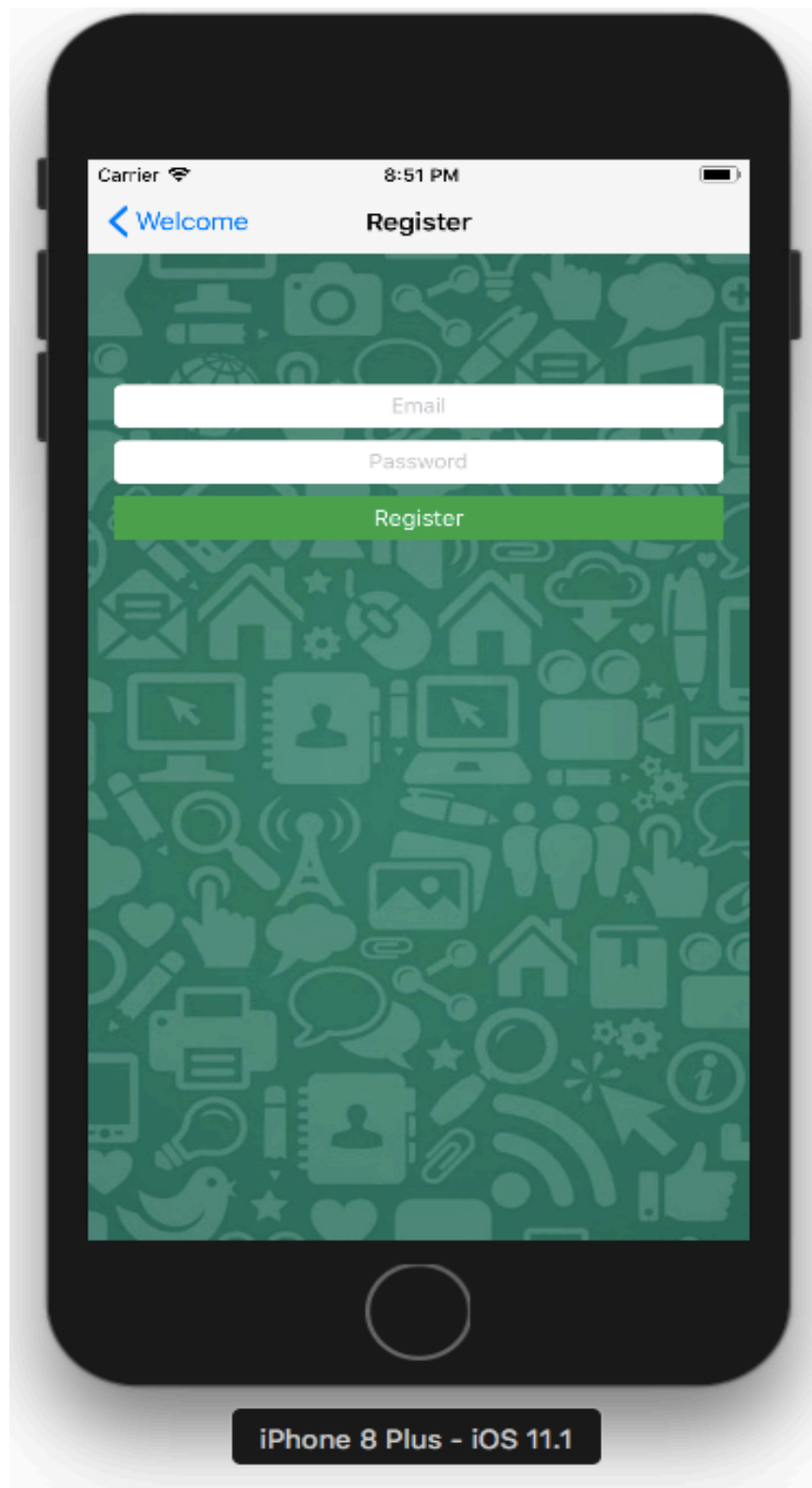


Home Screen

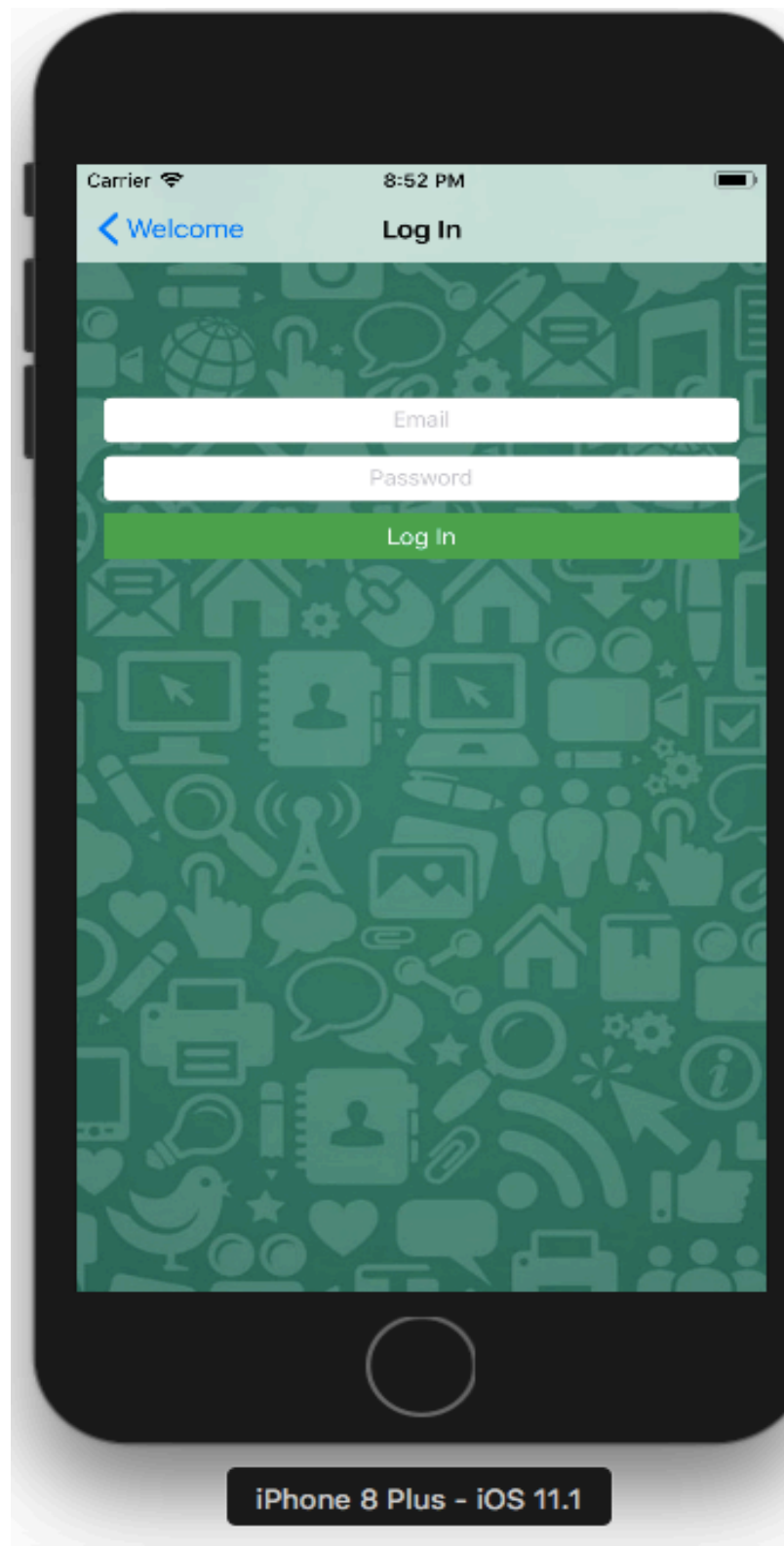


Welcome Page

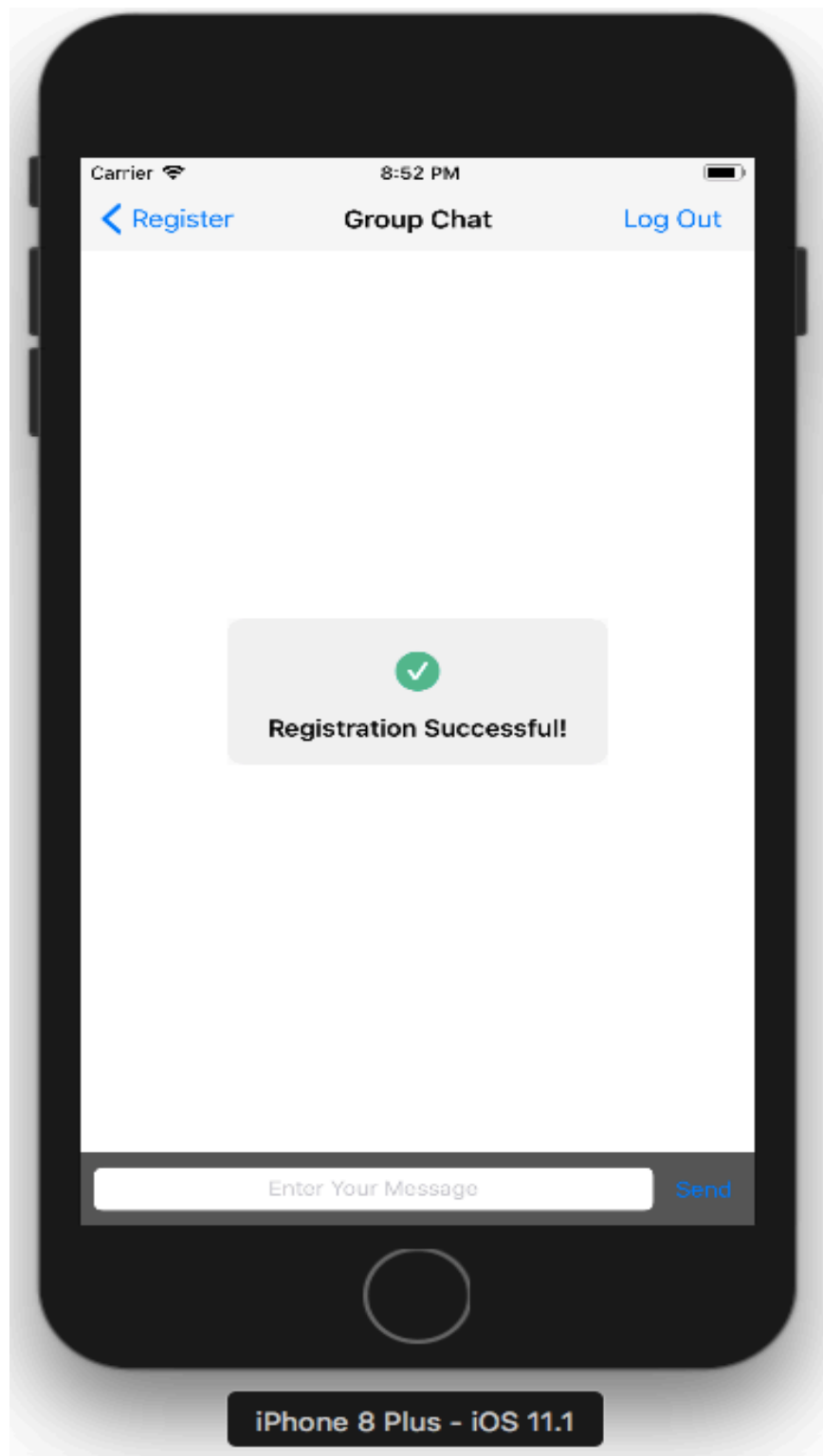




Registration page

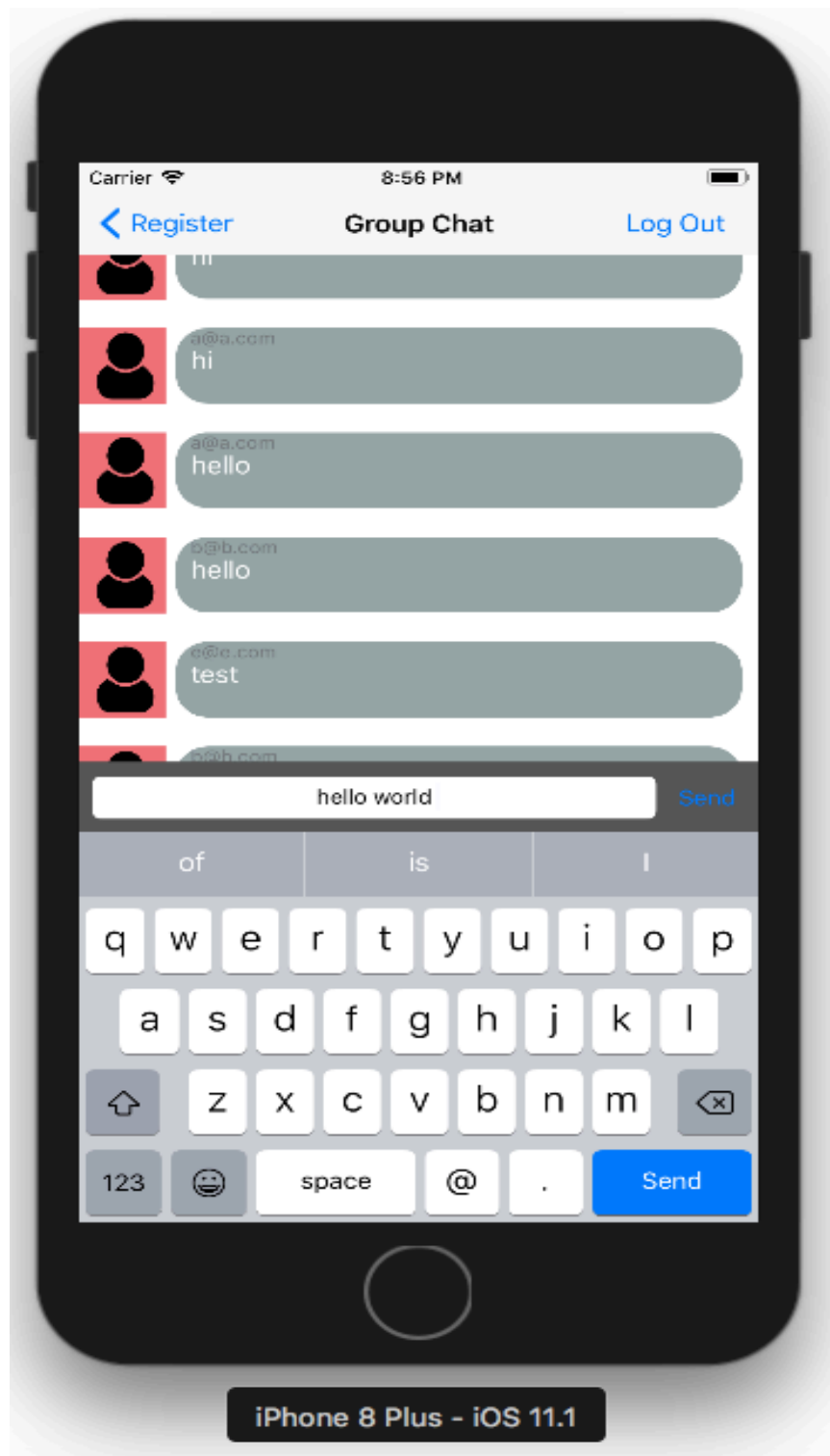


Login Page

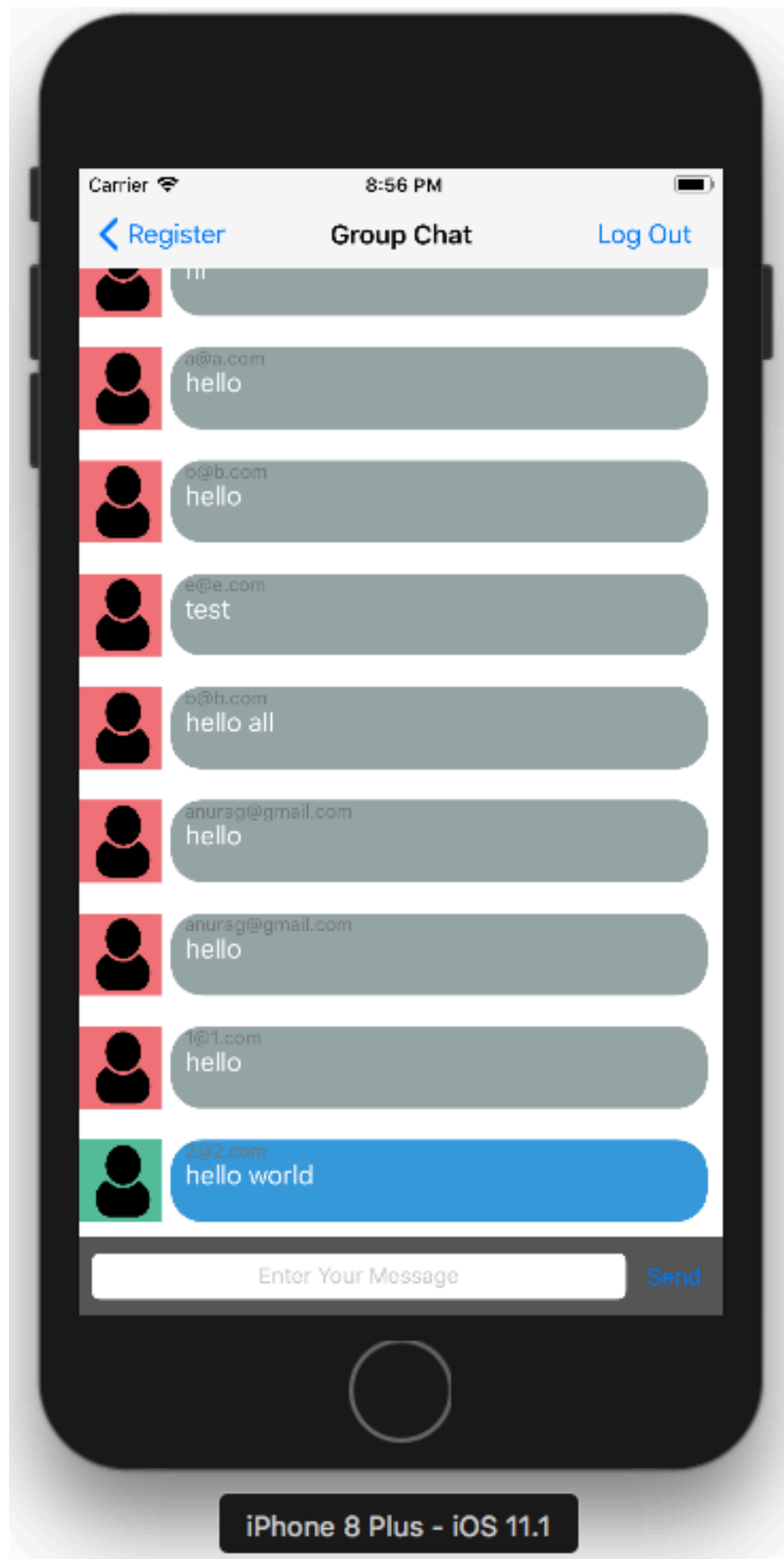


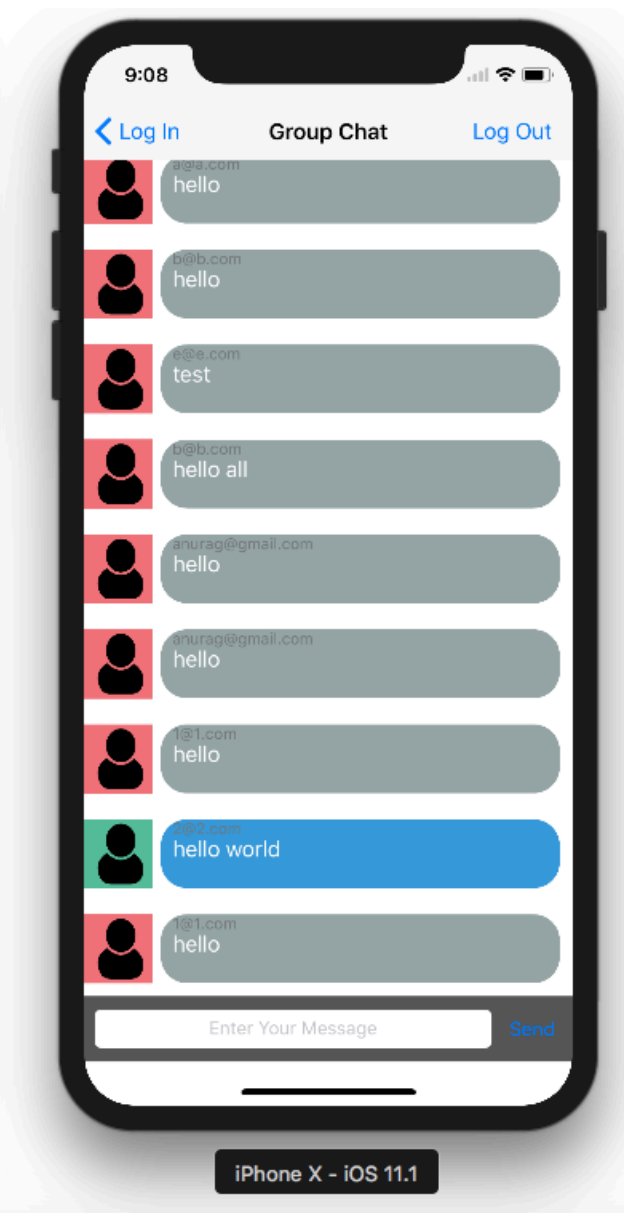
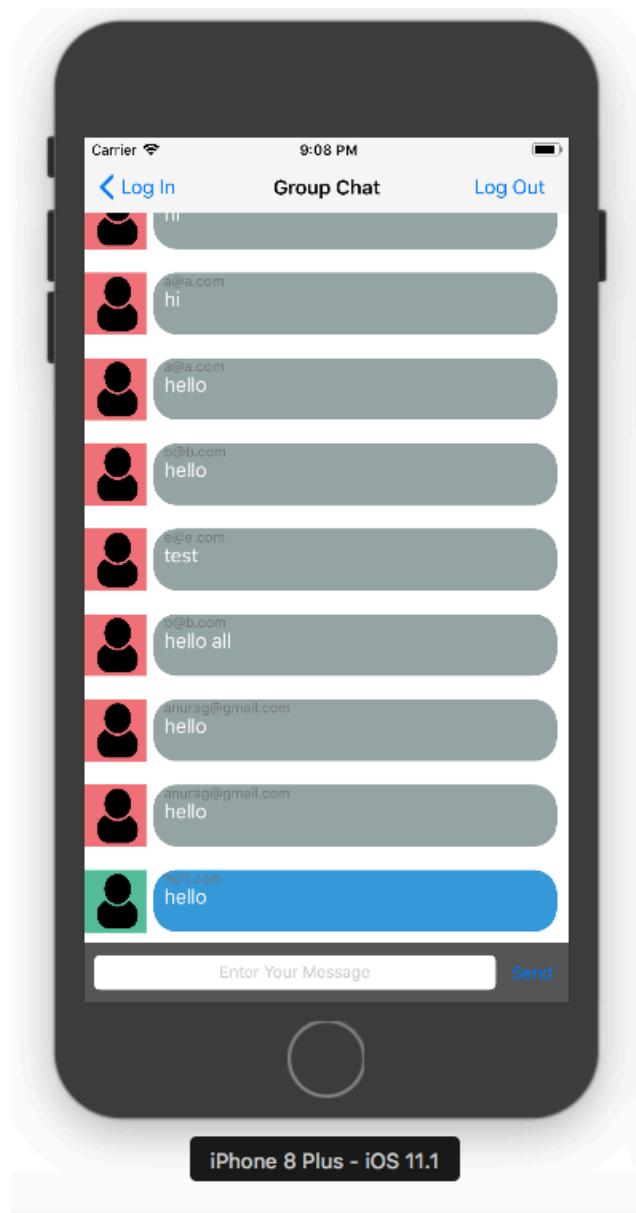
iPhone 8 Plus - iOS 11.1

Once user Register Successfully



Chat Room





Flash Chat

Authentication

Project Overview

DEVELOP

Authentication

Database

Storage

Hosting

Functions

ML Kit

STABILITY

Crashlytics, Performance, Test Lab

ANALYTICS

Dashboard, Events, Audiences, Attrib...

GROW

Predictions, A/B Testing, Cloud Mes...

Spark

Free \$0/month

UPGRADE

## List of users

<div> <div> </div> <div> <div>Project Overview</div> <div> <div>DEVELOP</div> <div> <div>Authentication</div> <div>Database</div> <div>Storage</div> <div>Hosting</div> <div>Functions</div> <div>ML Kit</div> </div> </div> </div> <div> <div>STABILITY</div> <div>Crashlytics, Performance, Test Lab</div> </div> <div> <div>ANALYTICS</div> <div>Dashboard, Events, Audiences, Attrib...</div> </div> <div> <div>GROW</div> <div>Predictions, A/B Testing, Cloud Mes...</div> </div> <div> <div>Spark</div> <div>Free \$0/month</div> <div>UPGRADE</div> </div> </div>	<div>Flash Chat</div> <div>Database</div> <div> <div>DATA</div> <div>RULES</div> <div>BACKUPS</div> <div>USAGE</div> </div> <div> <div>Realtime Database</div> </div> <div> <div> <div>https://flash-chat-7ffdb.firebaseio.com/</div> <div>flash-chat-7ffdb</div> <div> <div>Messages</div> <div> <div> <div>-LBmhuCfjgXGnhugtrcl</div> <div> <div>MessageBody: "test"</div> <div>Sender: "a@a.com"</div> </div> </div> <div> <div>-LBmhwdRN5p4ZyhcWEuP</div> <div> <div>MessageBody: "hello"</div> <div>Sender: "a@a.com"</div> </div> </div> <div> <div>-LBmnRbVPaMNBqxEdL6q</div> <div> <div>MessageBody: "hello"</div> <div>Sender: "b@b.com"</div> </div> </div> <div> <div>-LBmnYG0Dkwnb_fc21nf</div> <div> <div>MessageBody: "hello a@a.com"</div> <div>Sender: "b@b.com"</div> </div> </div> <div> <div>-LBmo0uC4VePtsVylBrR</div> <div> <div>MessageBody: "hello b@b.com"</div> </div> </div> </div> </div> </div> </div>
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## Database

## References

- [1] [https://en.wikipedia.org/wiki/Swift\\_\(programming\\_language\)](https://en.wikipedia.org/wiki/Swift_(programming_language))
- [2] <https://en.wikipedia.org/wiki/CocoaPods>
- [3] <https://firebase.google.com/docs/database/>
- [4] <https://firebase.google.com/docs/auth/>
- [5] <https://en.wikipedia.org/wiki/Xcode>
- [6] <https://firebase.google.com>
- [7] <https://github.com/relatedcode/ProgressHUD>
- [8] <https://github.com/SVProgressHUD/SVProgressHUD>