Khulna University of Engineering and Technology

Report on:
Weather Application
Course No: CSE 3218
Course Title: Mobile Computing Laboratory

Submitted by:
1. S. M. Shadman Sakib(1707065)
2. S. M. Rakib- Ul- Islam (1707074)
3. Sk Nahid Hasan(17007080)
4. Md. Kaab Islam (1707084)
5. Md. Jahid Hasan (1707085)
6. Emtias Ahamed (1707089)

Department of Computer Science and Engineering
Khulna University of Engineering and Technology
Khulna-9203

Introduction:

Swift is a powerful and intuitive programming language for iOS, iPadOS, macOS, tvOS, and watchOS. It is safe by design, yet also produces software that runs lightning-fast. *iOS* (formerly iPhone OS) is a mobile operating system created and developed by Apple Inc. exclusively for its hardware. In our project, we have used swift code as a language on the Xcode platform. We have used both firebase and JSON parsing in our project. The main features of our project "Weather App" are given below:

Features:

Firstly, the user needs to sign up by giving a username, email, and password. These data are saved in the real-time database of firebase. When a user tries to log in using the username and password, the username is fetched and matched with the stored usernames of the firebase database. If matched, then the password is compared. If it is also matched then the user will be able to enter the main storyboard. This is the authentication system.

Then after entering the app, there is a search box at the top. If the user searches for a city, the current weather condition of that city will be displayed in that view. Here JSON parsing is used. We have used OpenWeatherMapApi for the current weather conditions of a city. From there necessary data are fetched and shown on this page.

username

email

password

Sign Up

Search

Sunday

35 °C

Haze

Feels Like : 35   °C

Teligati Khulna

Other details

100	92.2	15
Humidity	windflow	rainfall
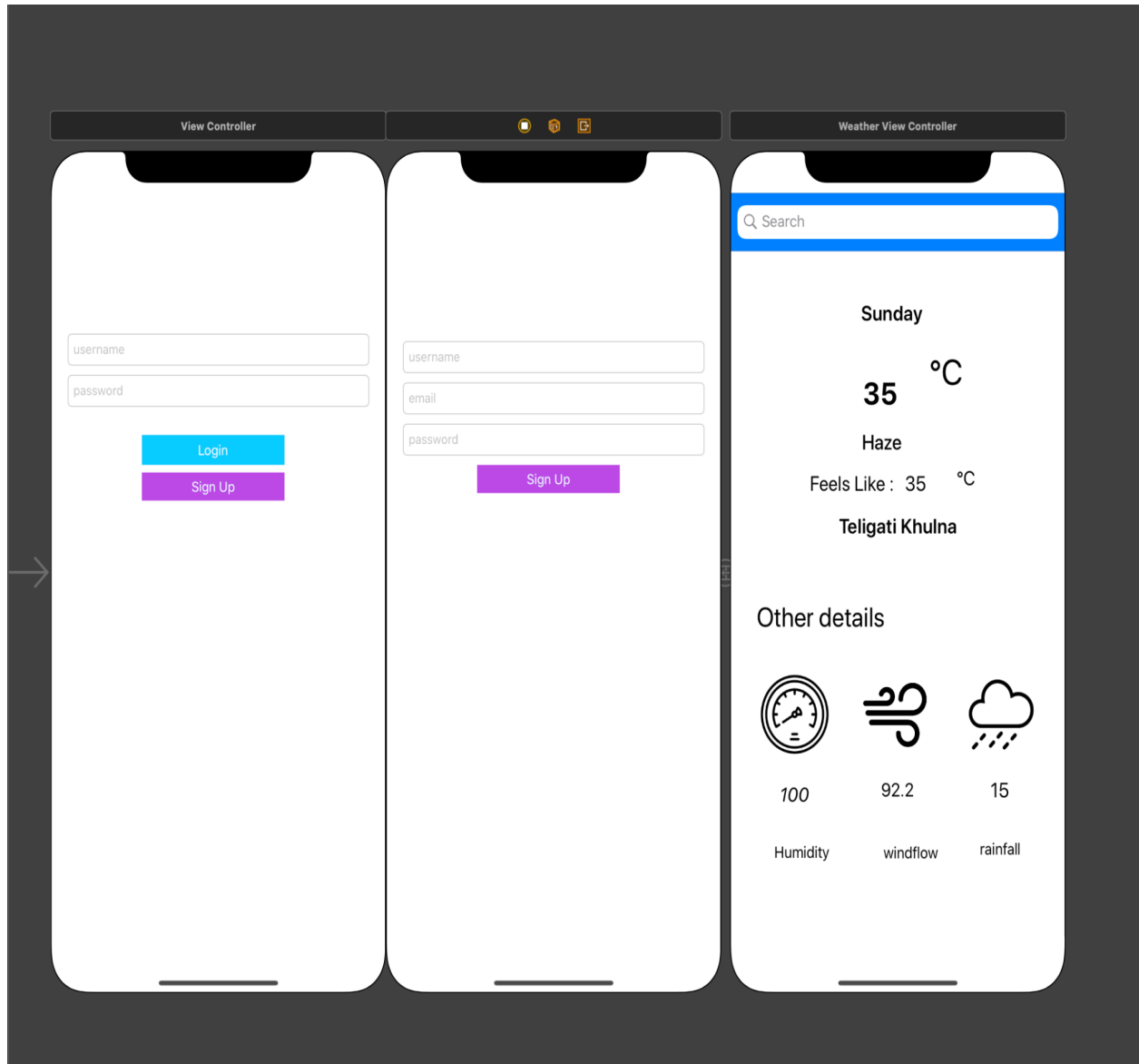
Figure: All three view controllers.

Sign Up

Check if User already or not?

Exists

Don't Exists

Send Error and Don't save Data

Accept Request and Save Data

User Name
Email
Password

Read Data Request

Write Data Request

Firebase Realtime Database

Login

User Name
Password

Read Data Request

Firebase Realtime Database

Send User details

exist

Check if the user exists

Don't exist

Compare Input pass and pass from db
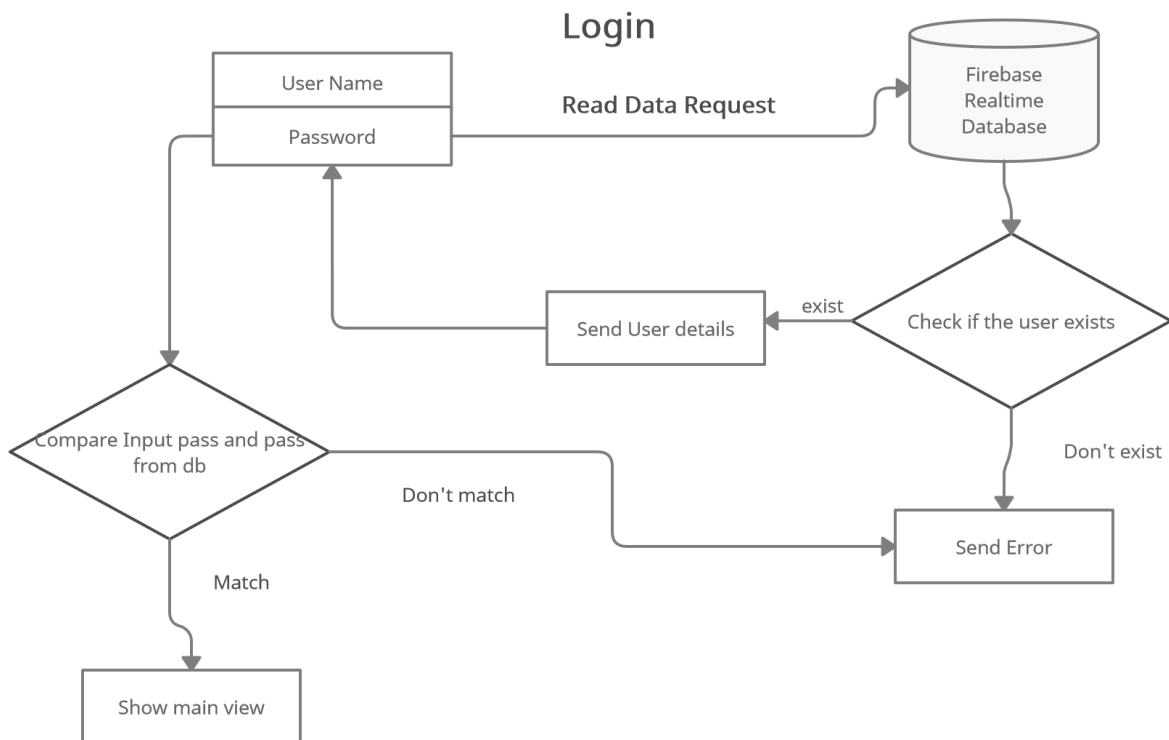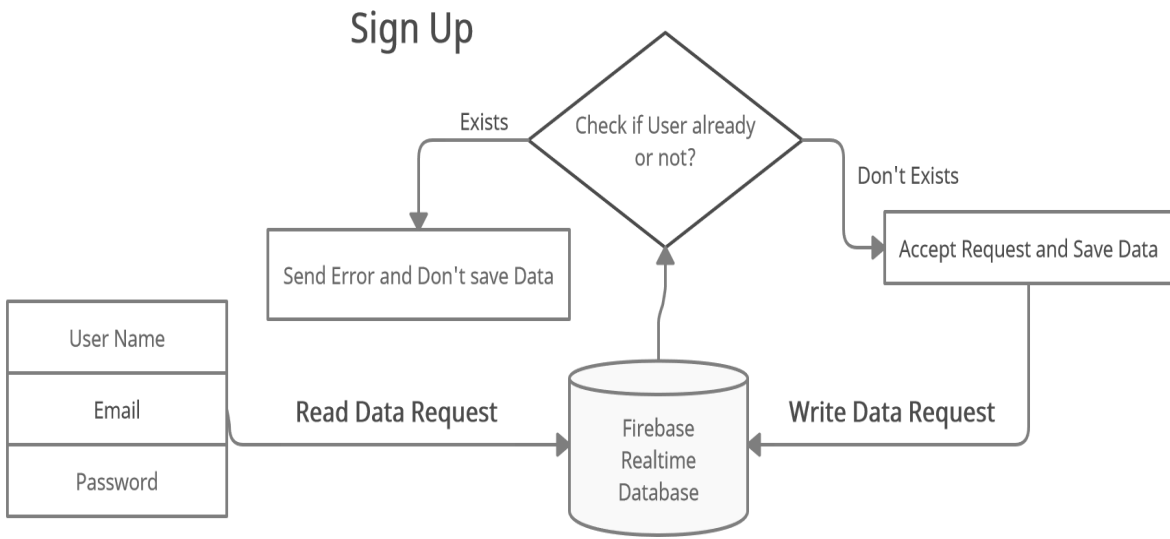
Don't match

Send Error

Match

Show main view

Figure : Flow diagram of the application.

User Manual:

After opening the application the user will see the login page. If the user is already signed in he/she just needs to give the username and password to enter otherwise he/she needs to click the button 'sign up' which redirects to the page sign up. Then the user needs to register by giving his/her name, valid email, and password.

After login, the user can see a search box at the top from where the user can search any city of the world to see the current weather condition of that city including temperature, feels like temperature, humidity, windflow, rainfall, and weekday.