Group Members: Taijbir Kohli, Carter Antrobus, Muhammad Qamar, Tanvir Pahwa, Jacob Landicho

Project Overview

The idea for our project is to have a mobile fitness app. This app will have numerous features, such as tracking steps, geolocation and calories. Users will be able to make a profile using their email, username and password. There will also be options to log in with other options such as Google and Facebook. This profile will keep track of their daily goals, activities and calories. This information will be stored using Google Firebase. We aim to have a fluid user interface that users may quickly adapt to and use to improve their daily fitness lives. Each member will have specific responsibilities: Taijbir will formulate the application homepage, Carter will create the Calendar/planning page, Muhammad will oversee the notification page, Tanvir will handle sensors and tracking, and Jacob will handle the MyProfile page.

Project Scope

Our primary goal is to have a simple-to-use fitness that users may use to improve their daily fitness activities and strengthen their long-term fitness goals. This project will be developed over a 2-month period with a deadline of December 6th, 2023. Our group aims to have around 3-5 commits per week to maintain project goals and keep up with the final deadline. Our team will also participate in weekly scrum meetings to perform thorough code reviews and keep track of any significant or minor changes to the project. Additionally, these meetings will allow members to easily share any new ideas they want to implement.

Responsibilities

Taijbir Kohli – Homepage

Carter Antrobus – Calendar/planning page

Muhammad Qamar – Notification page

Tanvir Pahwa – Sensors/tracking

Jacob Landicho – MyProfile page

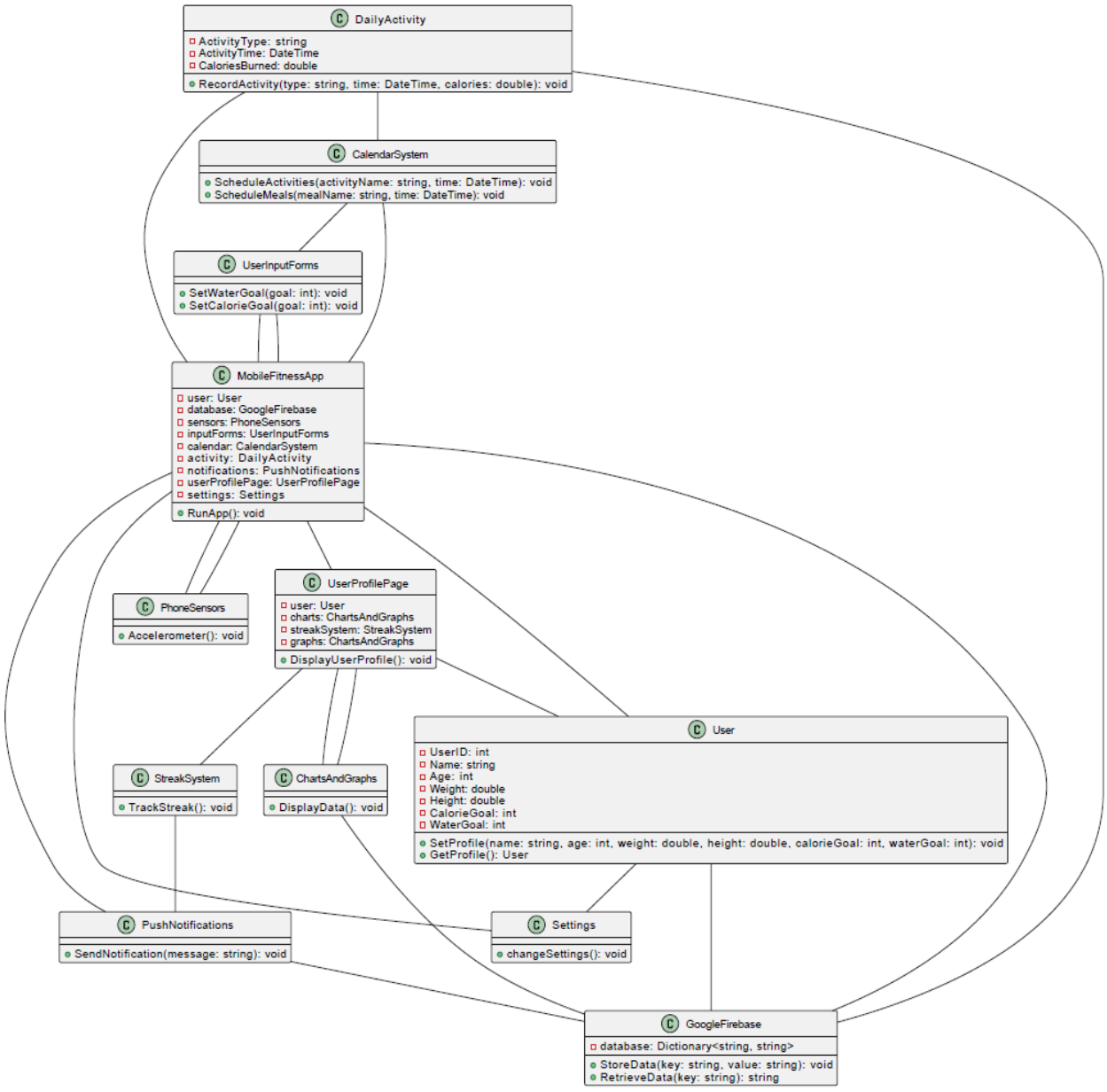
Key Features

One of the key features our team aims to implement is unique profiles that will store the user's fitness data using Google Firebase. The collected data will include live tracking through the phone's sensors, such as tracking steps through the accelerometer sensor. Other data, such as the tracking of water or calorie goals, will utilize user input forms. Users will also be able to make plans to schedule activities or meals using a built-in Calander system. Furthermore, calories burned through daily activities may be recorded based on the time and type of activity and added to a daily total. Charts and graphs that track and display fitness data will easily allow users to witness their progress over numerous time periods, from days to years. Push notifications will also be sent to users to remind them to perform their daily activities with a streak system to motivate users further to maintain their fitness goals.

Code Design

In order to implement a robust code design and reduce the amount of code in the main file, each page will be put in a separate file. This will also be true for each class file. Moreover, the basic code structure of the application will be a scaffold for the top bar and the bottom navigation bar. The top bar will hold a button on the left for a drawer, the middle will show an icon, and the far right of the top bar will display a user icon/profile picture. The bottom navigation bar will hold all the necessary icons for different pages. The body will return a row to display the page the user is viewing. This main row will consist of numerous cards and forms displaying fitness information. For example, on the homepage, there will be cards for daily activities, calories burned and calorie goals.

Here is UML diagram breaking down the structure of the application:



Mock User Interface

Here is a textual breakdown of the mock user interface:

Drawer on right top side:

- Settings at the top

Bottom bar:

Homepage

- Goals like water calories, daily activities like biking swimming, meals
- These will be placed in cards

Calendar/Schedule/Planning

- Daily meals, activities, goals for the week

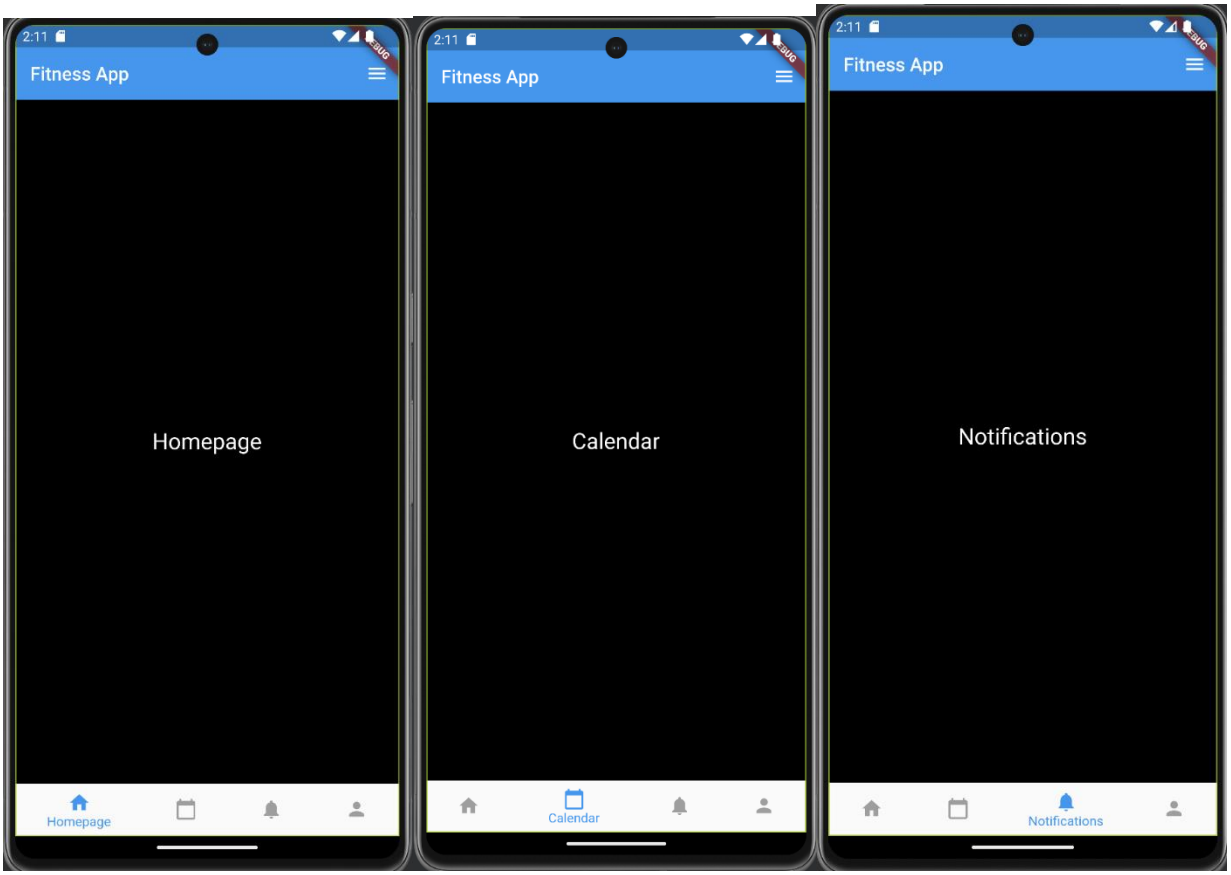
Notifications

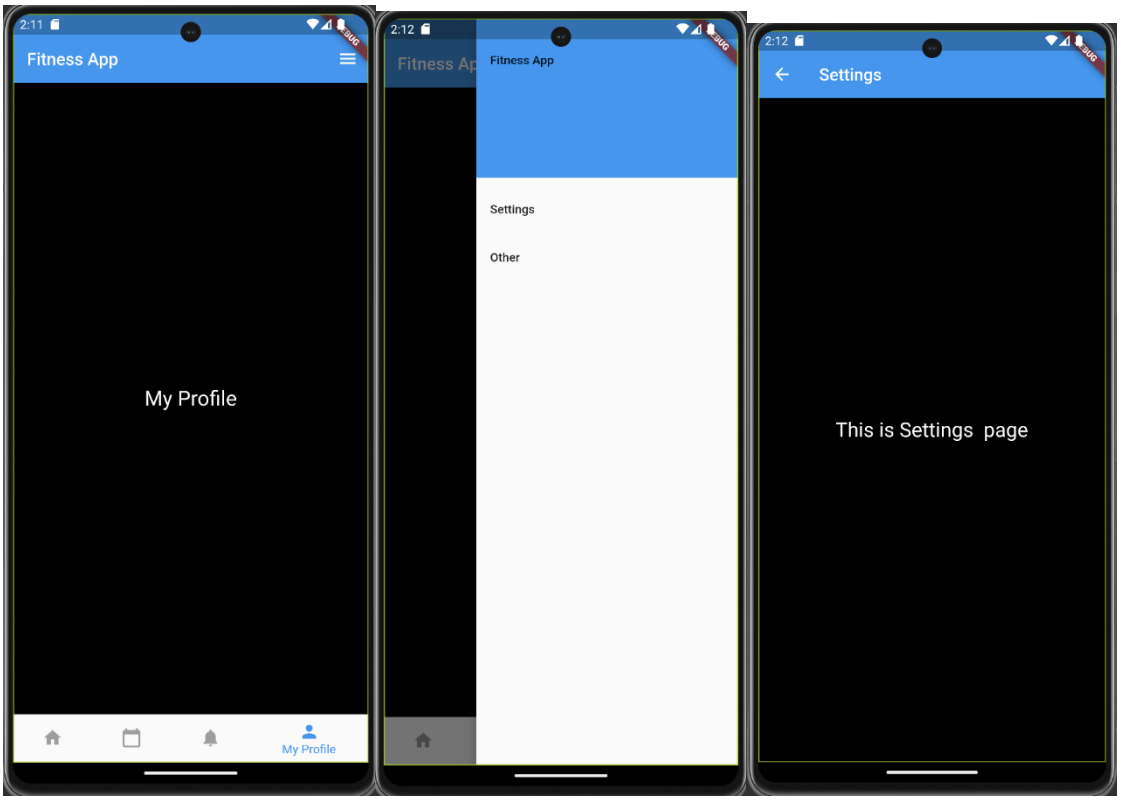
- Push notifications for daily activities (exercises, meals, water, calorie goals)

My profile

- Progress tracking (graphs, charts), streaks

Here is a visual breakdown of the mock user interface:


2:11
Fitness App
Homepage
Homepage
2:11
Fitness App
Calendar
Calendar
2:11
Fitness App
Notifications
Notifications


2:11
Fitness App
My Profile
My Profile
2:12
Fitness App
Settings
Other
2:12
Settings
This is Settings page