

Technical Report



EasyMed

CSCI4100U, Mobile Devices

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OVERVIEW OF PROJECT

Introduction:

Every single day, there are millions of people around the world that must take medications in order to take care of their health. There are several cases in which people don't take their medications and that is because of two main reasons. One, they are unsure of the instructions, two, they just simply forget. EasyMed is a medication reminder app that will help solve these two problems.

The Problem:

Patients who are required to take medication, frequently forget or incorrectly take their prescribed medication. This problem does not exist because the patients are trying to ignore the doctor's advice and pharmacist's instructions, rather, the instructions often involve multiple steps or are too confusing to comprehend. Although, this may seem like a small issue, but at a higher level, this problem is bigger for patients that live with chronic illnesses and have to take multiple medications, multiple times throughout the day. For elderly people, they tend to be inconsistent with the time the medication should be taken or fail to take it at all.

The Solution:

Our group would like to propose a solution to this problem. Introducing, **EasyMed!** EasyMed is an mobile application which reminds users to take their medications and provide them with instructions on how to take a particular medication. The mobile application will allow users to scan or enter the information of the medication and save it to their profile. This will allow users to see all the instructions of the medication straight from the palm of their hands and set up the schedule for each medication. This way, you never have to worry about forgetting anything! In the case, where everyone is working from home or is unable to leave their home, they can connect with their local pharmacist via the EasyMed app and this will allow their pharmacist to review their medications and ensure that nothing is wrong with their schedule and instructions. Users may also request medication refills and ask questions if they have any!

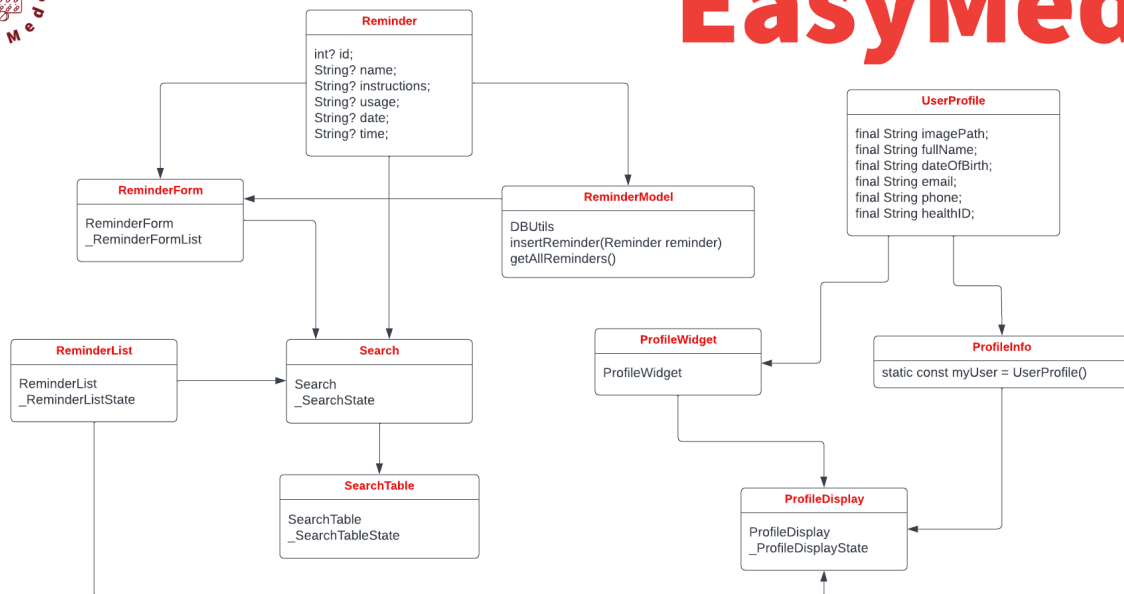
GROUP MEMBERS & WORK BREAKDOWN

Member Name:	Work Done:
Fadi Chamas	Geolocation, Geocoding, Map
Chanuka Goonetilleke	Local & Cloud Storage, Google Login
Kaathihan Luxmachandran	Internationalization
Preet Panchal	Frontend/UI for App Views, Tech Report
Eihab Syed	Backend for App Views

CODE DESIGN



EasyMed



USER'S GUIDE

Login with Google:

Before you login with your Google account you will need to add your SHA-1 and SHA-256 keys to the firebase project. Here is how its done:

1. Open your system terminal and type the following commands.

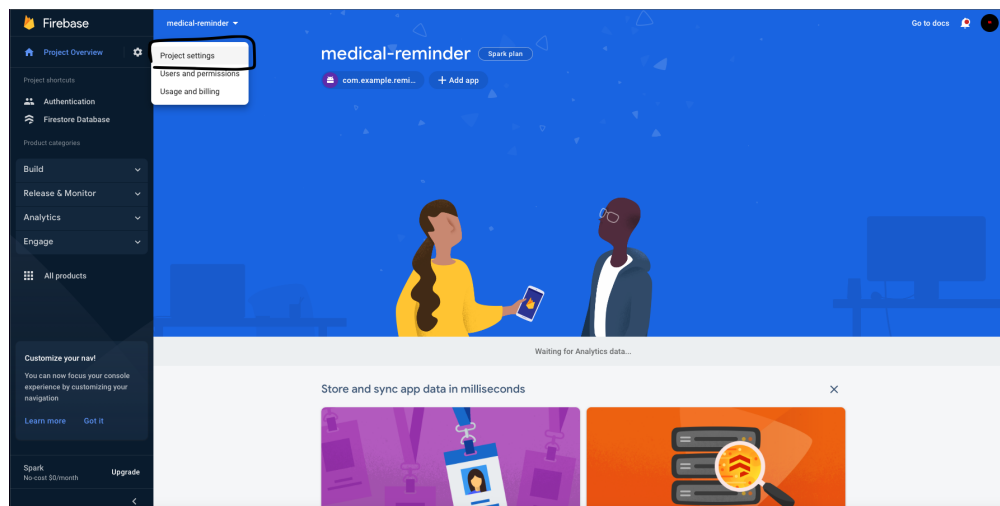
Windows:

```
keytool -list -v \  
-alias androiddebugkey -keystore %USERPROFILE%\android\debug.keystore
```

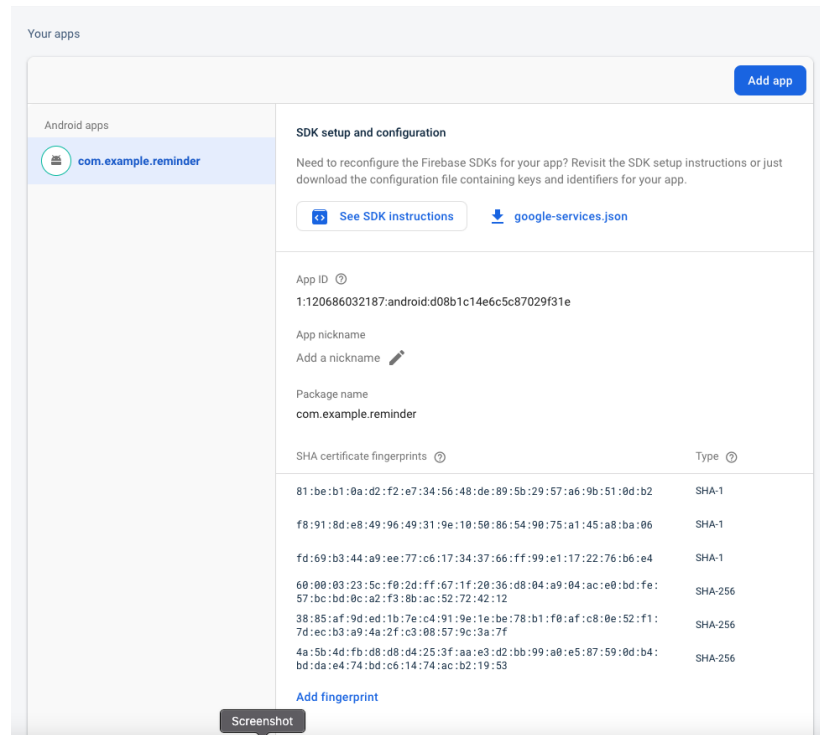
Mac/Linux:

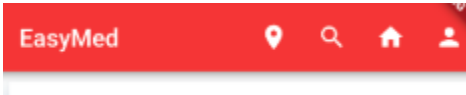
```
keytool -list -v \  
-alias androiddebugkey -keystore ~/.android/debug.keystore
```

2. Note down the SHA-1 and SHA-256 keys.
3. Login to the “medical-reminder” Firebase Project.
4. Go to “Project Settings”.



5. Scroll down to the “Your apps” container and under “SHA certificate fingerprints” enter your SHA-1 and SHA-256 keys.



6. Now you are able to sign-in with Google for the Easy Med app.
 7. If you are unsuccessful with steps 1-6, there is an option to sign in as guest to view full functionality of app, except for profile page, as there will nothing to display.
 8. When logged in, you will be navigated straight to the home page where it will black to begin with. This is because you must add medications from the search page to your schedule for them to show up.
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9. Click the first icon to navigate to the map page where you can view local pharmacies near you to visit.
 10. Click on the second icon to navigate to the search page where you will see a list of medications to add to your profile.
 11. Click the third icon to return to home page to view your schedule at any point in time.
 12. Click the fourth icon to navigate to profile page to view your user information.

FUNCTIONAL REQUIREMENTS

1) Multiple Screens & Navigation:

Our app consists of 5 main views/pages:

- Login page (google login or
- Home page (displaying med schedule with all reminders)
- Search med page (select meds to add to schedule)
- Map page (to search local pharmacies)
- Profile page (basic user info)

A user is able to easily navigate through all of these pages.

2) Dialogs & Pickers:

“Medication successfully added to Profile” dialog shows success message for users when they add medication to profile from the Search page.

3) Snackbars & Notifications:

“Medications pulled from Firebase” snackbar to confirm that cloud storage is working and medications are being pulled from the cloud database. Snackbar goes away after 45 seconds. Notification for reminder shows up once added to the user’s schedule.

4) Local Storage:

The reminders are stored in the local storage with sqflite, but the medication list is stored in firebase.

5) Cloud Storage:

List of medications, instructions and its dosage is all on the cloud storage via Firebase.

6) Data Tables & Charts:

List of medications on the Search page is done using a Data table. Unfortunately, since our idea and app does not involve any numbers, we decided not to include a chart as it did not make sense with our idea.

7) Maps:

Location icon in navbar navigates to a flutter map that shows the user's current location once they allow location to be tracked.

8) Geolocation:

The current location of the user is determined and a map will load. The map is interactable, you are able to zoom in and out and also move around the map to find pharmacies.

9) Geocoding:

Geocoding is used to find the locations of the pharmacies using an API. This will help our client find the nearest possible pharmacies to meet their medical needs.

10) Internationalization:

Added multiple language support for profile page.