CSE 3200: System Development project

Project Title : Safety App

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Introduction:

Safety app is built to help the users and their family members to remain safe while outside.

This app will track each and every users location so user's can know where their family member are at any moment .

The unique drive mode can help the users to have a disturbance free driving.

Objectives:

a. Real time location detection.

b. Custom family circle for users.

c. Nearest pathway between two users.

d. Real time speed measurement during driving via GPS.

e. Auto phone ringmode change with vehicle speed.

f. Send SMS(user busy) automatically to caller while driving.

Motivation:

1) To ensure the safety of our family members:

2) To ensure a disturbance free driving experience.

3) To reduce the accident rate caused by mobile disturbance duing driving.

System Overview:
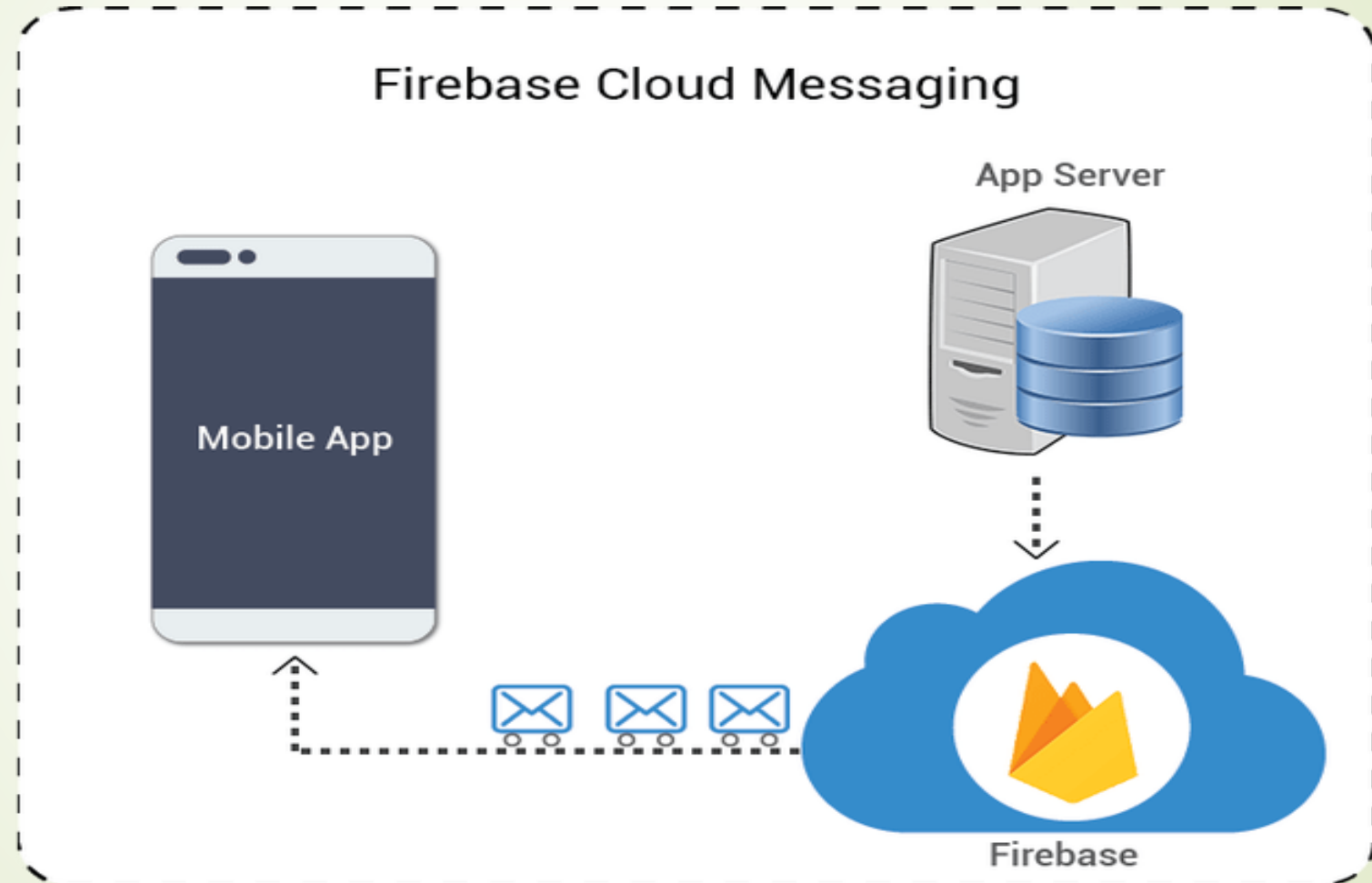
Why Firebase?

1)To store User Information

2)To validate user Authentication

3)To store user's Family member list

4) Real time User Location

Firebase Data

App Functionality

Methodology and Implementation

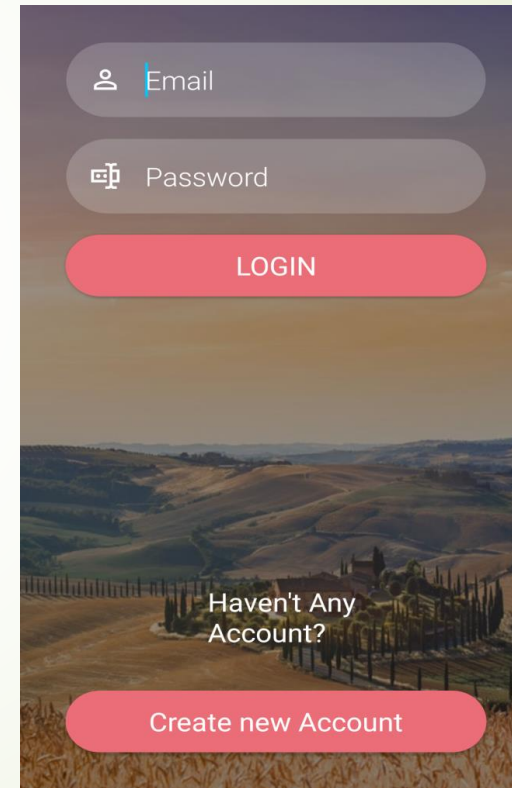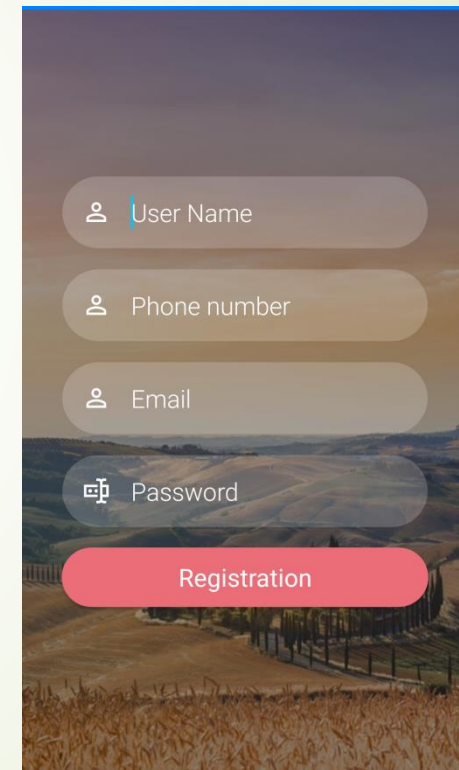**Login Activity:** We used user's email and password as verification for valid user account.

Methodology and Implementation

Registration Activity: This activity requires some information like user name, phone number, email and password . Which is stored in firebase.

Methodology and Implementation

Location tracking on map: In this activity users can see the locations of their family members on real time as well as see the shortest path to any family member.
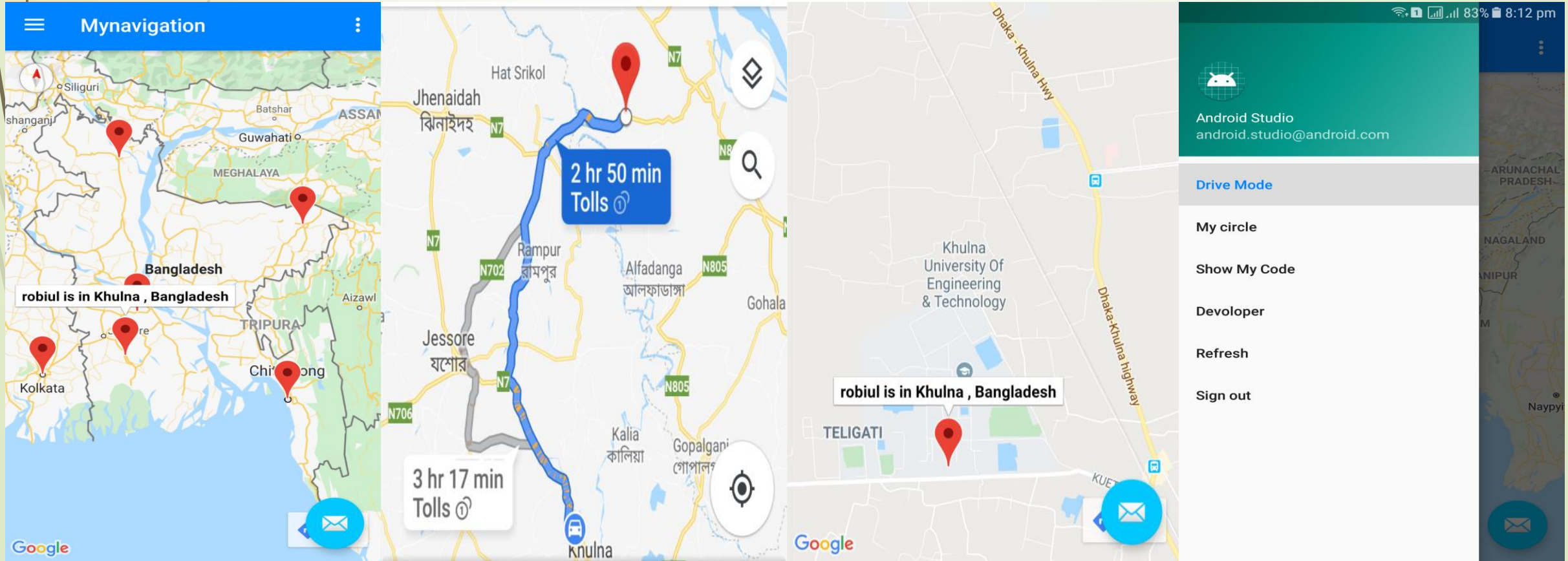
Methodology and Implementation

View User ID and Circle Creation:In the User Id View activity users can view their own id and on the circle creation activity users can add other user as family using their unique user id code.
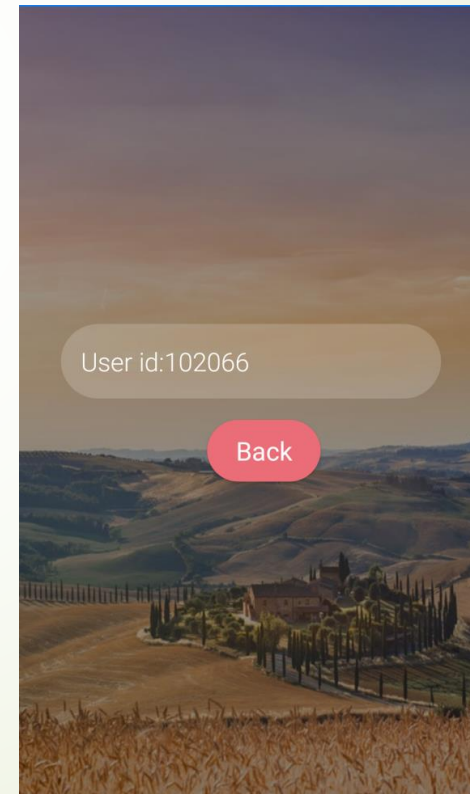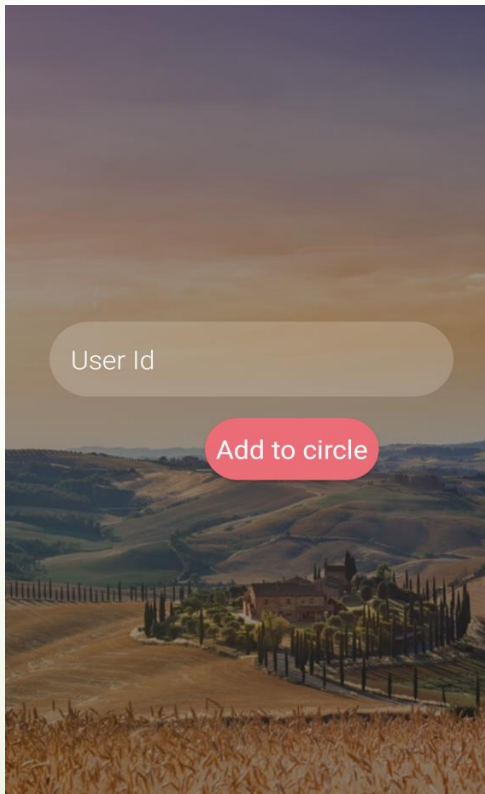
Drive mode:

i. GPS based location detection and speed measurement::
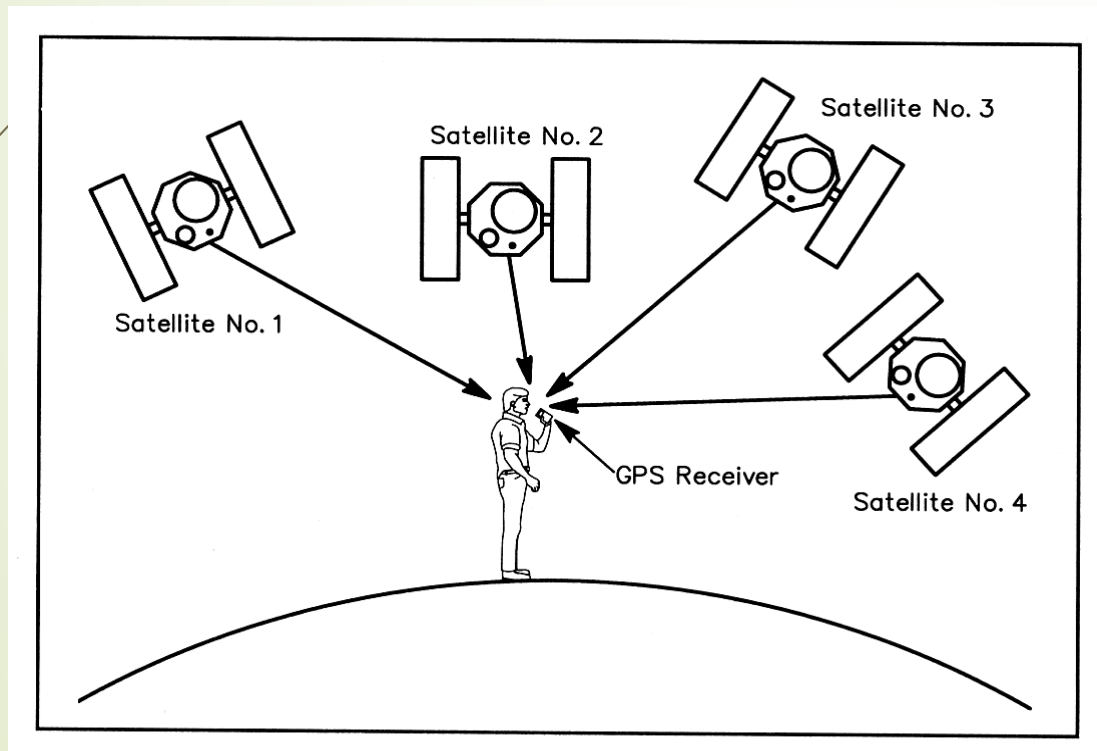
2. Automatic ringmode change and SMS service:
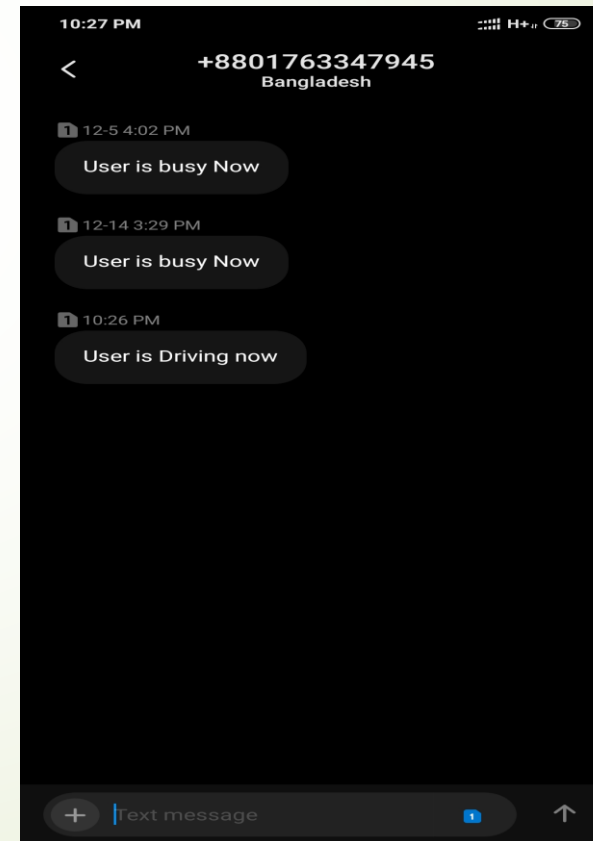
7/11/2021

Methodology and Implementation

About Developer: This Activity shows some information about us . custom JSON file was used to parse the information from firebase.

Back

Name:Md. Robiul Islam
Occupation:Student
Age:21
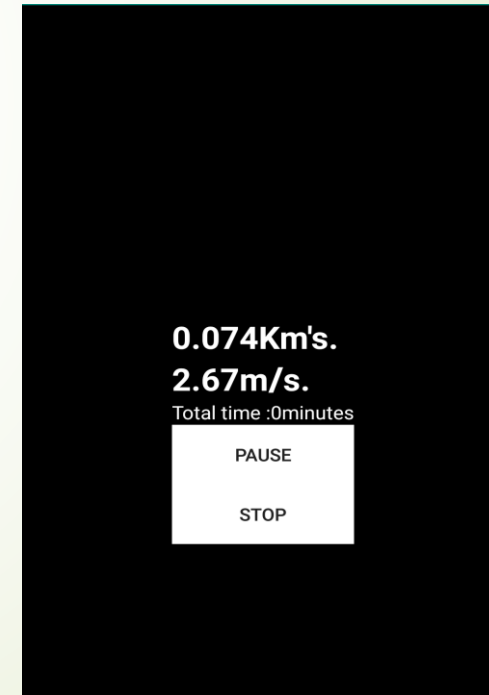Psesent Address:Kuet,Fulbarigate,Khulna
Parmanent Address:Shovarampur,Ambikapur,Faridpur
phone:01763347945
email:robiulislamstudent12@gmail.com

Name:Atik sahariar
Occupation:Student
Age:21
Psesent Address:Kuet,Fulbarigate,Khulna
Parmanent Address:Shovarampur,Ambikapur,Faridpur
phone:01763347945
email:robiulislamstudent12@gmail.com

Challenges have been faced and Solution

a) Adding firebase to the project.

b) App crushing while detecting location.

c) Not enough documentation on only Gps based location tracking and speed measurement.

Limitations:

a.Firebase storage (Limited).

b.Response time delay.

c.Valid Email verification.

d.Username, email unchangeable.

e.User cannot delete his/her account.

f.GPS base tracking is not 100% accurate.

g.Slowly moving vehicle speed can not be measured accurately.

h.Not all phones have built in GPS chip inside.

Future Improvement:

a.Storage can be increased.

b.Real time location sharing.

c.Accident detection While driving.

d.Auto inform family and nearest hospital upon accident.

e.Will be uploaded on google app store.

f.User friendly and beautiful UI.

Conclusion:

"Safety" app is a GPS based location app that can help a user in many ways. A user can see his/her family member's location on real time. The drive mode will give the users a disturbance free driving experience thus minimizing the accident risk.

References:

a)Head First Java

   ---by Kathy Sierra

b) Android Application Development All-in-One For Dummies

c) https://firebase.google.com/

d) https://stackoverflow.com/

e) https://developer.android.com/

Thank You