Teller

Chavi Ralhan, Vipul Gupta, Sachin Singh, Pooja Yadav, Sparsh, Yash

School of Computer Science and Engineering, Lovely Professional University, Phagwara, Punjab, India

ABSTRACT

In today's fast world, everyone is running for their survival. No one is trying to live the life, as they are busy collecting material things. People have cut themselves from their family and friends. In other words, they have no in-person communication between them. As a result, mental illness comes into action when nobody is there to hear your problems. People feel alone and depressed. That's why the rate of suicides, depression or mental illness is increasing day by day. This app (TELLER) is developed by keeping in mind the current scenario of the world to decrease all these curse rates.

Keywords : Mental health app, Software design patterns, mobile app, Flutter, Dart and Firebase

I. INTRODUCTION

Teller deals with the security of dear ones who are away or you want to keep a check on. Teller is a mobile application, which is used to communicate with the people concerned about the idea and security. When a user registers, from his email/password we will be redirected to the intuitive home. It allows authenticated users to access data anytime, whether uploaded by the concerned party or the caring one, this assists in seamless communication between the two parties. It allows users to share their contact numbers via which they can take in use of the SMS functionality for accessibility. The app also takes in required permission like location and SMS access for the time. While developing a complex project like this, the first and the most significant point is to analyze the system model. It deals with the creation of a formal model while we understand the exact and precise requirements of the project. First of all there are no similar apps like Teller. Right now people have apps to monitor their emotions and they use it to track things, but these apps do not have the way to actually trigger help in a hassle-proof way. Also, there are apps which do send out help for the same, but a perfect collaboration solution does not exist as of now. Hence it is a must be more conscious about the misuse and security of the users. Privacy is also an issue when it comes to data involvement.

II. OBJECTIVE

Like, we already mention that everybody is running after material life rather than to live life. Due to which mental illness rate is increasing day by day. These days it's very very hard to actually keep track of the people around us. This becomes difficult when it comes to the mental and physical state of the loved ones. Communicating with them via phone or video

call is also not enough when it comes to mental health. Messages too have no tone indicators and emotions can be easily hidden behind those pale texts and emojis. To tackle this issue we thought of TELLER.

TELLER deals with the mental, social and physical well-being of a person. It is an end to end encrypted digital safety net which allows us to keep a good check on the person and people we care about. The project deals with the gathering of contact information of the people connected into a graph-like web to obtain the best and the most urgent possible health. It collects related information from all the members, whose details are then used to actually gather and process the information among the required people.

A. Relatable Work

Sparsh has reported the issues, stories and practices required for the software lifecycle of the application and the ins and outs of the best use of time and resources. He has examined the UI portion of the application and has created views for the same. Sparsh has also led the team to believe in team spirit during the irregular schedule of the participants. Vipul has done the data modelling for the app and has provided the resources for the project. He has also collaborated a lot for the report creation and management. Pooja has done the research on the project's feasibility and has led us into fruitful solutions and understanding. Pooja also created the data-flow diagrams of the design of the concepts and entities. All the levelling of resources and the assigning of the task in a gradual manner. She has also curated the formulations for the app's usability. Sachin has created the codebase for the application. He has used several different frameworks and tools in collaboration to the idea of the application. The tools and selection of ideas was made fruitful with the help of Yash. Yash and Sachin have been the pair programmers for the code generation of the

application and have used Flutter and dart as the selections for the tech stack to be used. The ideation and project management part in technical aspects was dealt with the help for complete, uniform and consistent contributions of the participants. The clear picture was made to understand by Yash for the executions and management of the project. We found out several different techniques by using existing communication tools to make our works flowing seamlessly without any hurdles faced amidst this covid-19 crisis. This has been a great learner and an amazing enlightening experience for all of us. Suggestions from Sachin and Yash have led us to significant checkpoints and findings. This is how we made this paper possible.

B. PROCEDURE AND RECOMMENDATIONS:

1 Collaborative family connection system

The app collaborates over the connections between the family members and the ones wanted to be kept under the close eye of observation over the period of time and let the design of the app handle the required things for the connection via SMS or notifications. The basis will then be used to show useful information and the mood-lifting of the user and the one under the crosshair for the betterment of his/her mental health. The system focuses on a few taps and more precise connection of the things.

C. Mood bases events

We take in user's moods into consideration and rate it on our scale of sentiments and recommend things dependent on that mood of interest. As soon as we get the mood of the person we try to assign it to separate articles or different ways to get am out of that mental space. Most of the time when a person is feeling low he feels spaced out so we make sure that we initiate the least number of tabs are clicks and assign to him the required and appropriate things to get his or her brain running. The person is supposed to receive two notifications every day, one in the

morning and the second one in the afternoon. Now this timing can also be changed w.r.t to the person when he or she is available, after which they will be subjected to this notification to be answered every day. If he or she doesn't feel to answer the first one then the second one needs to be answered anyhow, and if that one is missed as well then there will be an SOS or help signal sent to the family members. Benefits of notifications:

· Answering and not answering is a very crucial part
· If you fail to answer the first one then there may be chances that you are busy in something else. But if you even feel to answer the second one then we have some consequences to be handled.
· When you don't answer the second notification we are going to initiate procedure which will lead us to get your exact state of mind
· We always have people to help out first one are family members and second ones are the proximity family uses, in this way we keep a check on the concerned ones

III. DESIGNING

We are going to elaborate designing in few breakdowns as follows:

A. UI design:
This part is tricky for us. Because we want Teller to be pretty much intuitive as well as interactive. That's why we use animations in it. We also keep in mind that users can easily understand how to use it.
B. Database design:
The data is the most important for Teller, also it is the most important part of an individual like name, age, phone numbers, emails etc. In Teller we assure you that every user's data is end to end encrypted. Every detail of the user will be stored in a secure database.
A. System design:
During this section an entire flowchart of the working framework is implied. This flowchart can

show the important part of the relative multitude of events and activities to be performed for an occurrence.

IV. Software Model

File Structure:
the file structure consists of dart files used in the flutter framework and we are trying to input some details for that application to function you are the important ones are mentioned:
1. User input personal details
2. User selects the contacts
1. Handling notifications

As soon as we get this information we are assigning things to that person particularly

Output Image:
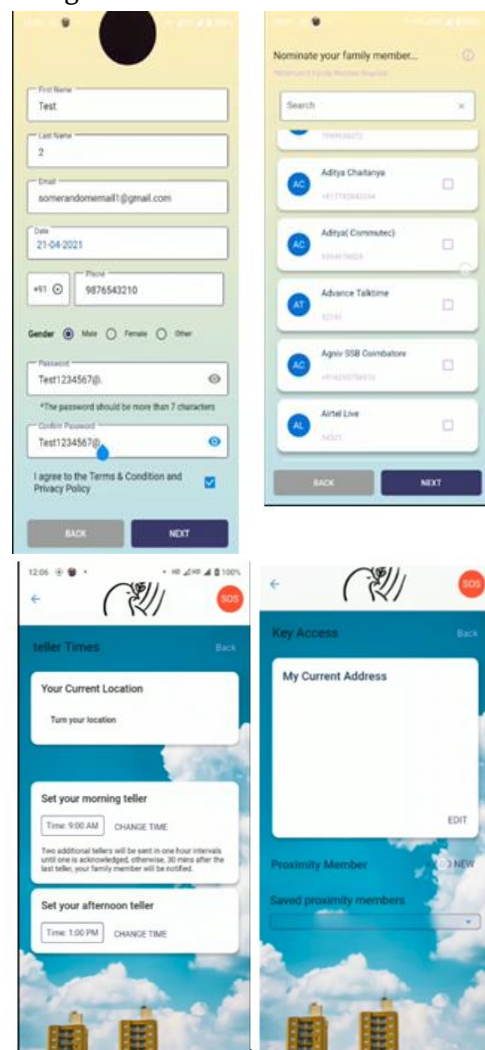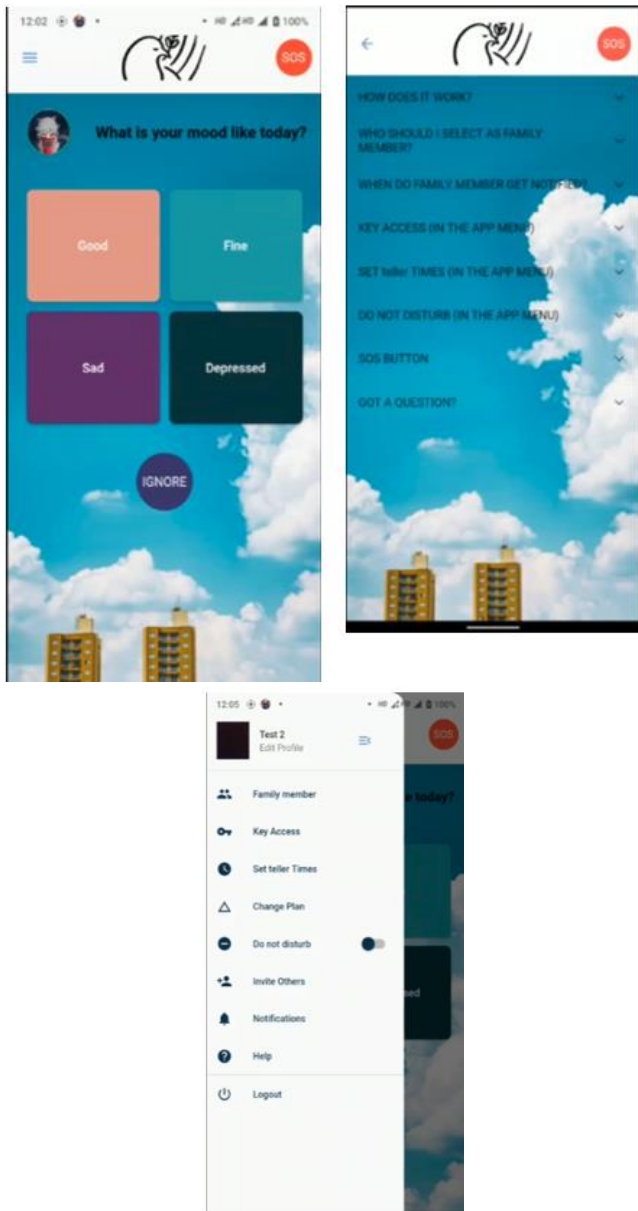
V. Code and Workflow

PSEUDO CODE::

```
import 'dart:convert';
import 'package:cloud_firestore/cloud_firestore.dart';
import 'package:teller/constants/api.dart';
```

To get the family:

```
FirebaseFirestore db;
 FirebaseAuth auth;
 SafePeopleService() {
```

```
db = FirebaseFirestore.instance;
auth = FirebaseAuth.instance;
}
Stream<List<SafePeople>> streamSafePeople() {
 if (auth.currentUser.uid == null) return null;
Stream<QuerySnapshot> stream =

db.collection('users/${auth.currentUser.uid}/safe_people').snapshots();

 return stream.map((event) => event.docs.map((e) =>
SafePeople.fromFirestore(e)).toList());
```
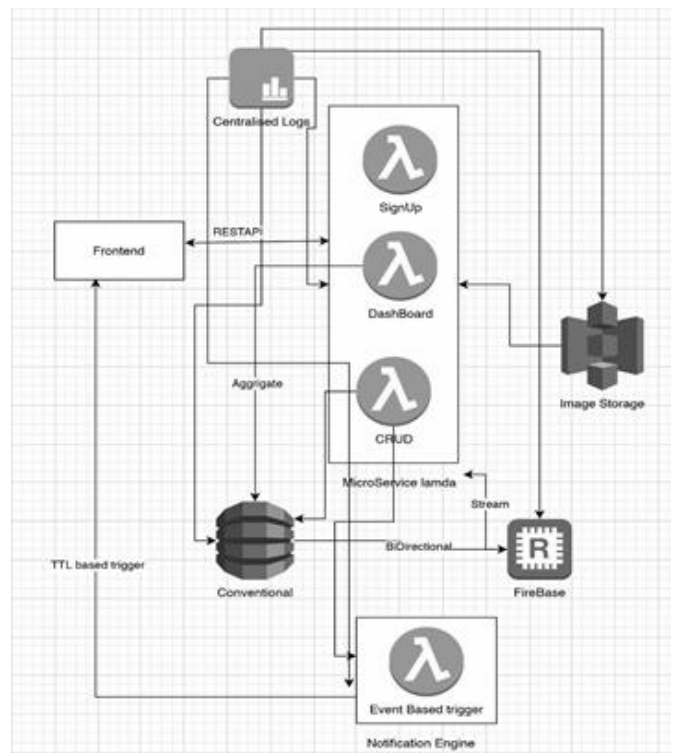

Figure (3): Backend

VI. LITERATURE REVIEW

The feasible study for this operation was conducted by Mr Vipul has been a constant supporter and the constant data retrieval from various platforms and research papers for us. He read several studies and surveys in favour of getting the required data of mental illness or mental instability. the structure of the application and then we aligned them into objects.

On a day to day basis, you experience different moods and feelings, These modes allow you to gather the respective states of mental space. We had to do a psychology study for this and Vipul and Puja were very helpful in doing this. They were also responsible for giving out the exact statistics for an application like this. this entire credit to Puja for creating data flow diagrams and reporting every possible solution whenever it was required for the team to happen. it was very important to gather things as user experiences by these two notifications and just a few tappable buttons this is a hardware Sparsh comes on, Sparsh created a very intuitive and seamless experience for the user interface in the least taps possible. Now it is very important for a person who is mentally ill to see something which is good for the eyes and very soothing when he or she uses or experiences our application. For this again Sparsh did a very deep dive into the UI and UX part of the application, which led us to create something which was indefinitely the best for anyone with continuous oscillations in and out into the mental space.

Now we come to the project development part of the application, the project includes several services and application tools which enable us to create an application like this. so we are using Google's mobile application development Framework called flutter which uses a language called dart. now that is an interpreted language. This allows us to debug our applications into runtime and compile and run as stand alone applications by converting into machine code. Now that uses something called JIT and AOT. the first one stands for just in time compiler and the second one stand for ahead of time so these two things actually make the compilation for interpreted languages like JavaScript Dart and C Sharp very very fast and provides us with the tools to debug it in in live debugging state so the entire generation was done by Yash and Sachin with the help of the user interfaces and Research provided by Sparsh and Puja

and Vipul respectively the constant builders of our team have been very consistent while providing data input and insights now application first on both a user by projecting him to enter his or her details now use detail consists of name address time of availability when he or she can look at the notifications and respond by tapping on button after which we store each and every thing which user does in the application, when the registration process gets completed the user has to open up his contact list to enter his or her family members which allow us to to save this contact into our close ones or safe list. Once this list is saved we store it on our database. for the database path we are using Google's very own service call firebase and we are storing it in form of documents in collections using cloud firestore, cloud firestore have a very less latency from you make sure that the uniformity is maintained everywhere when the concerned party is not available or able to respond Then we initiate a separate procedure to handle the condition we are trying to send our family members their exact location and the state of their phone's battery this will be instantly triggered via a simple SMS and this sms will contain the longitude and latitude of the person's current location after which we will also receive the data of the things which he tapped while deciding his feelings of moods.

In recent years, there has been increasing acknowledgment of the important role psychological state plays in achieving global development goals, as illustrated by the inclusion of psychological state within the Sustainable Development Goals. Depression is one of the leading causes of disability. Suicide is that the second leading explanation for death among 15-29-year-olds. People with severe psychological state conditions die prematurely – the maximum amount is 20 years early – thanks to preventable physical conditions.

Despite progress in some countries, people with mental state conditions often experience severe human rights violations, discrimination, and stigma.

Many psychological state conditions are often effectively treated at relatively low cost, yet the gap between people needing care and people with access to worry remains substantial. Effective treatment coverage remains extremely low.

Serious mental illness costs the U.S about $193.2 billion in lost earnings per year.

Mood disorders, like depression and manic depression, are the third commonest reason for hospitalization for patients between the ages of 18 and 44.

Adults living with the mental disease die a mean of 25 years before others, largely thanks to treatable conditions.

37 percent of scholars are affected by a psychological state condition dropout of high school. More than 90% of youngsters who die by suicide suffer from a psychological state condition.

The aim of our app is to reduce all this and allow people to have a better living, where self love is outgrown and allows people to have a better life allowing them to reach to a state where they have gratitude towards thing, positivity boosts them and negativity allows them to understand that something that is happening around is wrong and to avoid such situation instead feeling burdened in negativity, also when allowed to intervene during a timely manner, psychological state services can help lower health costs and release limited resources. Studies indicate that folks use medical services 90 percent less

frequently after receiving appropriate psychological state care. psychological state services also reduce the danger of chronic diseases associated with stress, anxiety and drug abuse .

Most importantly, psychological state services save lives, while improving the outlook for people that may feel hopeless and lost. If you think you'll be affected by a mental disease or if you recognize someone who is, take positive steps toward recovery by contacting a psychological state professional today.

A. System Description:

The system handles end-to-end and communication between the users and the people concerned in the family it also has a third look over by using proximity users around the person which is to be looked after this system is very precise and communicating when it comes to doing I/O operation into a database and the application. the generation of user report based upon the feelings and mood needs to be saved somewhere into our analytics which is currently being handled by firebase providing us with multiple services we're then subjecting user with the exact recipe to title that time of expression of state of mind sooner or later he is going to receive something to uplift the mood and said the data entered to be successful for everyone

B. Technologies Used:

Flutter, Dart, firebase firestore, auth0, bloc, streams, permission handlers, SMS services. JS, JSON etc.

5.1 System Overview:

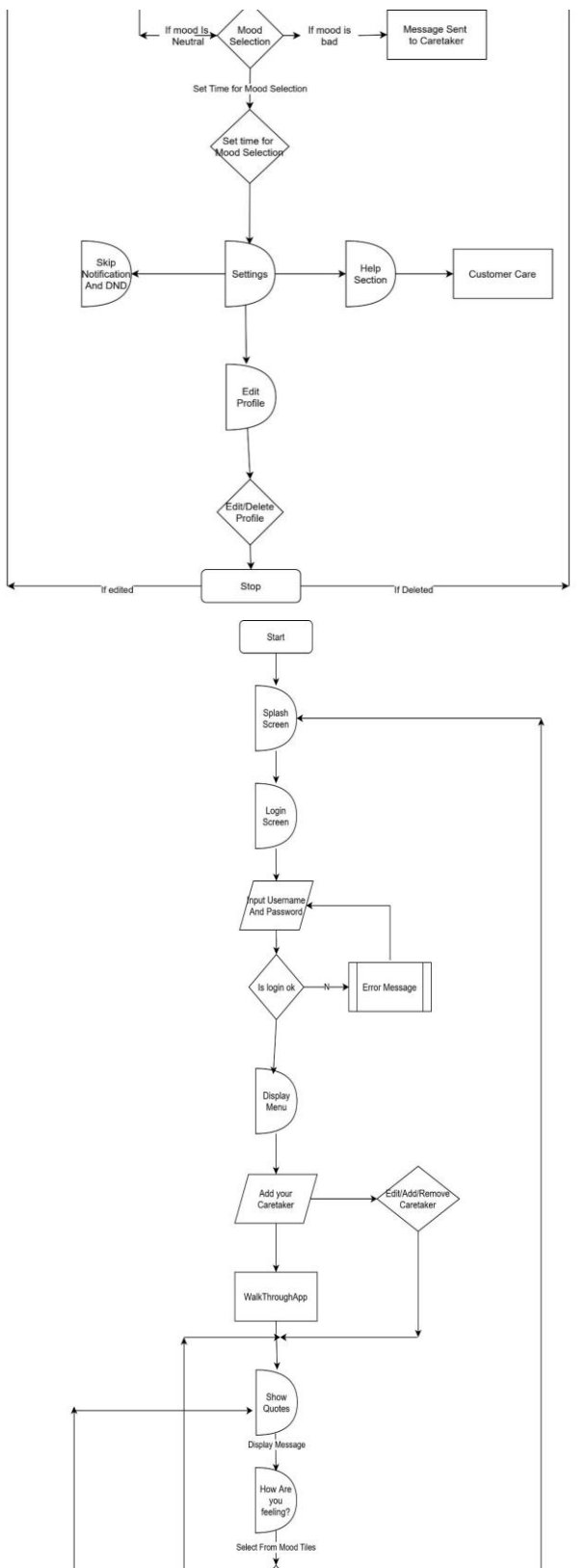Figure(4) : System Overview

VII. Conclusion and Future Scope

This app(TELLER) is developed by keeping in mind the current scenario of the world i.e increasing rate of suicidal cases, depression cases or any other mental illness. We made this app so that we can give our small contribution to aware people about mental illness and most importantly to decrease the rate of suicidal cases, depression cases. We want to give a message to all people out there who are suffering from any kind of mental illness that you're not alone. Your loved one's are always there for you, care for you. That's why we made this app so that users can select their family members to notify them in case of any help, so that they can reach you ASAP. Last but not the least, always be happy, stay safe and keep in touch with your family members if you want to cure your mental illness.

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