A PROJECT REPORT ON

Video Calling Application

BY

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MCA – II, SEM – III, DIV-D

2021-2022

TO
SAVITRIBAI PHULE PUNE UNIVERSITY
PUNE- 411041

IN PARTIAL FULFILLMENT OF
MASTER IN COMPUTER APPLICATION (M. C. A.)

UNDER THE GUIDANCE OF
Prof. Dipali Patil

Sinhgad Institutes

Sinhgad Technical Education Society's
SINHGAD INSTITUTE OF MANAGEMENT,
Vadgaon Bk, Pune
(Affiliated to Savitribai Phule Pune University, Approved by AICTE
& Accredited by National Board of Accreditation, New Delhi)

Date:-

CERTIFICATE

This is to certify that Mr. Tushar Rajendra Jagtap, has successfully / partially completed his project work entitled **"Video Calling Application"** in partial fulfillment of MCA-II SEM-III Mini Project for the year 2021-2022. He have worked under our guidance and direction.

Prof. Dipali Patil
Project Guide

Dr. Chandrani Singh
Director, SIOM-MCA

Examiner 1

Examiner 2

Date:

Place:

DECLARATION

We certify that the work contained in this report is original and has been done by us under the guidance of my supervisor(s).

- The work has not been submitted to any other Institute for any degree or diploma.
- We have followed the guidelines provided by the Institute in preparing the report.
- We have conformed to the norms and guidelines given in the Ethical Code of Conduct of the Institute.
- Whenever we have used materials (data, theoretical analysis, figures, and text) from other sources, we have given due credit to them by citing them in the text of the report and giving their details in the references.

Name and Signature of Project Team Members:

Sr. No.	Seat No.	Name of students	Signature of students
	20373	**Tushar Rajendra Jagtap**	

ACKNOWLEDGEMENT

We have immense pleasure in expressing our sincerest and deepest sense of gratitude towards our guide Ms. **Prof**. **Dipali Patil** for the assistance, valuable guidance and co- operation in carrying out this Project successfully. We have developed this project with the help of Faculty members of our institute and we are extremely grateful to all of them. We also take this opportunity to thank Director Dr. Chandrani Singh, for providing the required facilities in completing this project. We are greatly thankful to our parents, friends and faculty members for their motivation, guidance and help whenever needed.

Thank You,

Tushar Rajendra Jagtap

INDEX

CHAPTER 1: INTRODUCTION

1.1 Existing System:

In the present scenario So many application are available for video calling and video conferencing. So many apps are paid and if not paid those apps has some limitation like whatsapp only 8 peoples are make video conferencing at a time and many more limitation.

So many other applications are available like Microsoft team, zoom but they are paid and so many peoples can't afford. That's why limited peoples are using this application.

In free, there are limited applications available and provides good service like Google Meet one of the most popular options in free video calling and conferencing.

That's why I created free android application for video calling and conferencing.

1.2 Need for System

This App will help peoples to meet with friends, family member and professional peoples with free of cost.

Most of the peoples don't have enough money to purchase paid software. I think this app is a good choice for those peoples who need alternative of free video calling application with good features like recording, screen sharing, chatting and capacity is more to join peoples.

1.3 Operating Environment Hardware and Software

Hardware/Software Interface:
This section lists the minimum hardware and software requirements needed to run the app efficiently.

Hardware Interface:
- Any Basic Mobile processer
- 60 MB of free Memory space
- 500 MB of RAM

Software Interface:
- Operating System: Android 10 or above

CHAPTER 2: PROPOSED SYSTEM

2.1 Proposed System (Introduction of system):

The pandemic lockdown growth of remote work, organizations and individuals are embracing tools that allow personal communication with friends, customers, or employees working remotely.

This reality has led to a fast rise in the popularity of video calling apps and revenue growth. In 2020, we've witnessed the video conferencing company Zoom grows to $130 billion in valuation, which is over 100 percent increase Year on Year. This rise in value is due to the lockdown and growing demand for video chat.

Although virtual, video calling makes communication more personal and genuine. This fact has pushed the adoption of video chatting apps as a tool for personalized communication.

In messaging apps like WhatsApp and Facebook messenger, video calling is one of the most used types of communication. Since 2017, over 55 million video calls are made on WhatsApp daily.

Nowadays, the video call feature has become standard in person-to-person (P2P) mobile communication apps like WhatsApp. These messaging apps are mostly used on mobile. On the other hand, business apps like Skype and Zoom offer video call functions on mobile, desktop, and web.

Compared to messaging apps, business video conferencing apps offer a wider range of options because their target audience operates in formal and informal.

2.2 Module specifications (Scope) :

Using Video calling application users make video conferencing with friends, family and professional peoples at free of cost. It provides Alternative way to Peoples without using paid apps like zoom and MS teams.

This App is easy to use for users to make video call with 75 people at a time with free of cost and full of security.

It's also provide so many features like recording, screen sharing, live streaming and many more features with free of cost not need to get any subscription.

2.3 Objectives of System:

The main purpose of a Video Calling Application is to provide convenient way to the users to call personal or professional use to free.

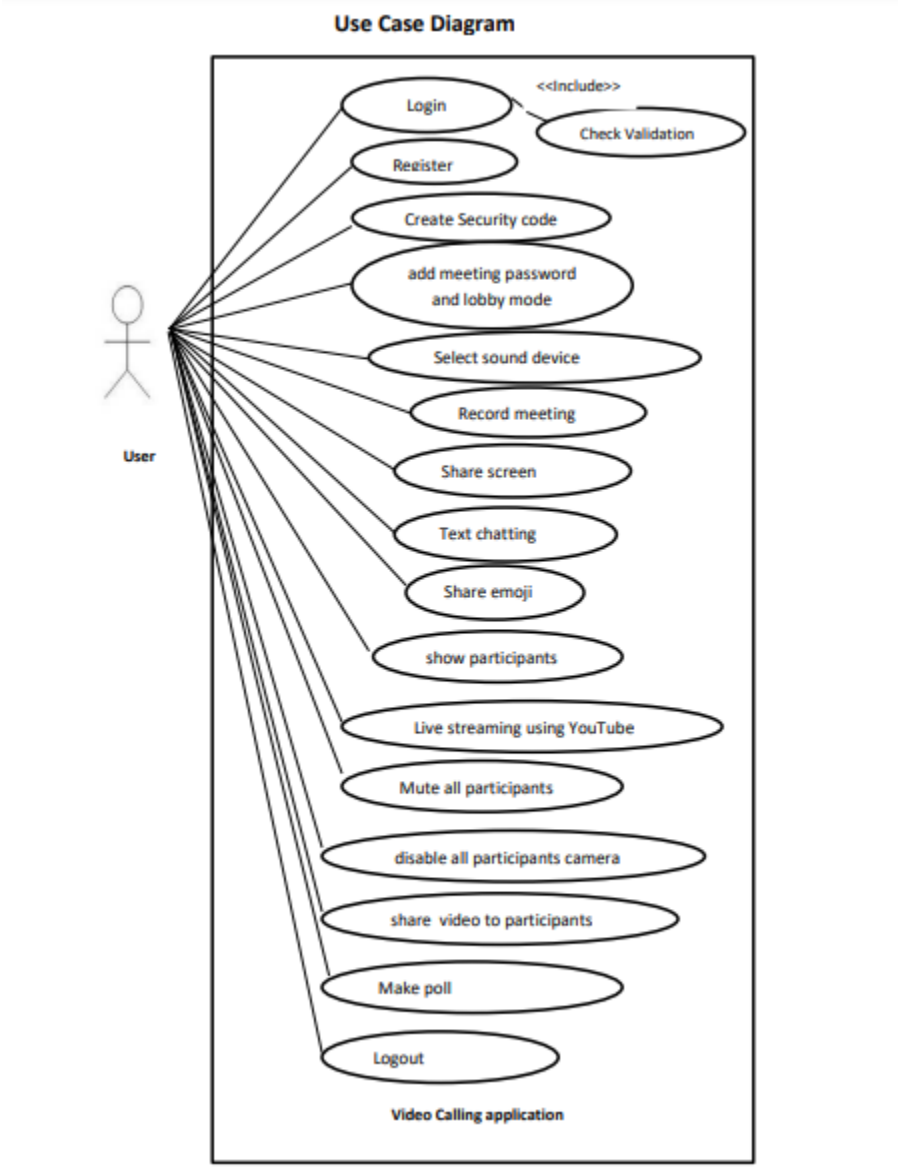
The main reason behind to create application is provide an alternative to the paid as well as free application like whatsapp, Google meet, Zoom and MS-Teams.

With an application, users can easily make Video Calling with friends, family and professional peoples with free of cost.

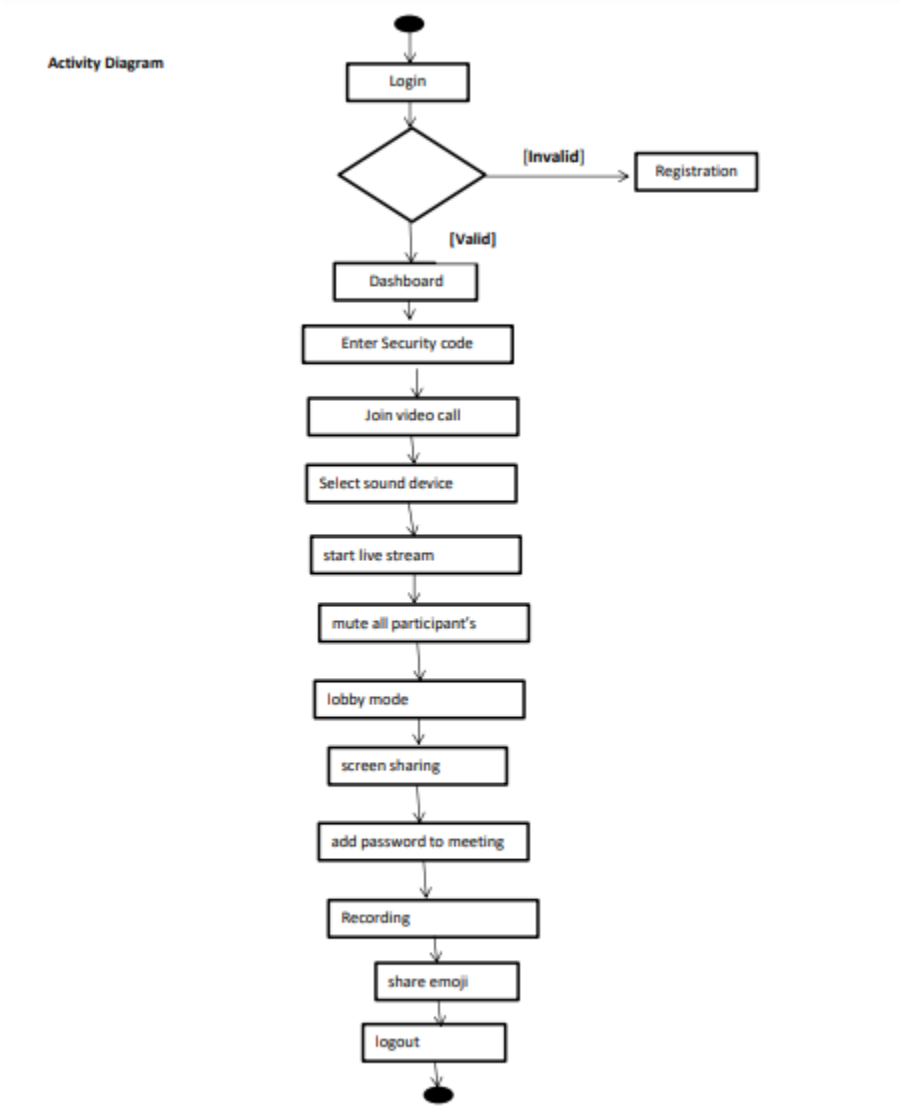
At a time 75 peoples can join using security code made by video call creator.

CHAPTER 3: ANALYSIS & DESIGN

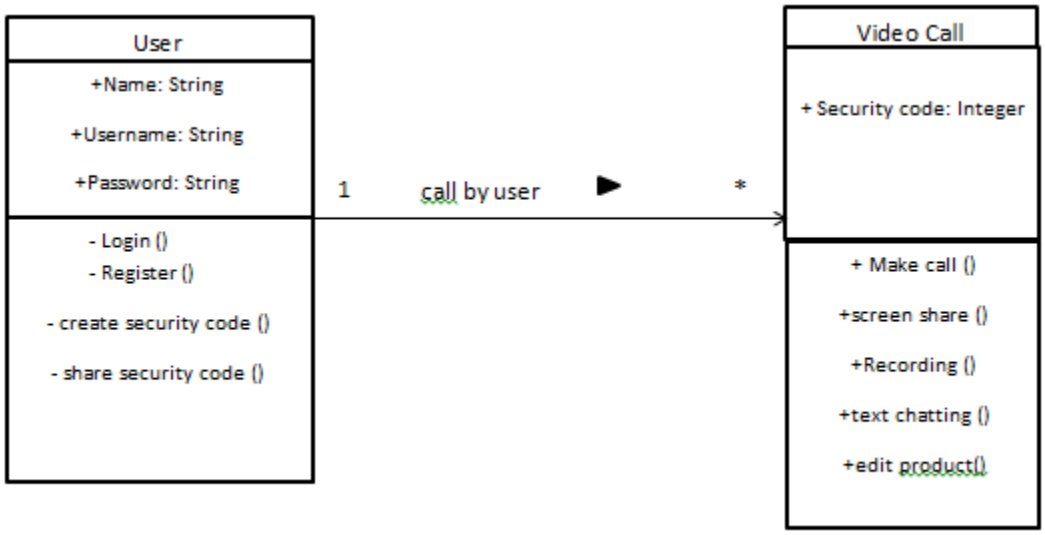
3.1 Use Case Diagrams:



3.2 Activity Diagram:

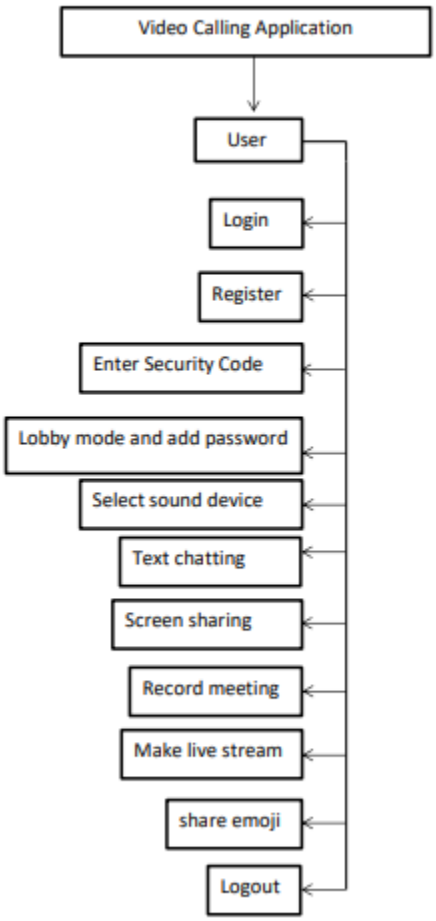


3.3 Class Diagram:



3.4 Module Hierarchy Diagram:

Module Hierarchy Diagram



3.5 Table specifications (Database design):

Table specifications

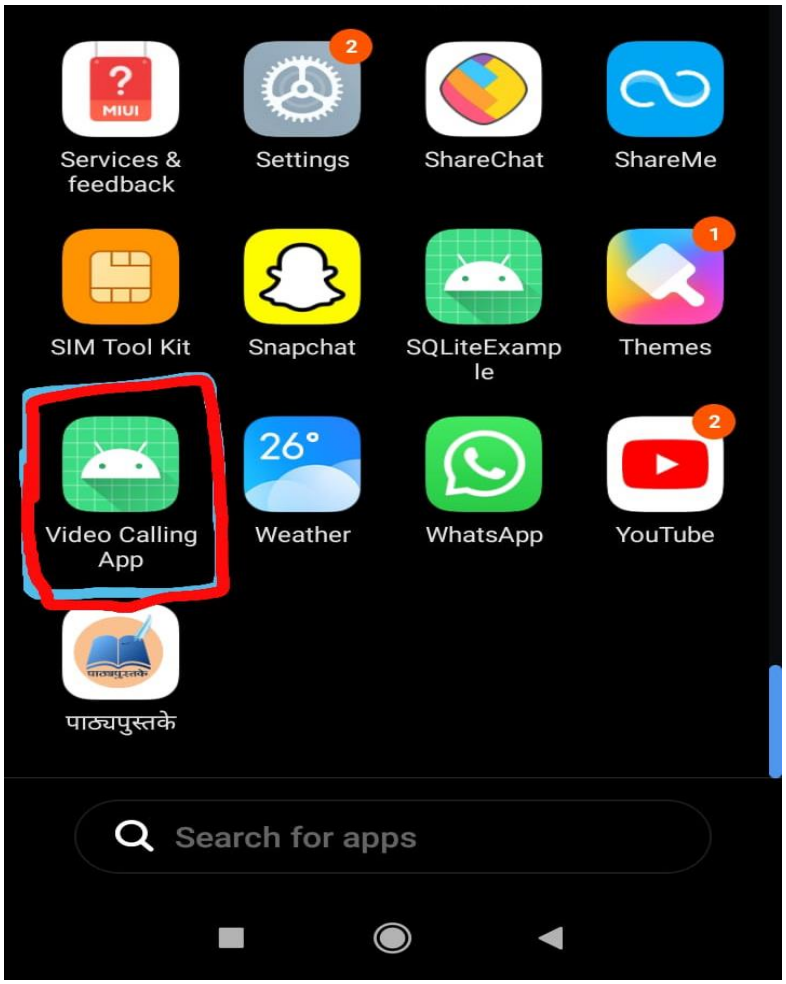
auth_user

Filed Name	Data Type	Size	Key
name	varchar	100	
email	varchar	100	
password	varchar	100	

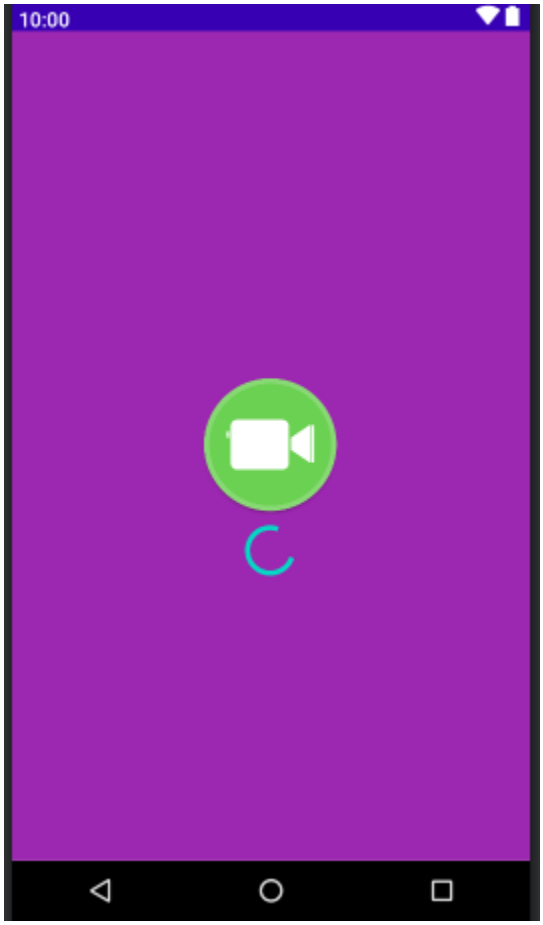
CHAPTER 4: USER MANUAL

4.1 User Interface Screens (Input):

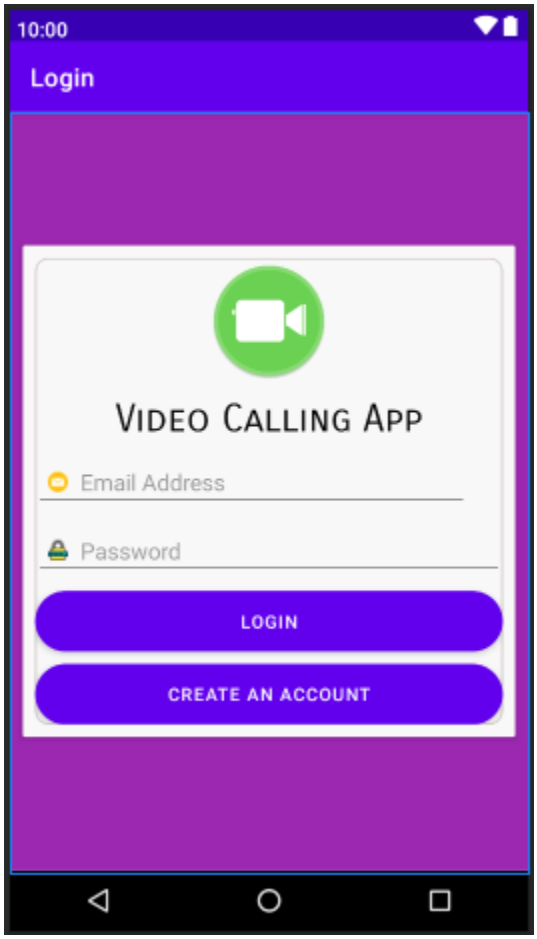
Output Screen



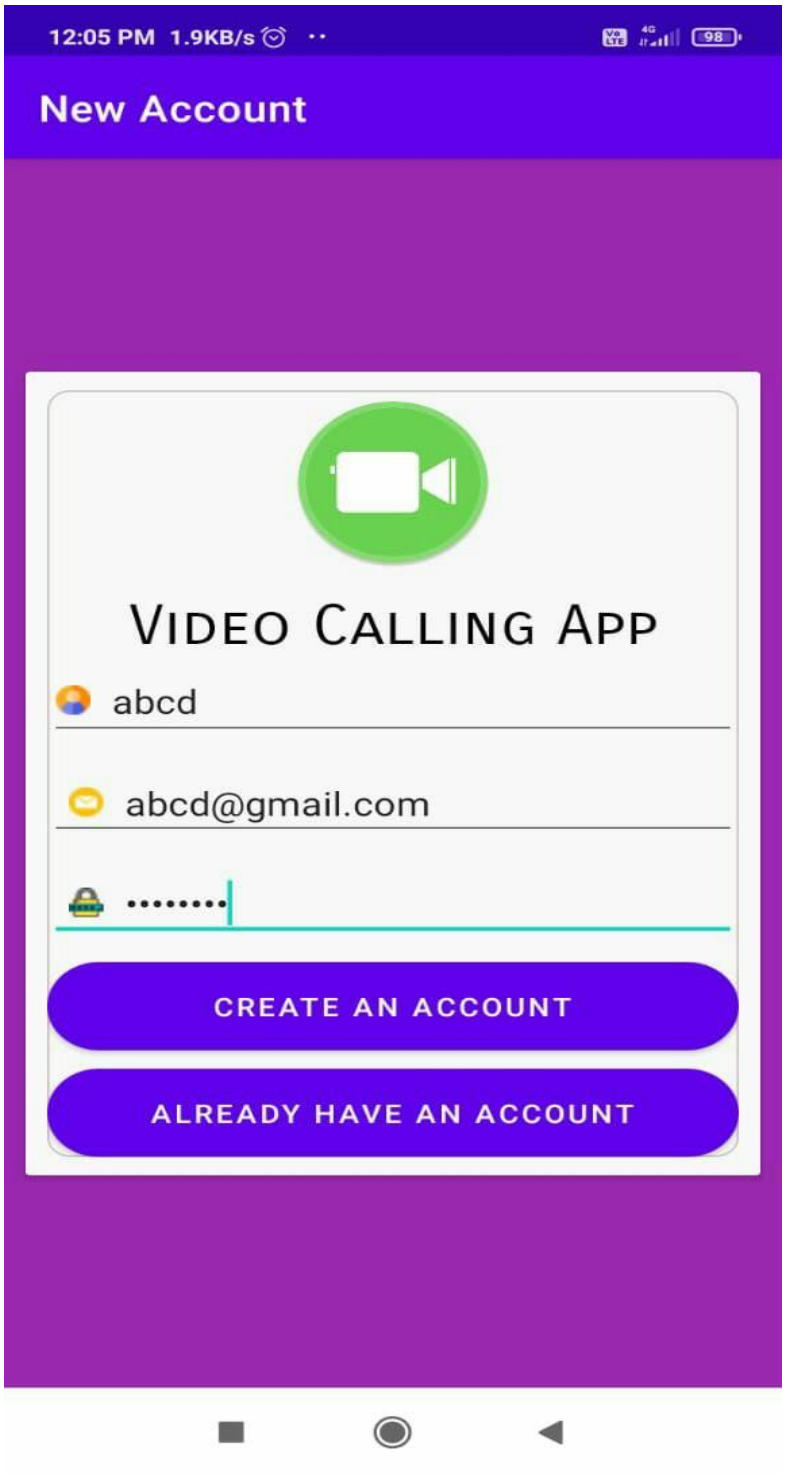
Splash screen

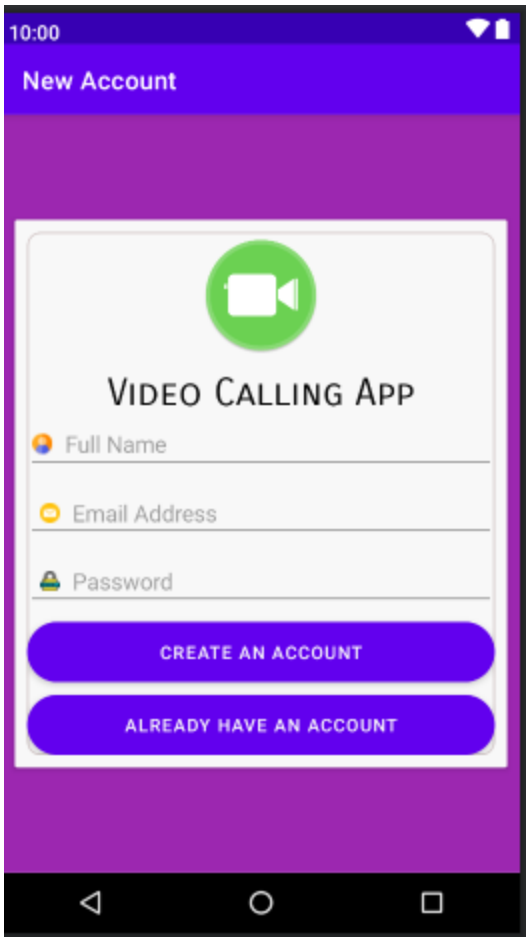


Login Screen



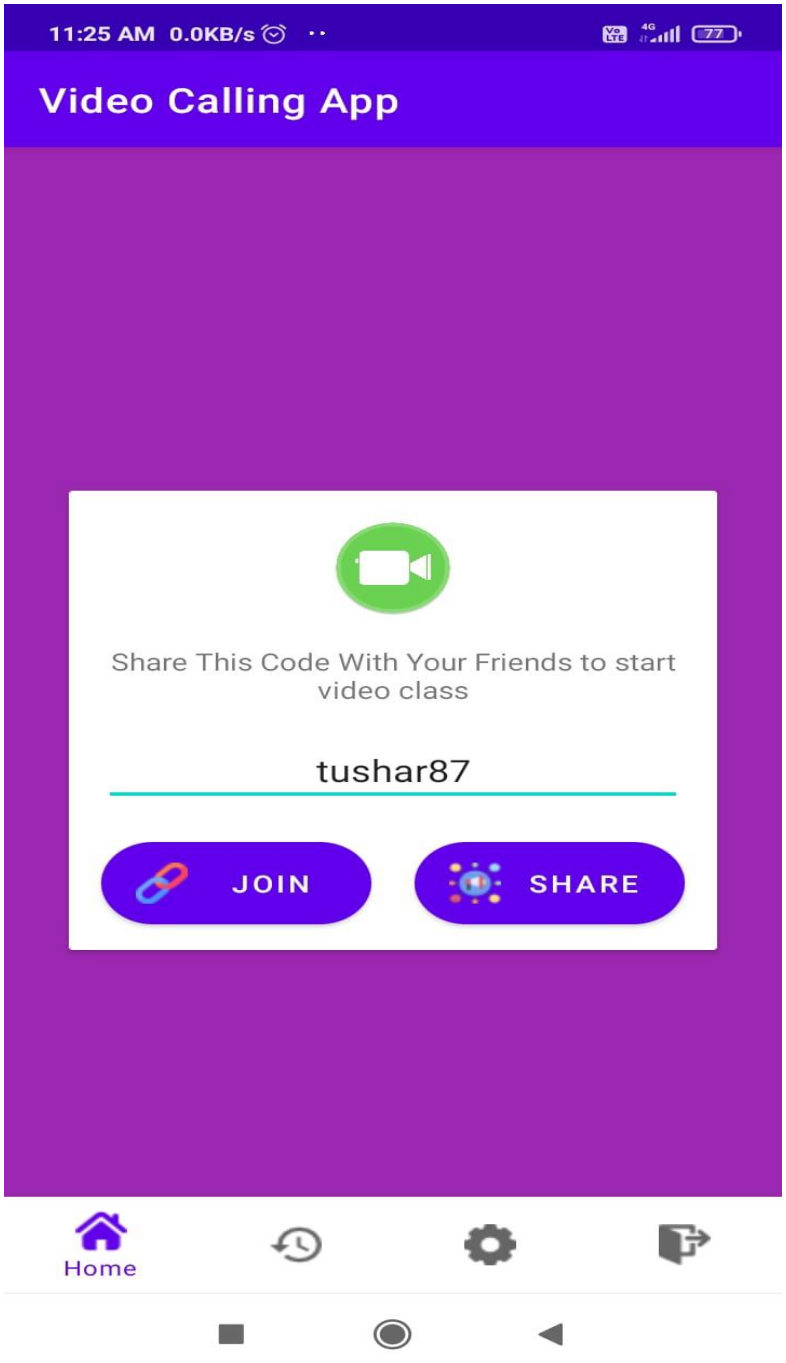
Sign up Screen

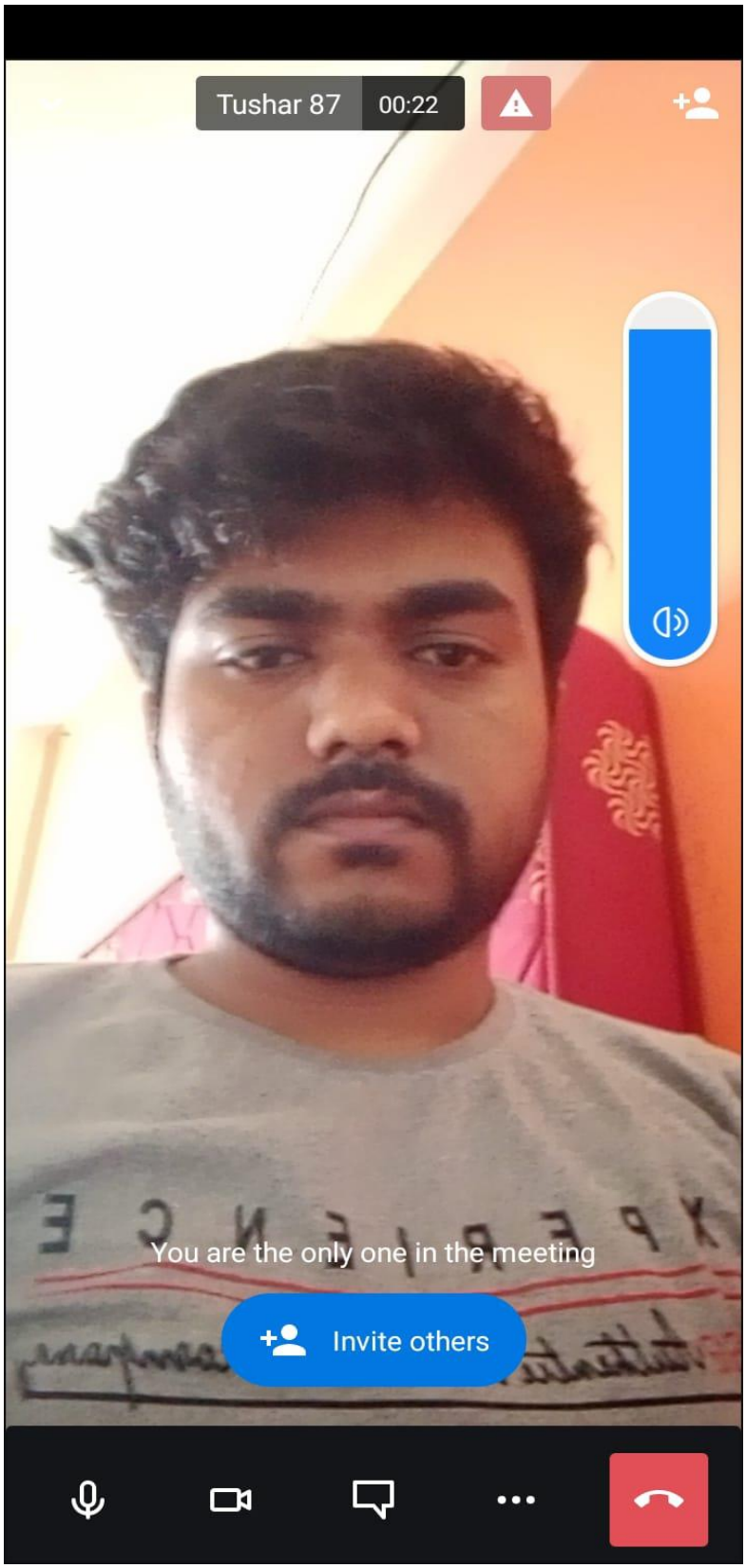


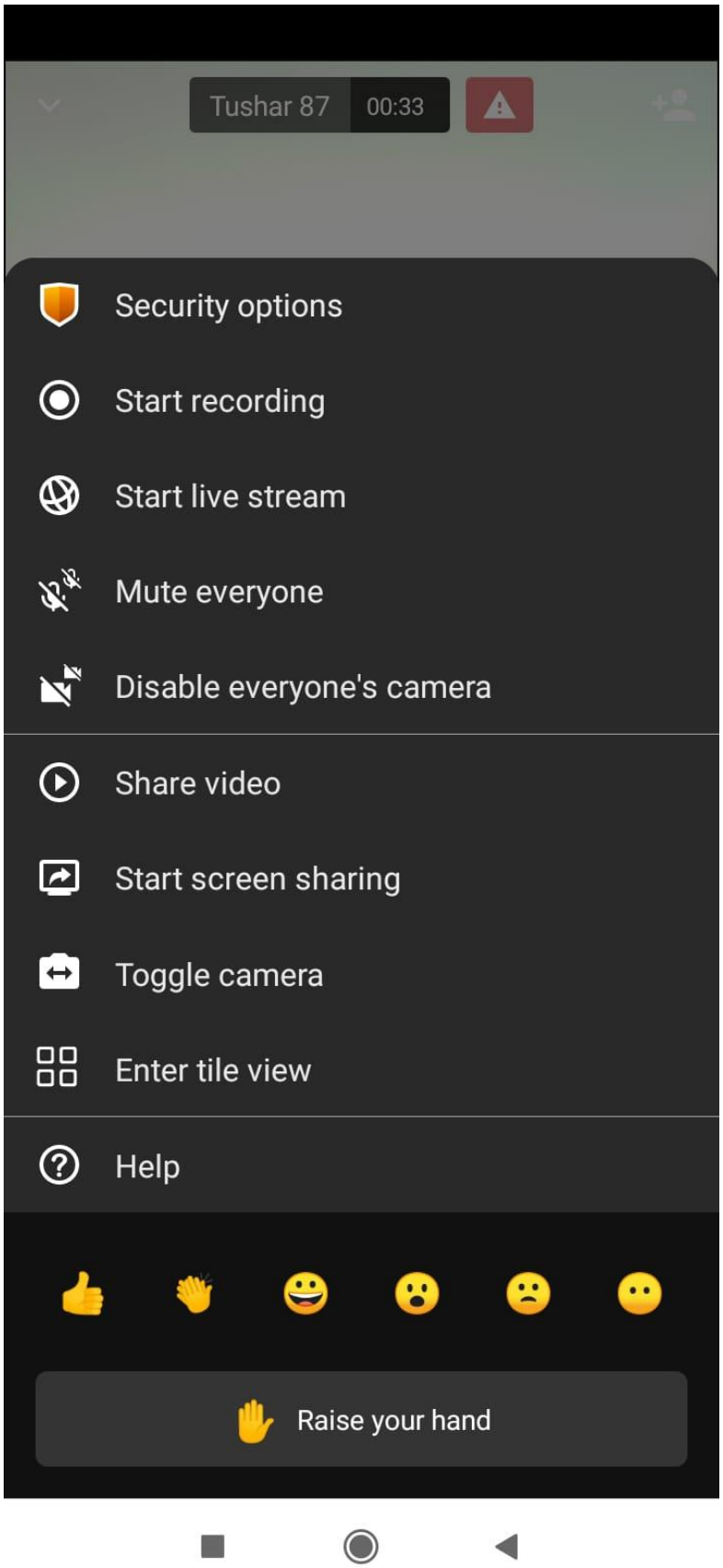

10:00
New Account
VIDEO CALLING APP
Full Name
Email Address
Password
CREATE AN ACCOUNT
ALREADY HAVE AN ACCOUNT

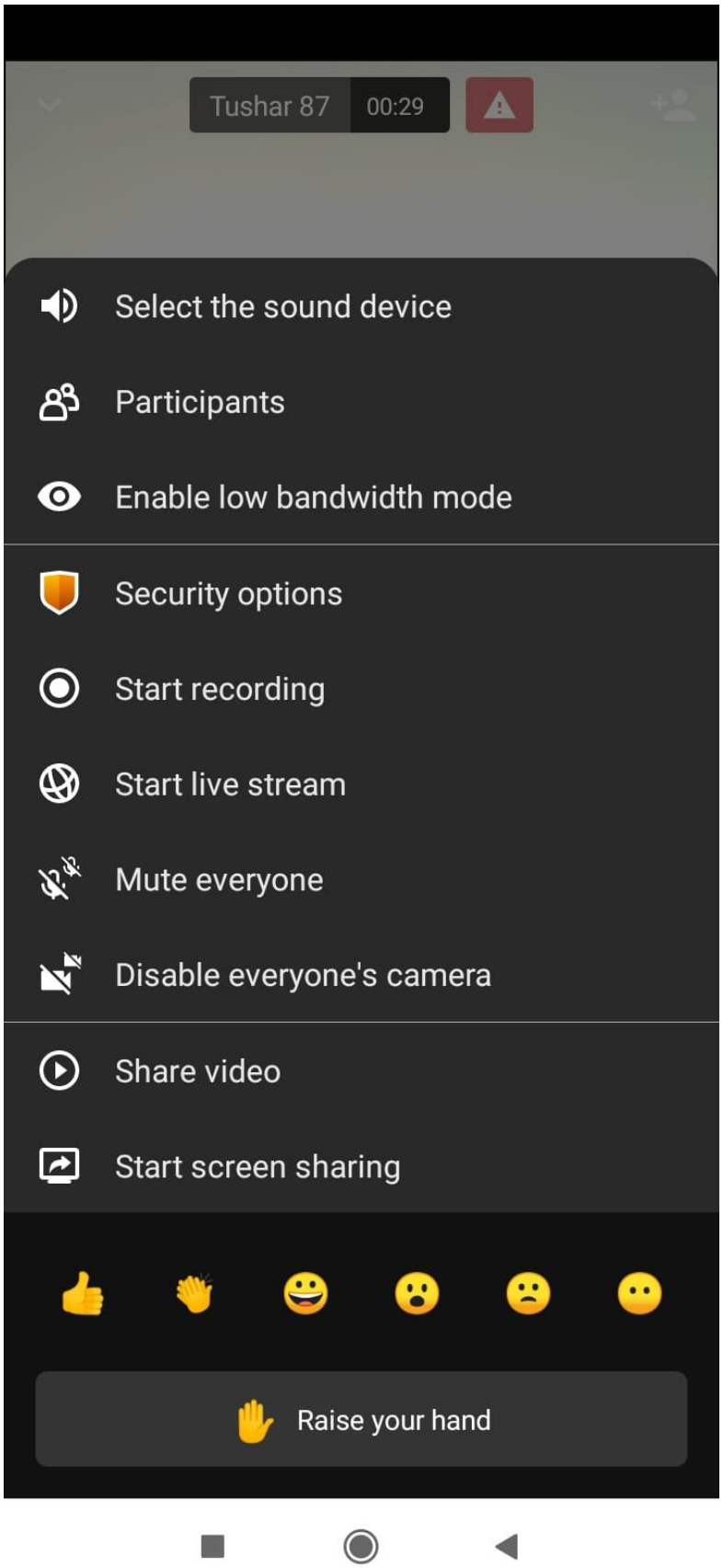
4.2 Output Screens with data:

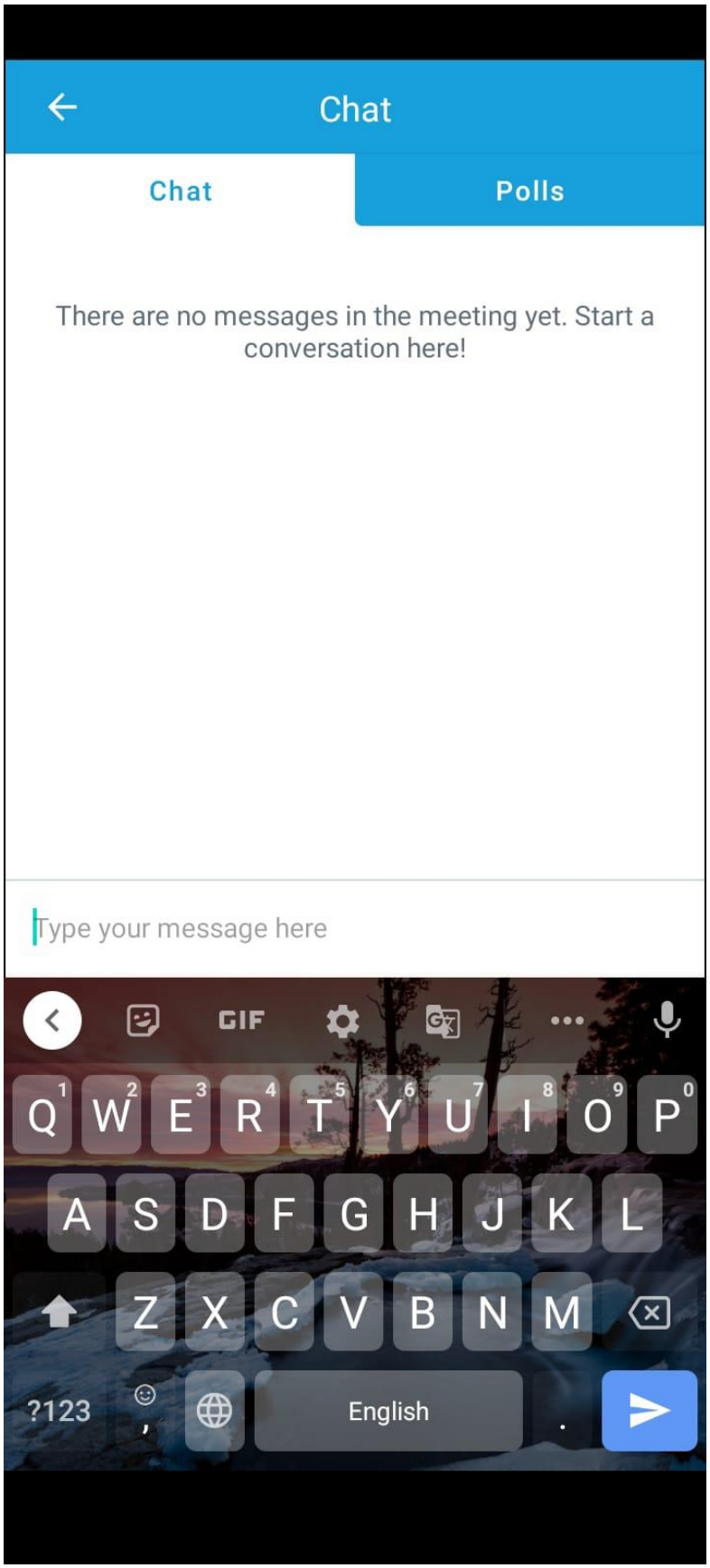
Dashboard

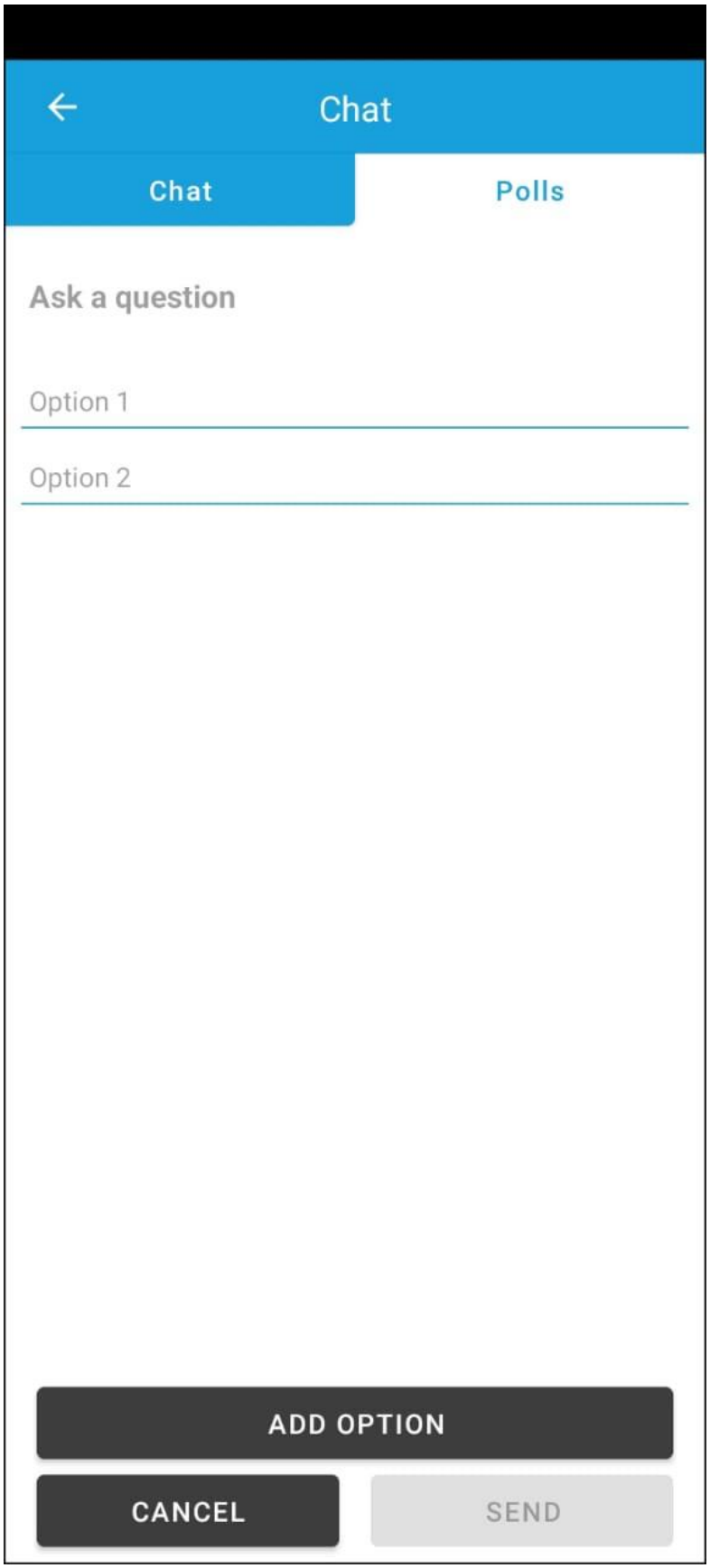


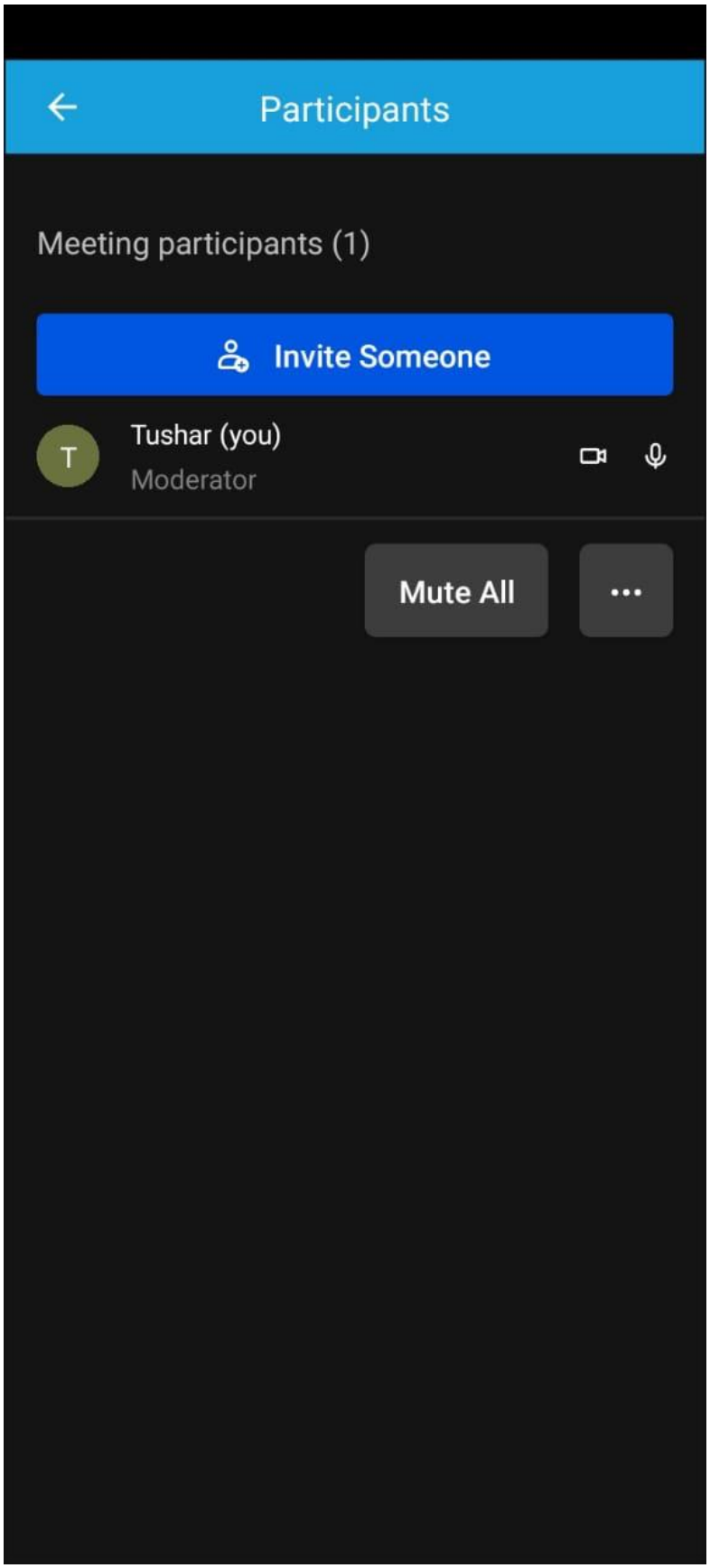

Tushar 87
00:22
You are the only one in the meeting
Invite others

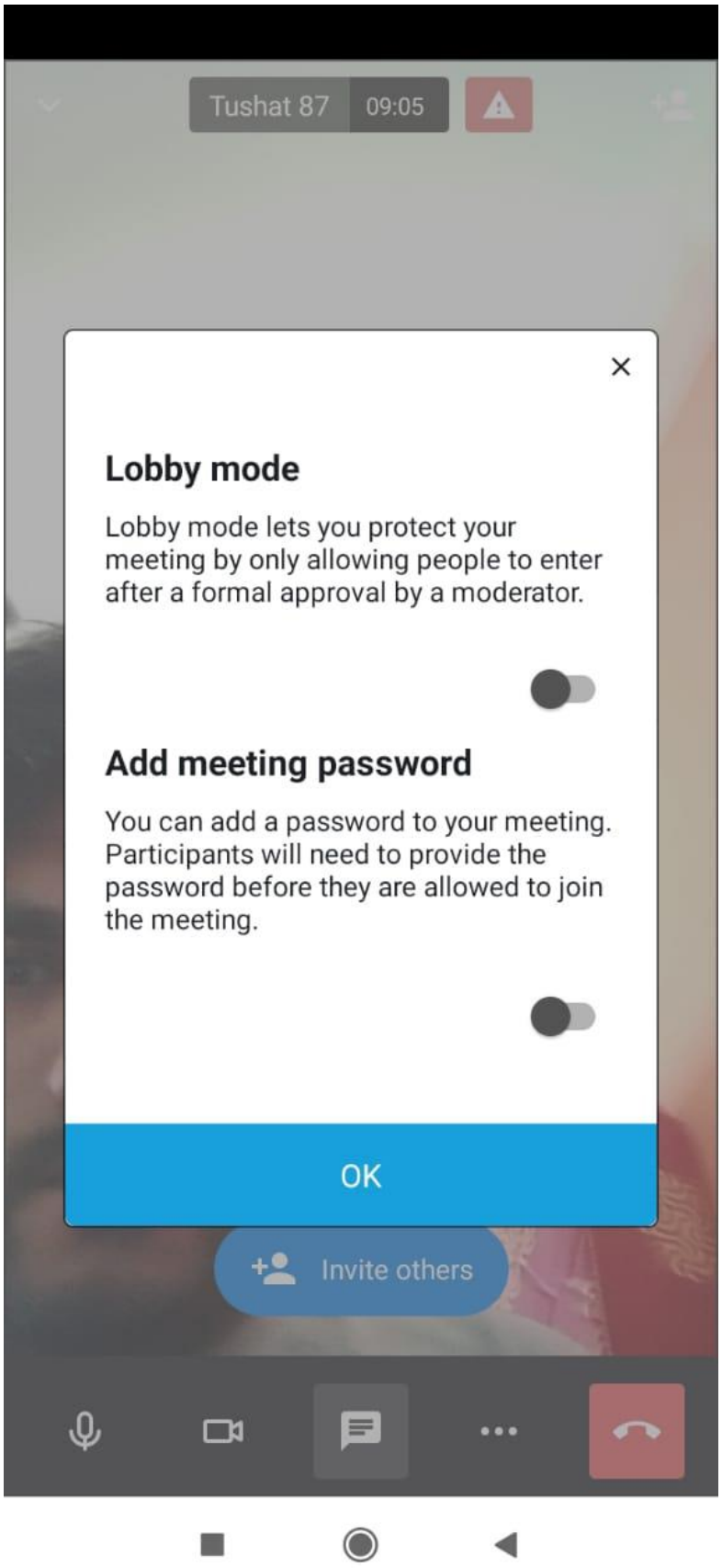

Tushar 87
00:33
Security options
Start recording
Start live stream
Mute everyone
Disable everyone's camera
Share video
Start screen sharing
Toggle camera
Enter tile view
Help
Raise your hand

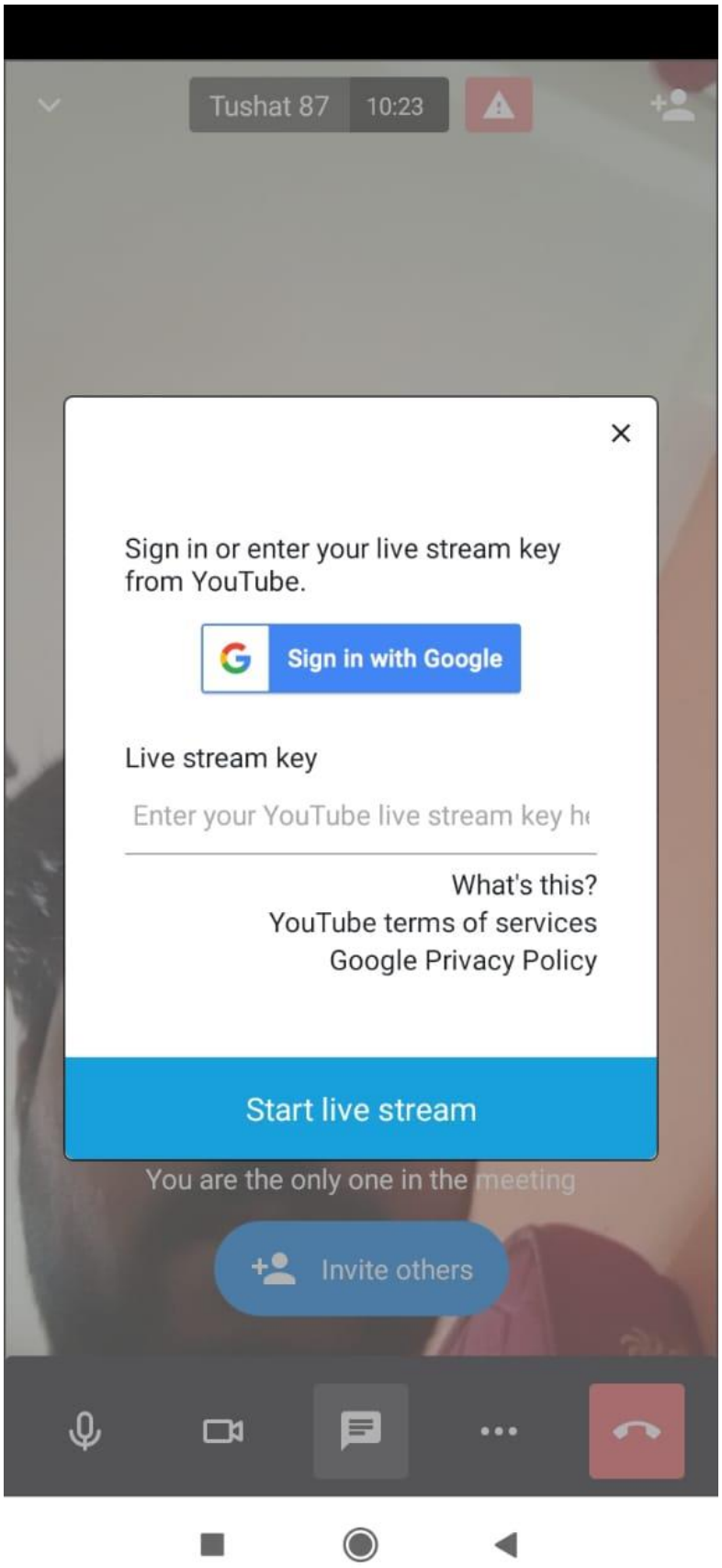

Tushar 87
00:29
Select the sound device
Participants
Enable low bandwidth mode
Security options
Start recording
Start live stream
Mute everyone
Disable everyone's camera
Share video
Start screen sharing
Raise your hand

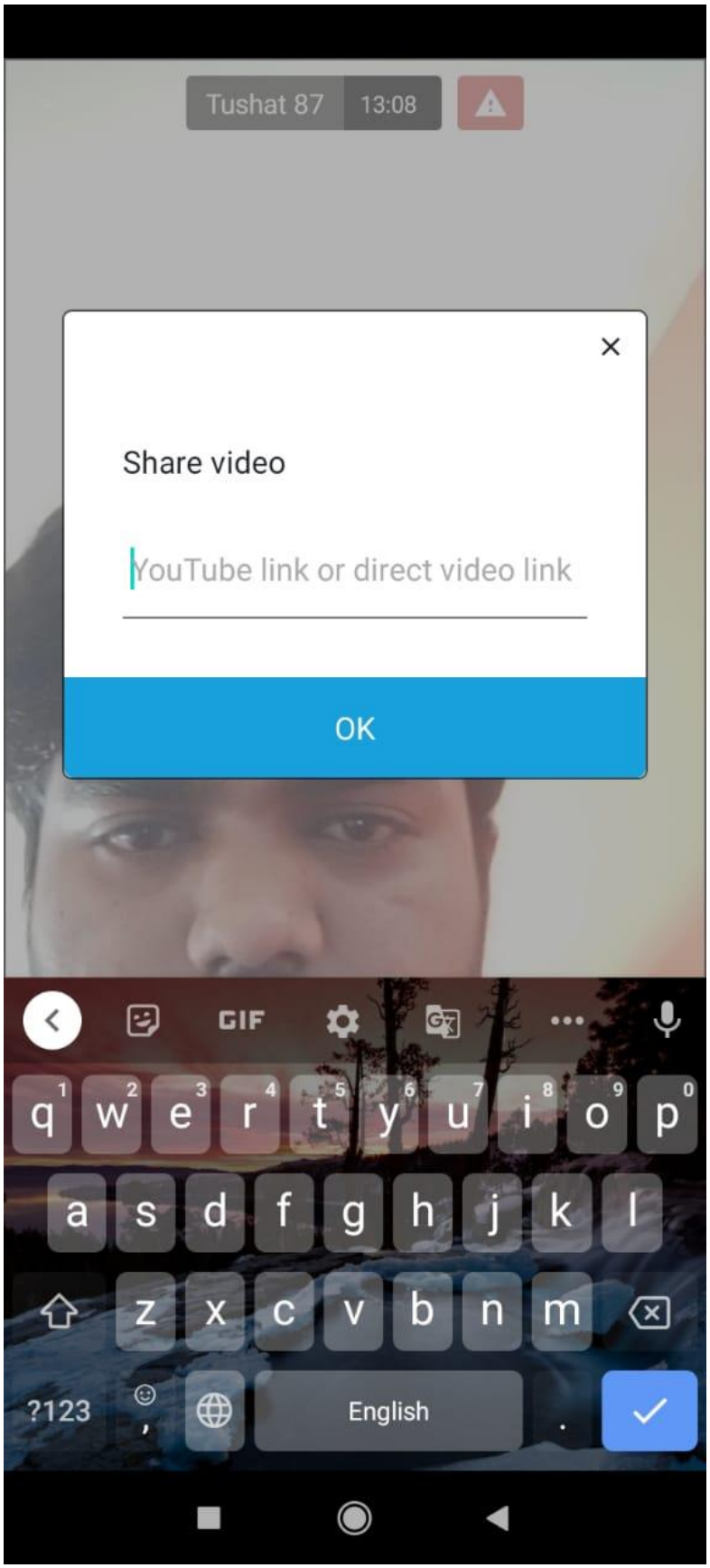

Chat
Chat
Polls
There are no messages in the meeting yet. Start a conversation here!
Type your message here
GIF
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
?123
English

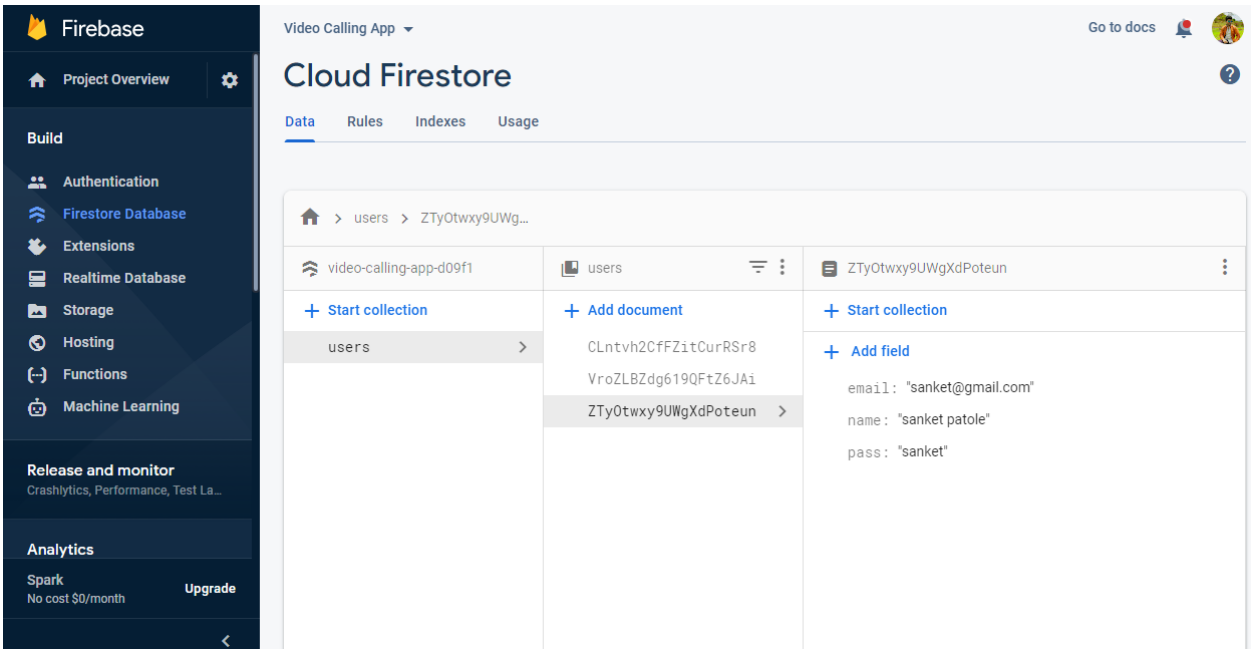

Chat
Chat
Polls
Ask a question
Option 1
Option 2
ADD OPTION
CANCEL
SEND


Participants
Meeting participants (1)
Invite Someone
T
Tushar (you)
Moderator
Mute All


Tushat 87
09:05
Lobby mode
Lobby mode lets you protect your meeting by only allowing people to enter after a formal approval by a moderator.
Add meeting password
You can add a password to your meeting. Participants will need to provide the password before they are allowed to join the meeting.
OK
Invite others


Tushat 87
10:23
Sign in or enter your live stream key from YouTube.
Sign in with Google
Live stream key
Enter your YouTube live stream key h
What's this?
YouTube terms of services
Google Privacy Policy
Start live stream
You are the only one in the meeting
Invite others


Tushat 87
13:08
Share video
YouTube link or direct video link
OK
GIF
English
?123


Firebase
Project Overview
Build
Authentication
Firestore Database
Extensions
Realtime Database
Storage
Hosting
Functions
Machine Learning
Release and monitor
Crashlytics, Performance, Test La...
Analytics
Spark
No cost $0/month
Upgrade
Video Calling App
Go to docs
Cloud Firestore
Data
Rules
Indexes
Usage
users > ZTyOtwxy9UWg...
video-calling-app-d09f1
Start collection
users
users
Add document
CLntvh2CfFZitCurRSr8
VroZLBZdg619QFtZ6JAi
ZTyOtwxy9UWgXdPoteun
ZTyOtwxy9UWgXdPoteun
Start collection
Add field
email: "sanket@gmail.com"
name: "sanket patole"
pass: "sanket"

4.3 Sample program code :

Activity_main.java

```
package com.example.videocallingapp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.os.Handler;

public class MainActivity extends AppCompatActivity {

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      new Handler().postDelayed(new Runnable() {
         @Override
         public void run() {
            startActivity(new Intent(MainActivity.this,LoginActitvity.class));
         }
      },2000);
   }
}
```

Dashboard_Activity.java

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:background="#9C27B0"
   tools:context=".Dashboard_Activity">


   <androidx.cardview.widget.CardView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_margin="30dp"
      app:layout_constraintBottom_toBottomOf="parent"
      app:layout_constraintTop_toTopOf="parent"
      tools:layout_editor_absoluteX="10dp">

      <LinearLayout
         android:layout_width="match_parent"
         android:layout_height="match_parent"
         android:layout_margin="5dp"
         android:orientation="vertical">

         <ImageView
            android:id="@+id/imageView3"
            android:layout_width="60dp"
            android:layout_height="60dp"
            android:layout_gravity="center"
            android:layout_margin="10dp"
            app:srcCompat="@drawable/logo" />

         <TextView
            android:id="@+id/textView2"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:gravity="center"
            android:text="Share This Code With Your Friends to start video class" />
```

```
        <EditText
            android:id="@+id/codeBox"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:ems="10"
            android:gravity="center"
            android:hint="Enter Code"
            android:inputType="textPersonName"
            android:padding="10dp" />

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="horizontal">

            <Button
                android:id="@+id/joinBtn"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_margin="10dp"
                android:layout_weight="1"
                android:background="@drawable/button_style"
                android:drawableLeft="@drawable/join"
                android:text="join" />

            <Button
                android:id="@+id/shareBtn"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_margin="10dp"
                android:layout_weight="1"
                android:background="@drawable/button_createaccount"
                android:drawableLeft="@drawable/share"
                android:text="share" />

        </LinearLayout>
    </LinearLayout>
</androidx.cardview.widget.CardView>

<com.google.android.material.bottomnavigation.BottomNavigationView
    android:id="@+id/bottomNav"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:menu="@menu/bar" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:background="#9C27B0"
  tools:context=".MainActivity">

  <ImageView
    android:id="@+id/imageView2"
    android:layout_width="120dp"
    android:layout_height="120dp"
    android:background="#9C27B0"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.498"
    app:srcCompat="@drawable/logo" />

  <ProgressBar
    android:id="@+id/progressBar3"
    style="?android:attr/progressBarStyle"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintEnd_toEndOf="@+id/imageView2"
    app:layout_constraintStart_toStartOf="@+id/imageView2"
    app:layout_constraintTop_toBottomOf="@+id/imageView2" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_dashboard.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:app="http://schemas.android.com/apk/res-auto"
   xmlns:tools="http://schemas.android.com/tools"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:background="#9C27B0"
   tools:context=".Dashboard_Activity">


   <androidx.cardview.widget.CardView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_margin="30dp"
      app:layout_constraintBottom_toBottomOf="parent"
      app:layout_constraintTop_toTopOf="parent"
      tools:layout_editor_absoluteX="10dp">

      <LinearLayout
         android:layout_width="match_parent"
         android:layout_height="match_parent"
         android:layout_margin="5dp"
         android:orientation="vertical">

         <ImageView
            android:id="@+id/imageView3"
            android:layout_width="60dp"
            android:layout_height="60dp"
            android:layout_gravity="center"
            android:layout_margin="10dp"
            app:srcCompat="@drawable/logo" />

         <TextView
            android:id="@+id/textView2"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:gravity="center"
            android:text="Share This Code With Your Friends to start video class" />
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```
      <EditText
        android:id="@+id/codeBox"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:ems="10"
        android:gravity="center"
        android:hint="Enter Code"
        android:inputType="textPersonName"
        android:padding="10dp" />

      <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="horizontal">

        <Button
          android:id="@+id/joinBtn"
          android:layout_width="match_parent"
          android:layout_height="wrap_content"
          android:layout_margin="10dp"
          android:layout_weight="1"
          android:background="@drawable/button_style"
          android:drawableLeft="@drawable/join"
          android:text="join" />

        <Button
          android:id="@+id/shareBtn"
          android:layout_width="match_parent"
          android:layout_height="wrap_content"
          android:layout_margin="10dp"
          android:layout_weight="1"
          android:background="@drawable/button_createaccount"
          android:drawableLeft="@drawable/share"
          android:text="share" />

      </LinearLayout>
    </LinearLayout>
</androidx.cardview.widget.CardView>

<com.google.android.material.bottomnavigation.BottomNavigationView
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    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:menu="@menu/bar" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

4.4 Limitations and Bibliography :

Bibliography

- https://www.w3schools.com/
- https://www.feelfreetocode.com/
- https://www.javatpoint.com/
- https://www.geeksforgeeks.org/
- https://www.learnvern.com/course/android-tutorial
- https://www.youtube.com/

Limitations

- using this app only 75 people can join meeting at a time
- You cannot track your meeting history
- you cannot join a meeting using browser you need to install application