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**PROJECT PROFILE**

**Project Name -: HGcalling**

**Developed By -:** Bhavdip Vaghasiya & Kishan Paghdal

**Class -:** BCA sem-6

**Year -:** 2022-23

**Front End -:** Android

**Back End -:** FireBase

**Project Evaluator -:** Mr Sandip Upadhyay

**Guide By**  -: Mr Sandip Upadhyay

**Project Submitted To** -: SSSDIIT-Junagadh

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# INTRODUCTION

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HGcalling isaflagshipproductofEasySolutionwhich covers all aspects of user. Hgcalling covers every minuteaspects of a universities work flow and integrates all processes with user friendly interface.WithhundredsofsatisfiedcustomersUMSisfirstchoiceofseveralstate,governments/semi-governmentuniversitiesandinstitutions.UMSisanoutcomeofhardworkdonebyourexperttechnical team in supervision of several renowned educationists which includes Controller ofexamination, faculties. UMS is a rare combination of experience and precision. UMSstreamline pathof information flowin organization bytakingcareof followingdepartments:

* + - • FeeVideoCall
    - • Secure

**SYSTEM ANALYSIS**

* - It is a process of collecting and interpreting facts, identifying the problems, and decomposition of a system into its components.
* - System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives.
* - It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose.
* - Analysis specifies **what the system should do**.

**IDENTIFICATION OF NEED**

The daily activities pointing to smooth running of a Service Centre involves recording of` large volume of data in record books. The management of staff, their duty allocation, their regular and overtime schedule maintenance, attendance and payroll need to be managed properly. In addition, timely preparations of several reports are required. All these require managing services quickly and efficiently.

* **Preliminary Investigation**

The preliminary investigation was carried out to determine the feasibility of the system. The methods employed are:

***Reviewing Organization Document***

The existing documents were reviewed, and minutely analyzed. They included-

* Register (In which all records are being kept)
* Conducting Interviews

Several interviews were conducted at various levels. The two prime interviewees were the management personnel and the computer operators. It made further clear the working of the system and the changes desired by them. Several suggestions were also made, some of which were accepted by the management.



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***Feasibility Study***

*Technical Feasibility*

The current system has Personal Computers. All the works are done on Word Processor and spreadsheets. The company already possesses the required software.

In the current working system, it requires time to produce the reports. The response time is high for processing queries.

## HardwareRequirements:

|  |  |
| --- | --- |
| ProcessorBrand | :Intel |
| ProcessorType | : Corei3 |
| ProcessorSpeed | :2 GHz |
| ProcessorCount | : 1 |
| RAM Size | :2 GB |
| MemoryTechnology | :DDR3 |
| ComputerMemoryType | :DDR3 SDRAM |
| HardDriveSize | :160 GB |

**SoftwareRequirements:**

Operatingsystem : Android version up to 5(requred)

*Economical Feasibility*

The company already possesses the required hardware and software. There is no investment in hardware and software.

The benefits of installing the application lie in the speedy processing of data, faster retrieval of information and increasing volume of data, and all these with greater accuracy and consistency.

To sum up, the benefits are great and cost is minimal. Therefore, the project is economically feasible.

*Operational Feasibility*

The system is expected to work smoothly when developed and installed. There has been participation of management and the computer operators in planning and development of the system. There will be a slight change in the format of the reports to which management agreed. There is no disturbance in organizational structure of the company. The new application for the system will have Graphical User Interfaces (GUI). The applications with GUI are very easy to handle and operate. The company has to train their staff members which can easily done in one or two days. They need to be instructed regarding using of the application software.

**COST ESTIMATION**

During project planning,project manager usally estimate the following parameter like,project size,effort,cost,project duration.

There are many methods available to get the size of the project. the. Those methods are LOC (Line of Code) and FP (Function Point),COCOMO (Constructive CostModel).

We are gone through cocomo method to get approximate cost of the website project.here all the calculation done to get the approximate cost if this website project.

Working time estimation is as given,

2 Months 15 days

2hr 1 day = 150 hours

* Now, the expenses & cost estimation are given below:

Computer rent = 2500/-

+ Light Bill =1500/-

+ Database design & creation = 2000/-

+ Coding & Validation = 3000/-

+Internet Connection =1500/-

+Extra exp. =2000/-

**Total = 12500/-**

Thus the approximation cost of this Web Site Project will be about 12500/- Rs.

**PROJECT ANALYSIS**

## T5.1Database Dictionary

* **backend in use Firebase Authentication**

1. **go to the google server and type to search www.Firebase .com**
2. **after goto console**
3. **click your project**
4. **and left side click authentication section**

**DFD (DATA FLOW DIAGRAM)**

1. **1)** **0-Level**





1. **2)** **1-Level**



**Login**

**Vidocall**

**3)** **2-Level**

Login

# 

Deshbord

Vidiocall

E-RDIAGRAM:

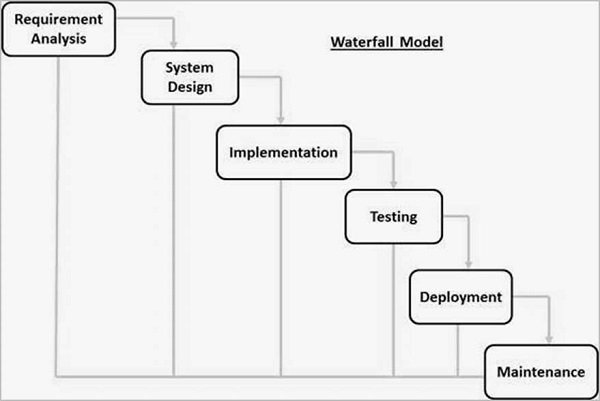
**ER Diagram:** ER Diagram is a high-level conceptual data model diagram. Entity-Relationmodel is based on the notion of real-world entities and the relationship between them. ERmodelling helps you to analyse data requirements systematically to produce a well-designeddatabase.

**Figure4.1: ERDiagramforSmartphoneManagementArena**

**S/W Engineering Paradigm applied**

Software paradigm refers to method and steps, which are taken while designing the software programming paradigm is a subset of software design paradigm which is future for other a subset of software development paradigm. Software is considered to be a collection of executable programming code, associated libraries, and documentation. Software development paradigm is also known as software engineering, all the engineering concepts pertaining to developments software applied. It consists of the following parts as Requirement Gathering, Software design, Programming, etc. The software design paradigm is a part of software development. It includes design, maintenance, programming.

The following illustration is a representation of the different phases of the Waterfall Model.



The sequential phases in Waterfall model are −

* **Requirement Gathering and analysis** − All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.
* **System Design** − The requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.
* **Implementation** − With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.
* **Integration and Testing** − All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
* **Deployment of system** − Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market.
* **Maintenance** − There are some issues which come up in the client environment. To fix those issues, patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

## H/W REQUIREMENT SPECIFICATION

## ▪ Androi

## ▪ Version

## ▪ Network

## 

**PERT Chart:**

The meaning of PERT is Project Estimation and Review Techniques. PERT chart is a combination of various Arrows and Boxes indicating information.

There are various signs that describe their own meanings.

The box indicates various activities. So, when the boxes we see in the project we can decide that how the work is done into the various processes.

The arrow indicates the task dependencies on various processes.

Arrows describes various task and in also shows that which task is dependent upon which task.

PERT chart is very useful to show the project statistically. PERT chart is also very useful in the project assuming. It also monitoring on the activities by the time

. It takes the care of the process by timing.



****

**GANTT Chart:**

GANTT chart is a part of PERT chart and we can get many things of the Gantt chart via the PERT chart. GANTT chart describes very time scheduling & resource planning. When the more than one activity is done parallel this chart is very useful to understand the each process.

GANTT chart is a special type of bar-chart that describes that each bar describes a process or an activity. The length of the bar describes the time-allocated for the activity.

In Gantt chart each bar consists of two parts white part and shaded part. The shaded part indicates the length of time estimated for the process. The white part describes the slack part of the process. The white part also describes the time by that the process must be completed.

Gantt charts used in software project management are actually an enhanced version of the software project management. Each bar consists of a white part and a shaded part. The white part of the bar shows the length of time each task is estimated to take. The shaded part of the bar shows the slack time.

In order to estimate the time durations for various activities, usually managers let the engineers themselves estimate the time for an activity they might be assigned to. However, some managers prefer to estimate the time for various activities themselves. Many managers believe that an aggressive schedule motivates the engineers to do a job better and faster.

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**Testing**

**Testing Plan:**

Testing is that step to software engineering process that could be viewed destructive rather than constructive.

In a software development project, errors can be injected at any stage during the development. Also some requirements errors and design errors can remain undetected. Ultimately, these errors will be reflected in the code.

Since the code is frequently the only product that can be executed and whose actual behavior can be observed, testing is the phase where the errors remaining form earlier phases also must be detected. Hence, testing performs a very critical role for quality assurance and for ensuring the reliability of the software.

Testing begins at the component level and works ―outward‖ toward the integration of the entire computer-based system. Different testing techniques are

**Testing Methods:**

* Testing is a process of finding the error when the program execute.
* Testing needs high probability for finding the errors.
* A successful testing is to be get from undiscovered errors.

**White Box Testing:**

In this system the testing is to search the undiscovered errors. White Box Testing is a test case design method that uses the control structure of the procedural design to derive test cases. Using white box testing methods, the software developer can derive test cases.

* Guarantee all paths will redirects the another page as the Individual working place.
* Log in page is directed as the User name and Password both are same than go in next page otherwise display the Error. And Put again user name and password.

**Black Box Testing**

Black box testing methods focus on the functional requirements of the software. That is, black box testing enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program.

* Incorrect Information fills in the Project entry, Module entry and Functionality entry Form so generate errors Massage
* In this system when the database structure is different from

insert value than give the Error.

**Implementation**

Implementation refers to the entire effort associated with a new system. The implementation of a web application involves longer term issues after the system has been designed and installed.

Implementation is a part of the design of a web application, and is an organizational change process. It is a part of the process that begins with the very first idea for a web application has been successfully integrated with the operations of the organization.

We expect most of the implementation to be concerned with behavioral phenomena since people are expected to change their information processing activities.

The implementation is processed from review and reports from developer cover the following areas:

* Good working conditions…

* Useful for gathering information…

* Changing in the pages at a time…

* Update application easily…

* Attractive layouts…

**TESTING**

System testing is the stage of implementation, which is aimed at ensuring that thesystem works accurately and efficiently before live operation commences. Testing is theprocess of executing the program with the intent of finding errors and missing operations andalsoacompleteverificationtodeterminewhethertheobjectivesaremetandtheuserrequirementsaresatisfied. Theultimate aim isqualityassurance.

## UnitTesting

The software units in a system are modules and routines that are assembled andintegrated to perform a specific function. Unit testing focuses first on modules, independentlyof one another, to locate errors. This enables, to detect errors in coding and logic that arecontainedwithineachmodule.Thistestingincludesenteringdataandascertainingifthevaluematches to the type and size supported by java. The various controls are tested to ensure thateachperforms its actionas required.

## IntegrationTesting

Datacanbelostacrossanyinterface,onemodulecanhaveanadverseeffectonanother,subfunctionswhencombined,maynotproducethedesiredmajorfunctions.Integrationtestingisasystematictestingtodiscovererrorsassociatedwithintheinterface.Theobjectiveistotakeunittestedmodulesandbuildaprogramstructure.Allthemodulesarecombinedandtestedasa whole. Here the Server module and Client module options are integrated and tested. Thistestingprovidestheassurancethattheapplicationiswellintegratedfunctionalunitwithsmoothtransitionof data.

## UserAcceptance

Testing User acceptance of a system is the key factor for the success of any system.The system under consideration is tested for user acceptance by constantly keeping in touchwiththesystem usersat timeofdevelopingandmakingchangeswheneverrequired.



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## TestCases:

**Table1.9Testcases**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **TestName** | **input** | **Actualoutput** | **Expectedoutput** | **Status** |
| 1 | Login | Usernameandpassword | Useris  successfullyAuthenticated | Useris  successfullyAuthenticated | Pass |
| 2 | Login | Wrongusernameand  password | Invalidusernameor  password | Invalidusernameor  password | Pass |
| 3 | Signup | Userdetailsand  passsword | Accountsuccessfully  created | Accountsuccessfully  created | Pass |
|  |  |  |  |  |  |
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|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

# LIMITATION

Theprojectentitledas**InstitutionManagementSystem**isthesystemthatdealswiththeissues related to a particularinstitution.

Thisprojectissuccessfullyimplementedwithallthefeaturesmentionedinsystemrequirementsspecification.

Theapplicationprovidesappropriateinformationtousersaccordingtothechosenservice.

Theprojectis designed keepingin view thedaytodayproblems faced byacollege.

Deployment of our application will certainly help the college to reduce unnecessarywastageof timein personallygoingto each department forsomeinformation.

Awarenessandrightinformationaboutanycollegeisessentialforboththedevelopment of student as well as faculty. So this serves the right purpose in achieving thedesiredrequirements of both thecommunities

**Future Scope**

* I can develop UI better then now.
* It can also possible to devlop wishlist where user can save their products to bus later.
* There will also possible to track order.
* It can also possible to develop to product android app for this website



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**All Screen Layout & Coding**

1. **Splesh:**

This page represents signing up to website. It leads to registering to websitemaking username and password, it takes the up username, name, password and securityquestion.Theseinformation aremandatory.



package com.example.hgcalling;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.os.Handler;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_main);

    }

    @Override

    protected void onStart() {

        super.onStart();

        try {

            new Handler().postDelayed(new Runnable() {

                @Override

                public void run() {

                    startActivity(new Intent(MainActivity.this, login.class));

                }

            }, 2000);

        } catch (Exception e) {

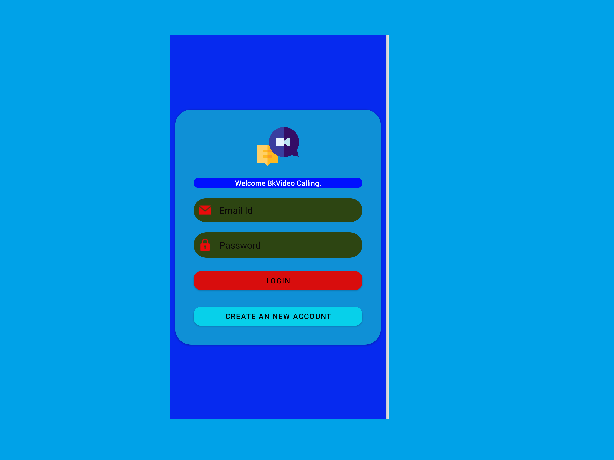
            Toast.makeText(MainActivity.this, "Some Error Are Accured", Toast.LENGTH\_SHORT).show();

        }

    }

}

1. **Login form:** This page represents the first thing about our website. It leads on to the loginpointforits personnel; it takes uptheusername,password and signup.



### 

package com.example.hgcalling;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import android.app.ProgressDialog;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import android.widget.Toast;

import com.google.android.gms.tasks.OnCompleteListener;

import com.google.android.gms.tasks.Task;

import com.google.firebase.auth.AuthResult;

import com.google.firebase.auth.FirebaseAuth;

public class login extends AppCompatActivity {

    FirebaseAuth auth;

    ProgressDialog pd;

    TextView email,pass;

    Button lgn,crt;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_login);

        pd = new ProgressDialog(this);

        pd.setMessage("Please Waite.....");

        email = findViewById(R.id.email);

        pass = findViewById(R.id.password);

        auth = FirebaseAuth.getInstance();

        lgn = findViewById(R.id.loginbtn);

        crt = findViewById(R.id.createbtn);

        try {

            lgn.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                    if (email.getText().toString().equals("") || pass.getText().toString().equals("")) {

                        Toast.makeText(login.this, "Plase enter value in blank Field", Toast.LENGTH\_LONG).show();

                        email.setText("");

                        pass.setText("");

                        email.requestFocus();

                    }

                    else {

                        pd.show();

                        String name, eml, ps;

                        eml = email.getText().toString();

                        ps = pass.getText().toString();

                        auth.signInWithEmailAndPassword(eml, ps).addOnCompleteListener(new OnCompleteListener<AuthResult>() {

                            @Override

                            public void onComplete(@NonNull Task<AuthResult> task) {

                                pd.dismiss();

                                if (task.isSuccessful()) {

                                    Toast.makeText(login.this, "Login Successfully", Toast.LENGTH\_SHORT).show();

                                    startActivity(new Intent(login.this, deshbord.class));

                                } else {

                                    Toast.makeText(login.this, task.getException().getLocalizedMessage(), Toast.LENGTH\_SHORT).show();

                                }

                            }

                        });

                    }

                }

            });

            crt.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                    startActivity(new Intent(com.example.hgcalling.login.this, signup.class));

                }

            });

        } catch(Exception e){

            Toast.makeText(login.this, "Some Error Are Accured....,Toast", Toast.LENGTH\_LONG).show();

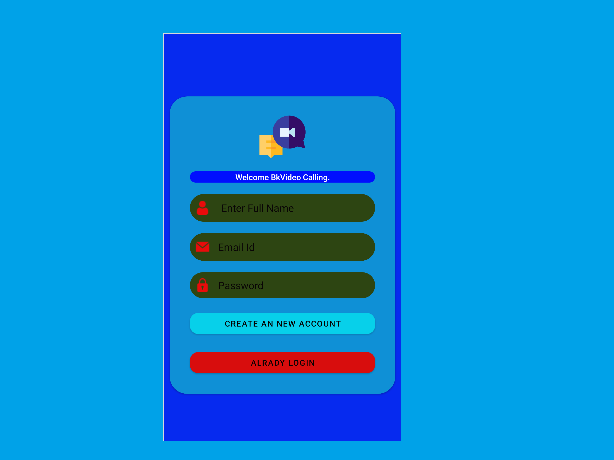
        }

    }

}

1. **Sign-Up:**

Sign up in enter username and email and password and after all this procsess to click save button



package com.example.hgcalling;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import android.widget.Toast;

import com.google.android.gms.tasks.OnCompleteListener;

import com.google.android.gms.tasks.OnSuccessListener;

import com.google.android.gms.tasks.Task;

import com.google.firebase.auth.AuthResult;

import com.google.firebase.auth.FirebaseAuth;

import com.google.firebase.firestore.FirebaseFirestore;

public class signup extends AppCompatActivity {

    FirebaseFirestore database;

    FirebaseAuth auth;

    TextView email,pass,nam;

    Button lgn,crt;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_signup);

        email=findViewById(R.id.gmail);

        pass=findViewById(R.id.passwordsign);

        nam=findViewById(R.id.nm);

        database=FirebaseFirestore.getInstance();

        auth=FirebaseAuth.getInstance();

        lgn=findViewById(R.id.loginbtn);

        crt=findViewById(R.id.createbtn);

        try {

            lgn.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                    startActivity(new Intent(signup.this, login.class));

                }

            });

            crt.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View v) {

                    String name, eml, ps;

                    eml = email.getText().toString();

                    ps = pass.getText().toString();

                    if (email.getText().toString().equals("") || pass.getText().toString().equals("")) {

                        Toast.makeText(signup.this,"Plase Fill Blank value",Toast.LENGTH\_LONG).show();

                        email.setText("");

                        pass.setText("");

                        email.requestFocus();

                    }

                    else

                    {

                        user us = new user();

                        us.setEmail(eml);

                        us.setPass(ps);

                        auth.createUserWithEmailAndPassword(eml, ps).addOnCompleteListener(new OnCompleteListener<AuthResult>() {

                            @Override

                            public void onComplete(@NonNull Task<AuthResult> task) {

                                if (task.isSuccessful()) {

                                    database.collection("users").document().set(us).addOnSuccessListener(new OnSuccessListener<Void>() {

                                        @Override

                                        public void onSuccess(Void unused) {

                                            startActivity(new Intent(signup.this, login.class));

                                        }

                                    });

                                    Toast.makeText(signup.this, "Account is create", Toast.LENGTH\_SHORT).show();

                                    startActivity(new Intent(signup.this, login.class));

                                } else {

                                    //startActivity(new Intent(signup.this, deshbord.class));

                                    Toast.makeText(signup.this, task.getException().getLocalizedMessage(), Toast.LENGTH\_SHORT).show();

                                }

                            }

                        });

                    }

                }

            });

        } catch (Exception e) {

            Toast.makeText(signup.this,"Some Error Are Accured....,Toast",Toast.LENGTH\_LONG).show();

        }

    }

}

1. **Deshbord:**



package com.example.hgcalling;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import org.jitsi.meet.sdk.JitsiMeet;

import org.jitsi.meet.sdk.JitsiMeetActivity;

import org.jitsi.meet.sdk.JitsiMeetConferenceOptions;

import java.net.URL;

public class deshbord extends AppCompatActivity {

    EditText jcode;

    Button join,share;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity\_deshbord);

        jcode = findViewById(R.id.joinbox);

        join = findViewById(R.id.joinbtn);

        share = findViewById(R.id.sharebtn);

        URL url;

        try {

            url = new URL("https://meet.jit.si");

            JitsiMeetConferenceOptions cop = new JitsiMeetConferenceOptions.Builder().setServerURL(url).setWelcomePageEnabled(false).build();

            JitsiMeet.setDefaultConferenceOptions(cop);

        } catch (Exception e) {

            e.fillInStackTrace();

        }

        try {

            join.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View view) {

                    if(jcode.getText().toString().equals(""))

                    {

                     Toast.makeText(deshbord.this,"Please Enter Code & Join Fast",Toast.LENGTH\_LONG).show();

                     jcode.requestFocus();

                    }

                    else {

                        JitsiMeetConferenceOptions jit = new JitsiMeetConferenceOptions.Builder().setRoom(jcode.getText().toString()).setWelcomePageEnabled(false).build();

                        JitsiMeetActivity.launch(deshbord.this, jit);

                    }

                }

            });

            share.setOnClickListener(new View.OnClickListener() {

                @Override

                public void onClick(View view) {

                    if(jcode.getText().toString().equals(""))

                    {

                        Toast.makeText(deshbord.this,"Please enter fill code Field",Toast.LENGTH\_LONG ).show();

                        jcode.requestFocus();

                    }

                    else

                    {

                        Intent share= new Intent(Intent.ACTION\_SEND);

                        share.setType("text/plain");

                        share.putExtra(Intent.EXTRA\_SUBJECT,"Your Metting Code Is : ");

                        String u="This Is Vidio Calling App Create By Android Devloper Is --> Kishan Paghdal & Bhavdip Vaghasiya  //----Metting Url Is : -> https://meet.jit.si and Your Metting Code Is : ->"+jcode.getText().toString();

                        share.putExtra(Intent.EXTRA\_TEXT,u);

                        startActivity(Intent.createChooser(share,"Metting Code.."));

                    }

                }

            });

        } catch (Exception exception) {

            Toast.makeText(deshbord.this, "some Error are accured", Toast.LENGTH\_SHORT).show();

        }

    }

}

1. **video Call :**

