A Project Report on

# *DIGITAL OUTPASS MOBILE APPLICATION*

Submitted by

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**Submitted to**

Under the supervision of

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**as a part of** Mini Project in E3-SEM2

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# ACKNOWLEDGEMENT

We would like to express our sincere gratitude to **Ms . E.Susmitha** , our project internal guide for valuable suggestions and keen interest throughout the progress of our course of research .

We are grateful to **Mr . P.Harinadha** HOD CSE , for providing excellent computing facilities and congenial atmosphere for progressing with our project .

With sincere regards,

R.L.Rajasekhar Reddy (R170129)

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# CERTIFICATE

This is to certify that the report entitled "DIGITAL OUTPASS" submitted by R.L.RajasekharReddy(R170129),Y.DayanandaReddy(R170194),U.Vishnuvardhan(R170516), B.Chaitanya Kumar Reddy(R170528) in partial fulfillment of the requirement for the award of Bachelor of Technology in Computer Science Engineering is a bonafide work carried out by her under supervision and guidance.

The report hasn't been submitted previously in part or in full to this or any other university or institution for the award of any degree. Under the Guidance of **E.Susmitha** (Assistant Professor, Computer Science &Engineering, RGUKT, R.K Valley).

**Project Guide,**

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RGUKT,RK Valley.

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Mr P.Harinadha,

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RGUKT,RK Valley.

# DECLARATION

We R.L.RajasekharReddy(R170129),Y.Dayananda Reddy(R170194), U.Vishnuvardhan (R17051 6), B.Chaitanya Kumar Reddy(R170528) here by declare that this report entitled “DIGITAL OUTPASS APP” submitted by me under the guidance and supervision of Ms.E. Susmitha , is a bonafide work. I also declare that it has not been submitted previously in part or in full to this university or other university or institution for the award of any degree or diploma.

**Date** :19-09-2022

**Place** : RK Valley

**ID NO**

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# ABSTRACT

The issue of security is paramount in any organization, especially for the students. Though educational institutions have taken lots of measures to ensure the students welfare as much as possible, these measures are considered to be tedious and time consuming for more than 80% of the student community. The hostel students find it difficult to request for an outpass because he/she has to run in search of the respective wardens who may be a teaching faculty of that particular organization. In such cases, the schedule or present location of the warden is non-predictable to the students who require their authorization in order to leave the campus. Secondly, every parent would prefer to know the where abouts of their warden. The above issues motivated us to develop this automated system. In this work, we developed a mobile application wherein the students can easily send their request for an out-pass which automatically gets approved if it contains valid reasons.

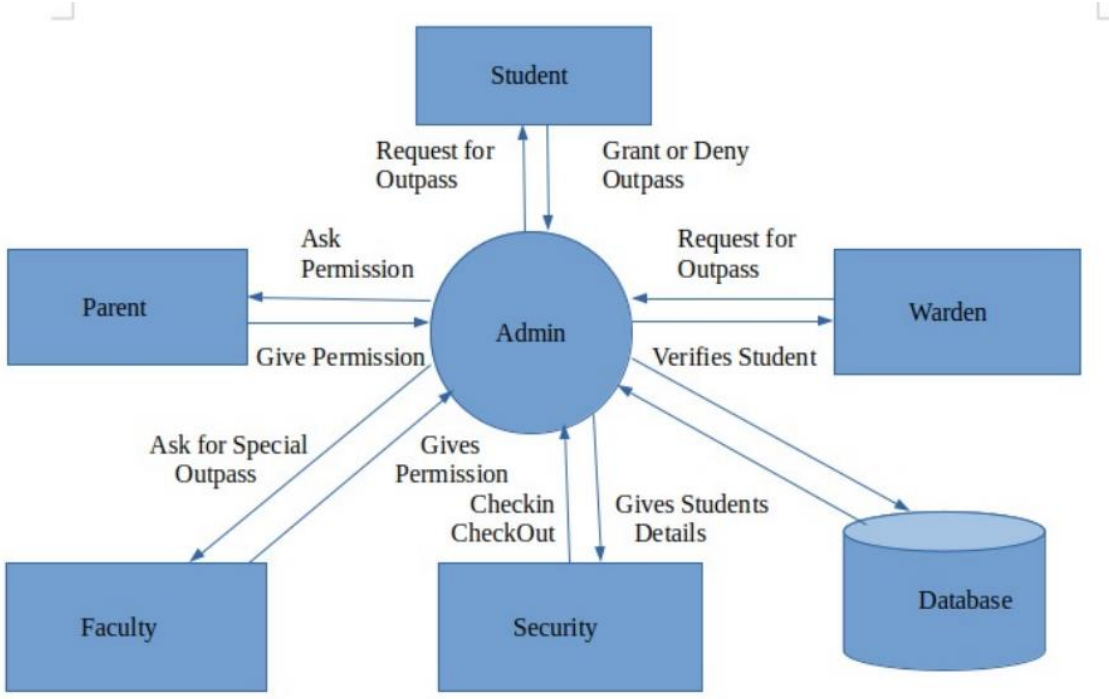
# INTRODUCTION

The general protocol to get an out-pass in any organization is to get a manual written letter from the student requesting an out-pass signed by the respective warden in-charge of the student. This process can become quite tedious when the campus size is large . As the students will have to go in search of the wardens in person. Also, in most cases the warden incharges might be a teaching faculty who find the authorization procedure to be intruding in their professional work times. Time is an important factor playing here affecting both student and the warden. To avoid this problem to occur , we are implementing an android application .We propose to implement this project using XML language in Android Studio for frontend ,Java for backend and firebase as Database .As we all Know that nowadays every individual carry their own smart phones and the uses of android applications have been increased rapidly so it is better to have such an android application which will provide a safe environment . Having the application on your phone can diminish our risk and bring assistance when we require. The main modules of this project are: Student Module, warden/Care Taker module.

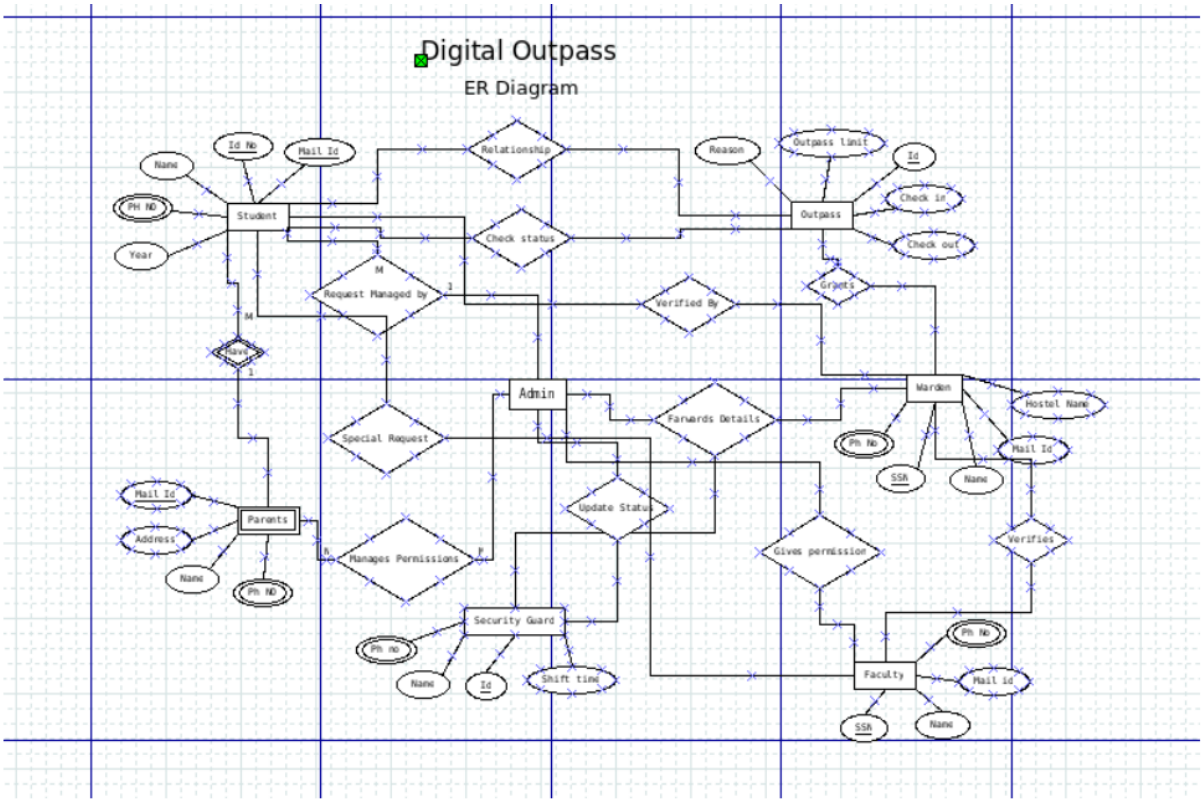
# PURPOSE

It is proposed to simplify the procedures involved in acquiring an out-pass for the hostel students, while at the same time maintain paramount and for-sure security methodologies. We wish to do the above by means of a mobile application. This application will allow students to send out-pass requests with just a button click. The pass is approved automatically by the system if the requested student has eligible number of pass limit Students will easily get the out pass with a valid reason. After successful registration for outpass student can check the status of the outpass, warden verifies all details of student and can grant the outpass to the respective student ,then warden will change the status of the outpass by issuing the outpass. Student can also cancel the outpass at any time.

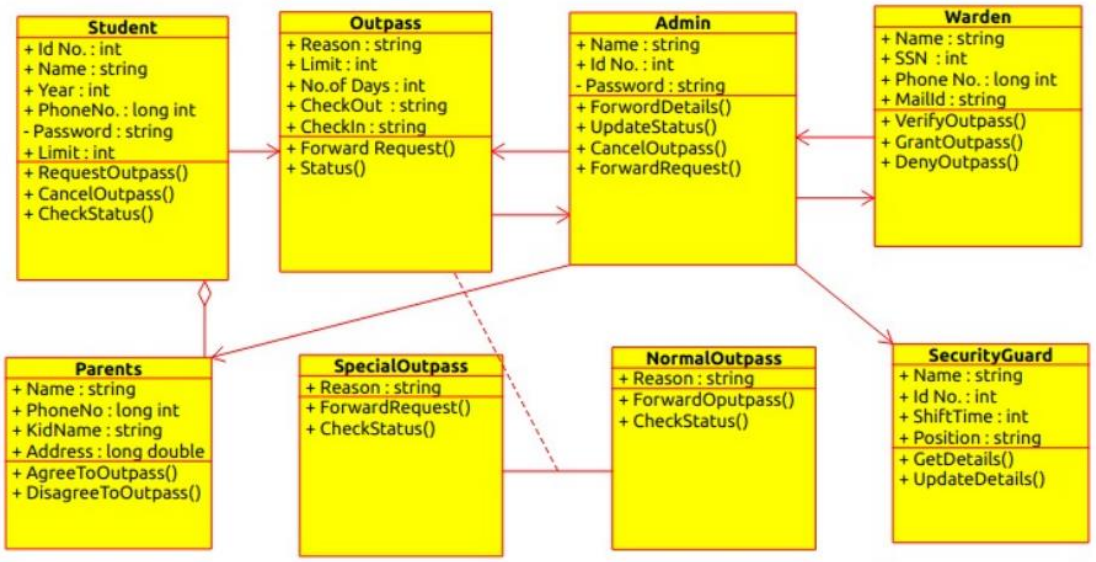
# CONTEXT DIAGRAMS



# ENTITY RELATIONSHIP DIAGRAM:



# CLASS DIAGRAM:



# USECASE DIAGRAM:

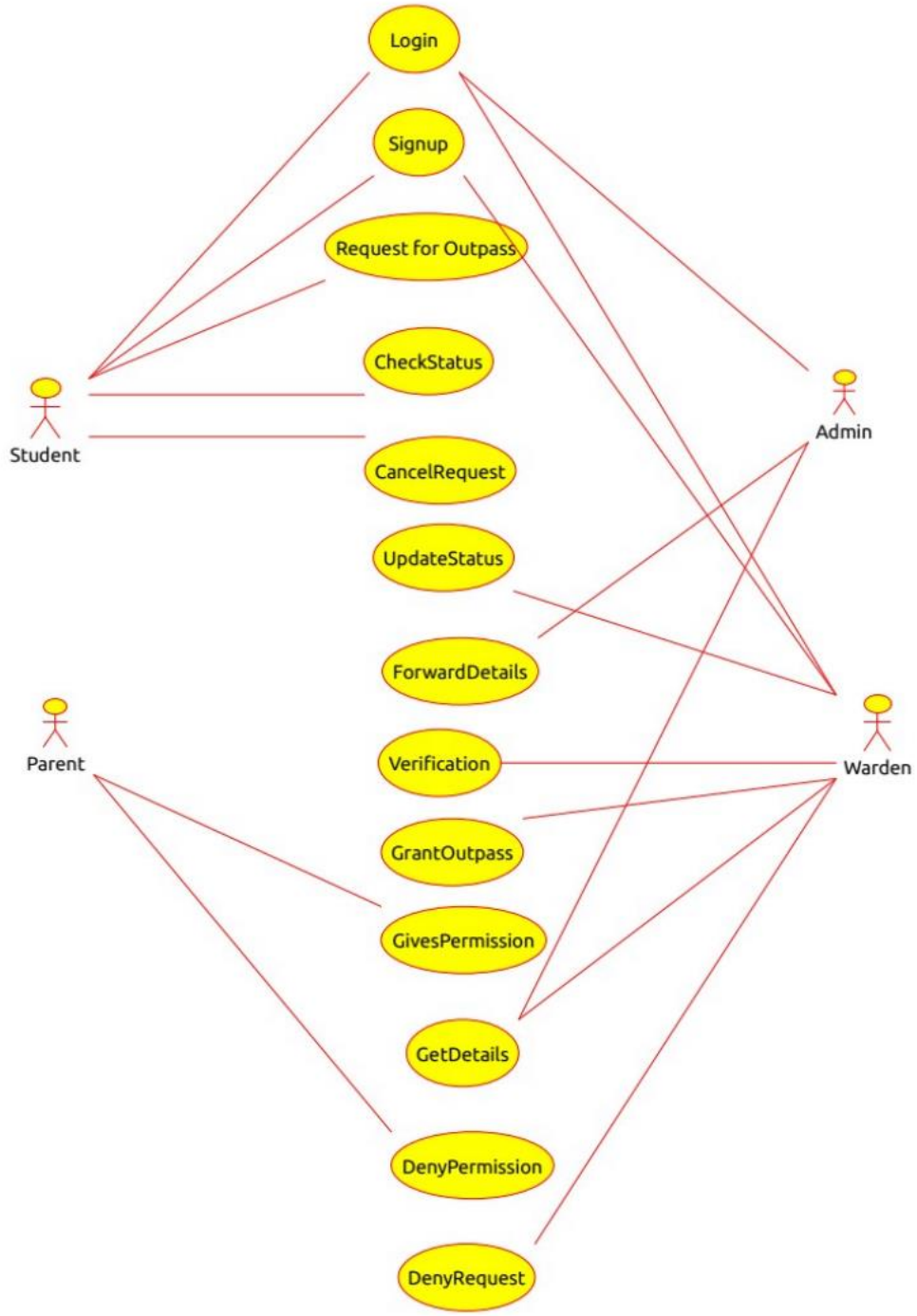



Diagram: use case diagram Page 1

# SOFTWARE REQUIREMENTS

## FrontEnd:

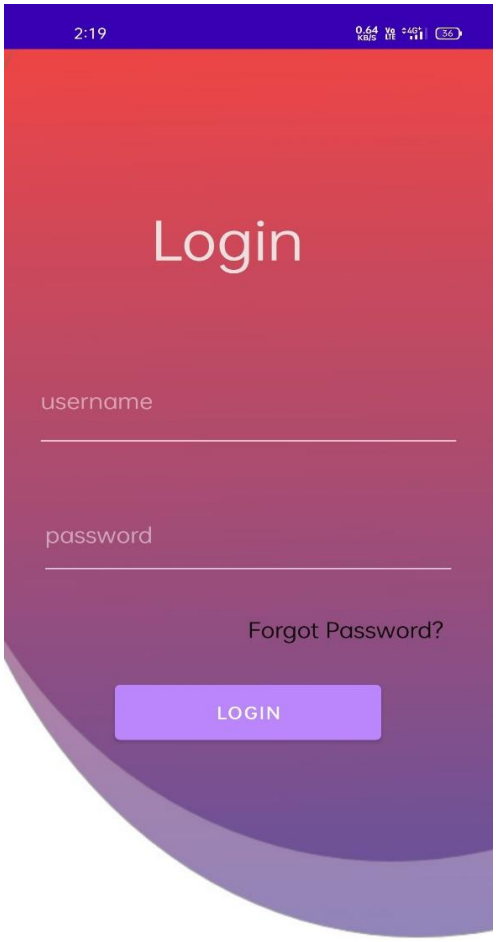
We used Android Studio Platform to build the Digital Outpass Mobile Application. We wrote the FrontEnd Code in XML language . XML is a cross-platform UI toolkit that is designed to allow code reuse across operating systems such as Android, while also allowing applications to interface directly with underlying platform services. By using Android Studio we made a mobile application for android. we have written the code in JAVA language. JAVA is a programming language designed for client development, such as for the web and mobile apps. It is developed by Sun Microsystems and can also be used to build server and desktop application. JAVA is an object-oriented, class-based, garbage-collected language with C++ -style syntax.

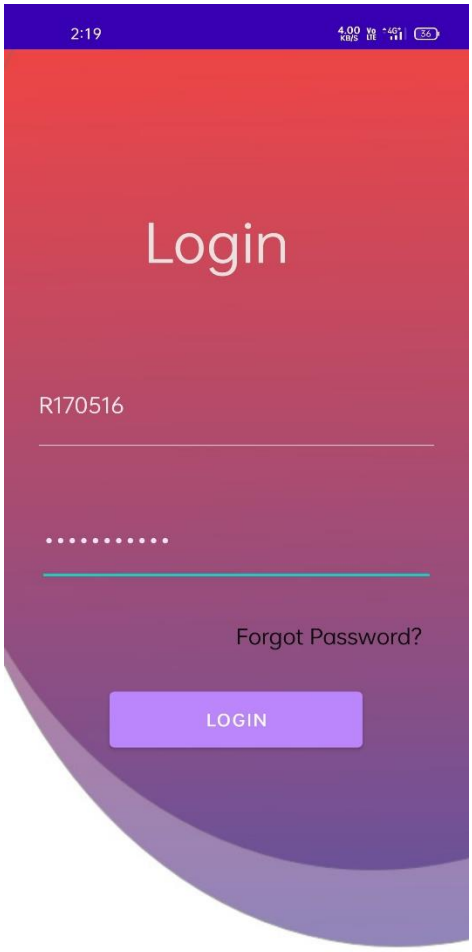
## BackEnd:

To store student registered details we used cloud Firestore in Firebase for BackEnd. Realtime Database is a flexible, scalable database for mobile, web, and server development from Firebase and Google Cloud.It keeps your data in sync across client apps.

# APPLICATION SCREENS

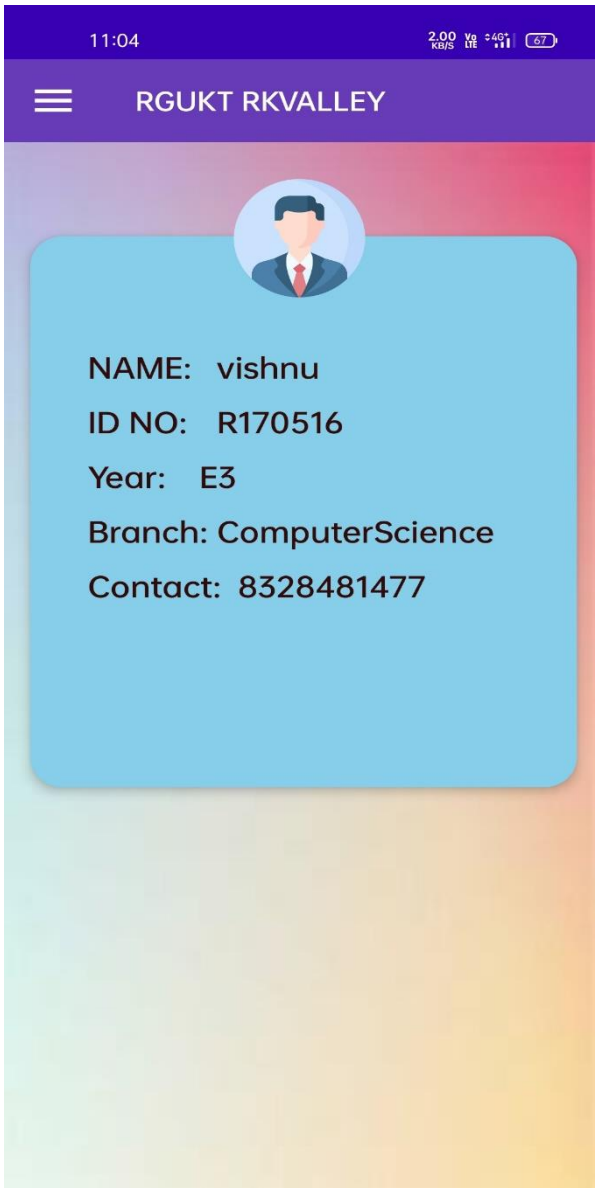
**LoginPage** : This is the login page of Digital Outpass.



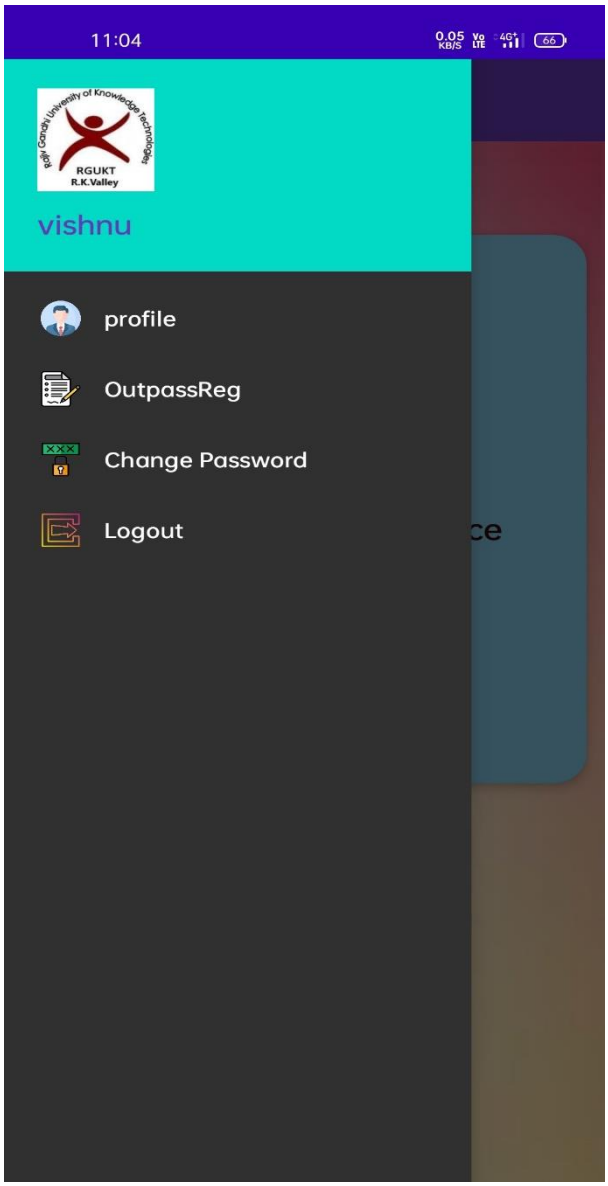



# STUDENT INTERFACE

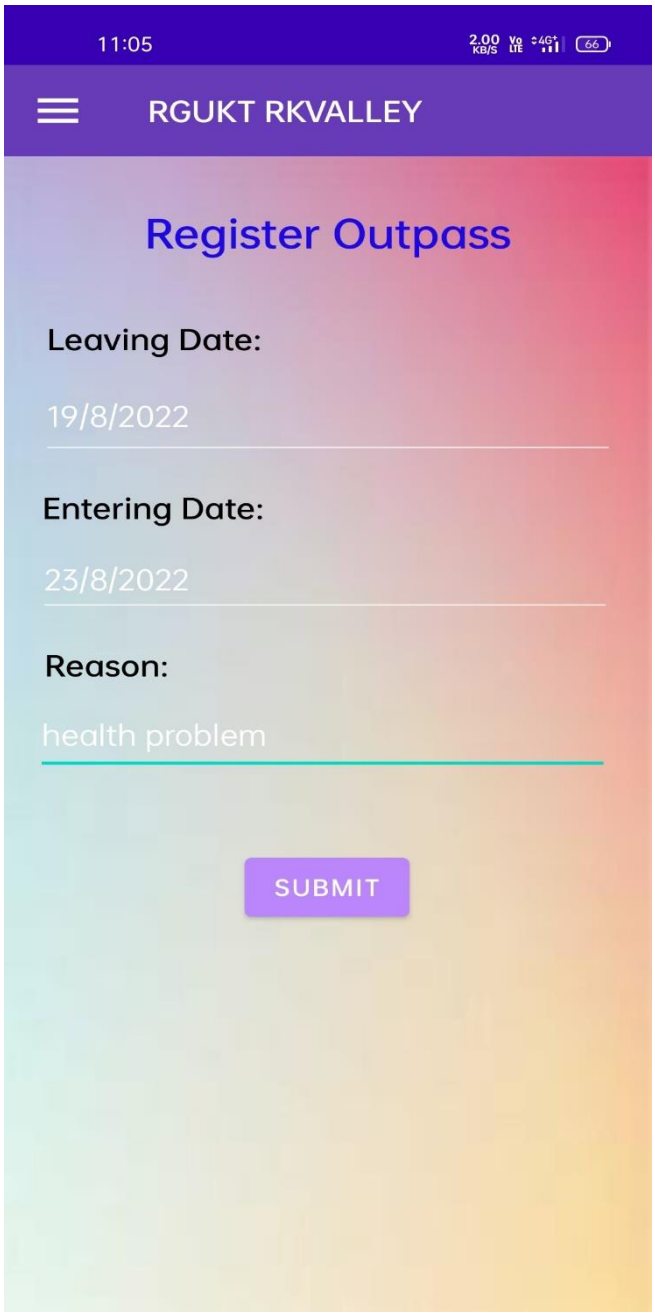
## STUDENT HOME PAGE



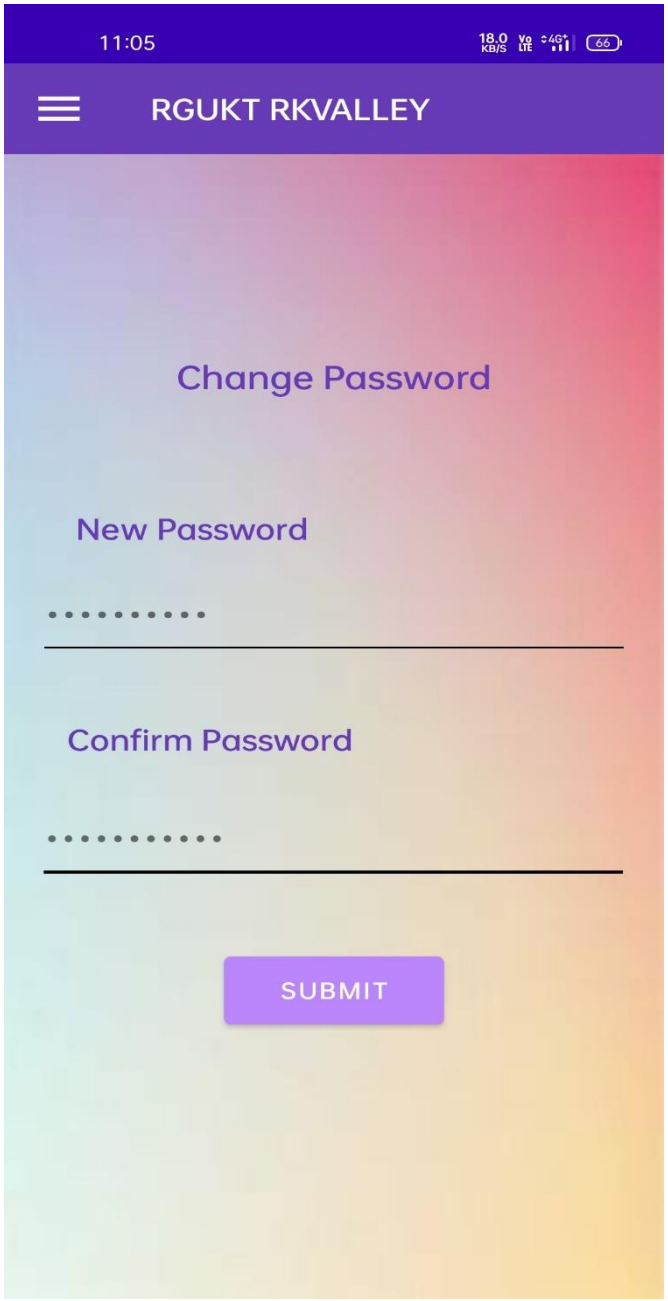

## NAVIGATION BAR



## STUDENT OUTPASS REGISTRATION

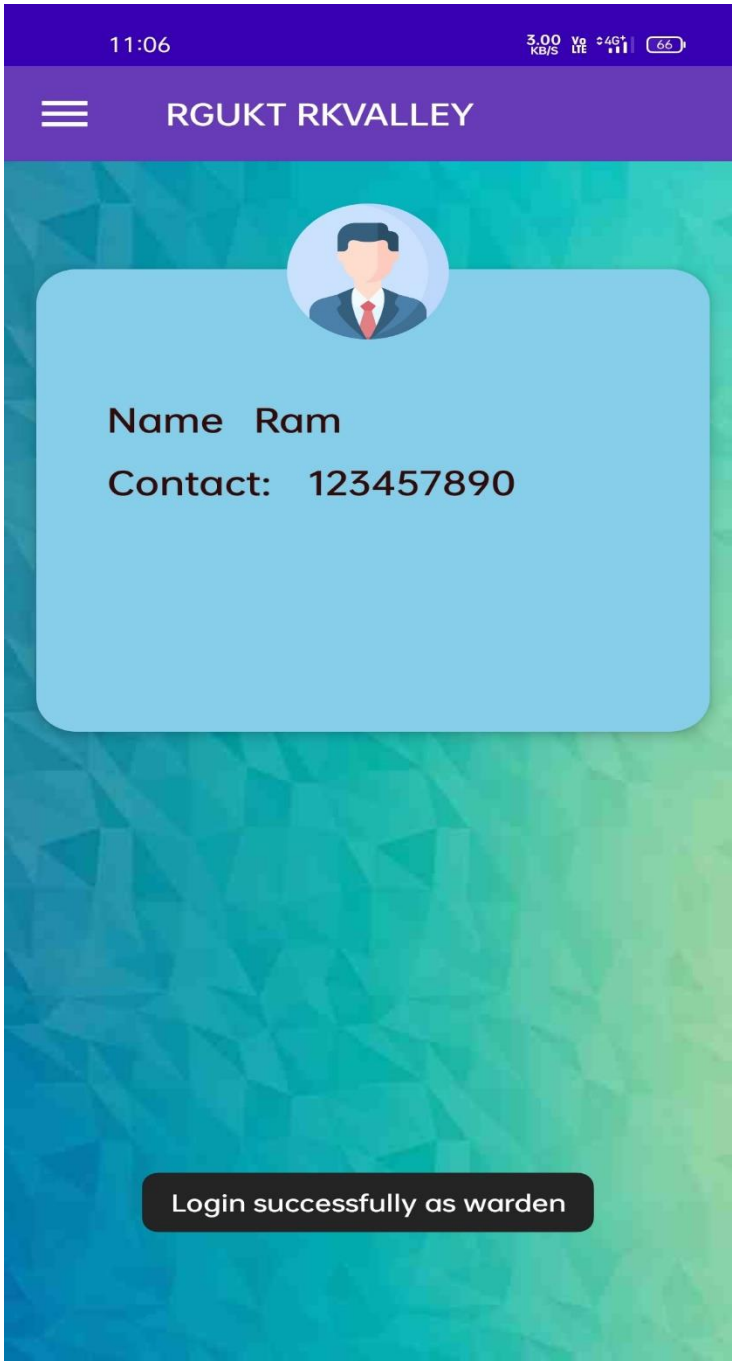



## CHANGE PASSWORD



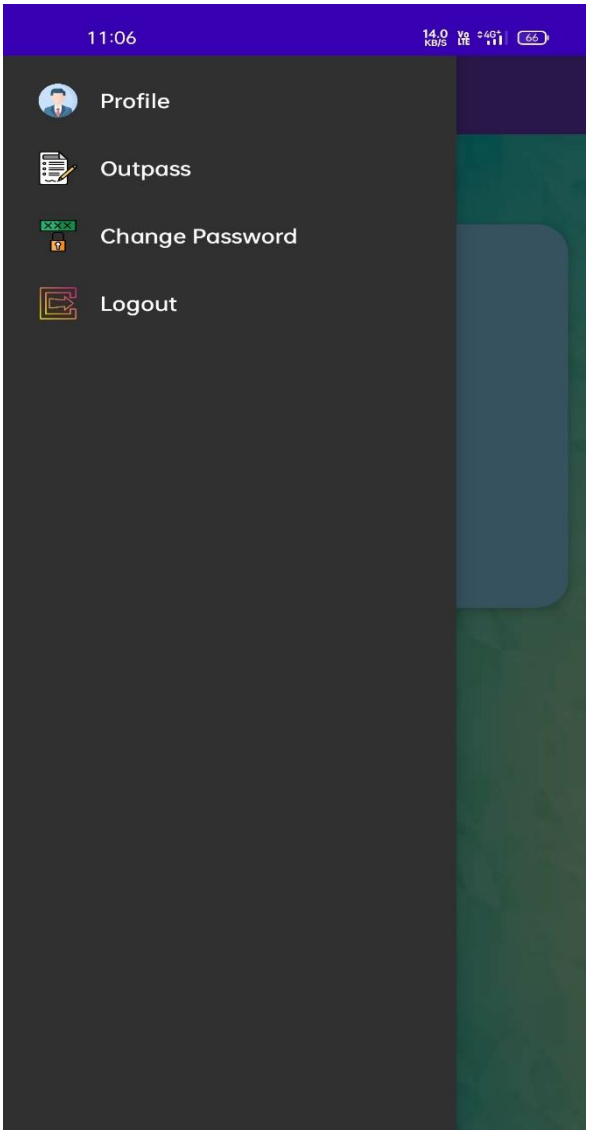
# WARDEN INTERFACE

## HOME PAGE

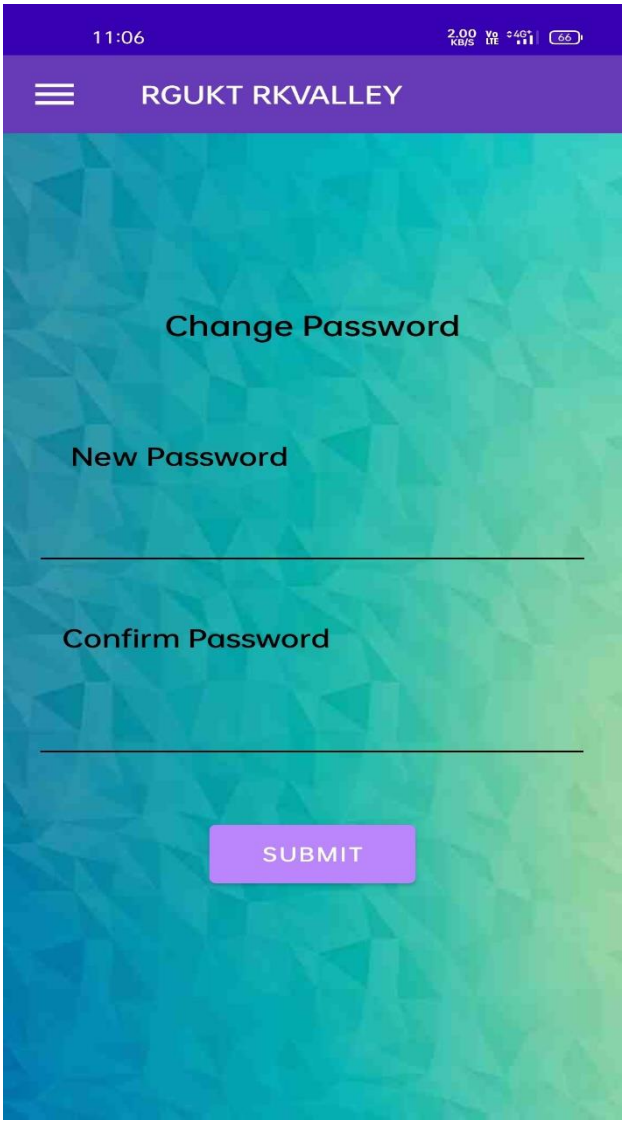



## OUTPASS REGISTRATION LIST

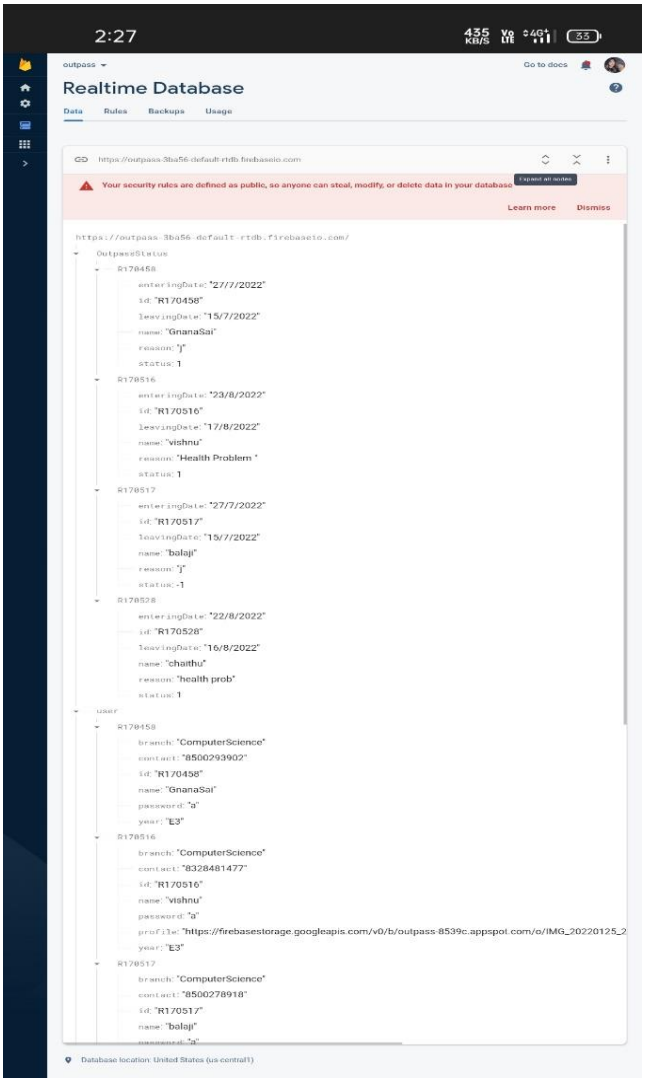
## NAVIGATION BAR

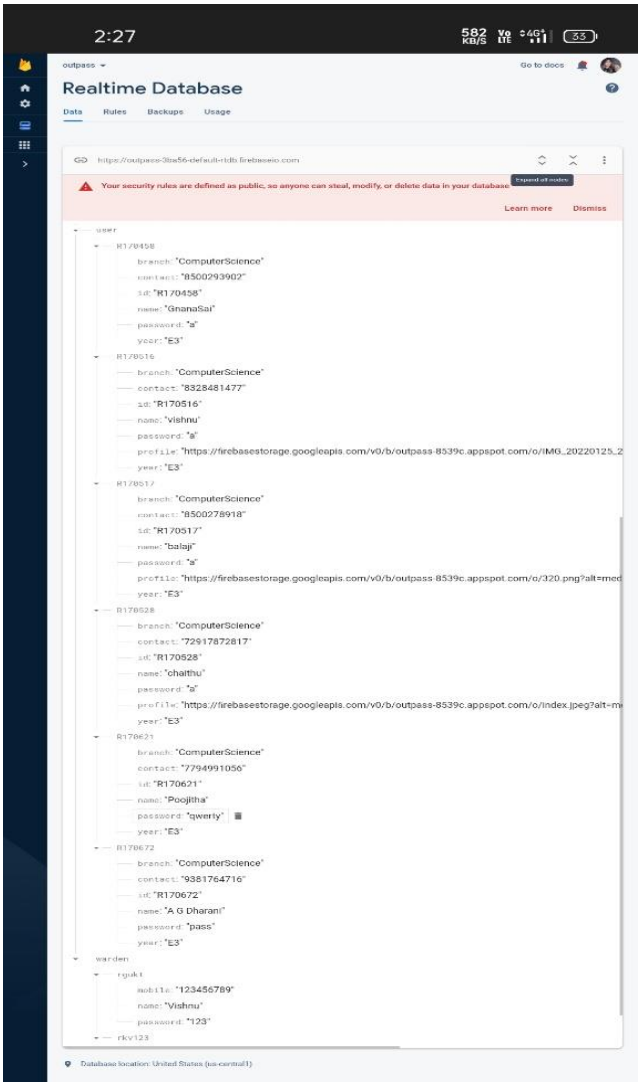



## CHANGE PASSWORD



# FIREBASE DATABASE (REALTIME DATABASE)



## Sample Code :

**MainActivity.java**

```
package com.example.outpassreg;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

public class MainActivity extends AppCompatActivity {

    static String userTxt;
    public static  DatabaseReference databaseReference;
    databaseReference = FirebaseDatabase.getInstance().getReferenceFromUrl("https://outpass-3ba56-default-rtdb.firebaseio.com/");
    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    final EditText user = findViewById(R.id.username);
    final EditText pass = findViewById(R.id.password);

    final Button loginBtn = findViewById(R.id.login);

    final TextView passs = findViewById(R.id.forgotPass);

    passs.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
        startActivity(new Intent(MainActivity.this,forgotpass.class));
      }
    });


    loginBtn.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {
         userTxt = user.getText().toString();
        final String passTxt = pass.getText().toString();

        if(userTxt.isEmpty() || passTxt.isEmpty()){
          Toast.makeText(MainActivity.this,"please enter username and
password",Toast.LENGTH_SHORT).show();

        }
        else{
          databaseReference.child("user").addListenerForSingleValueEvent(new
ValueEventListener() {
```

```
                @Override
                public void onDataChange(@NonNull DataSnapshot snapshot) {
                  //check if user exists
                  if(snapshot.hasChild(userTxt)){
                    final String getPassword =
snapshot.child(userTxt).child("password").getValue(String.class);


                    if(getPassword.equals(passTxt))
                    {
                      Toast.makeText(MainActivity.this,"Login successfully as
student",Toast.LENGTH_SHORT).show();
                      startActivity(new Intent(MainActivity.this,Navigation.class));
                      finish();
                    }
                    else {
                        Toast.makeText(MainActivity.this,"password not
matched",Toast.LENGTH_SHORT).show();
                      }
                  }
                  else{
                    //Toast.makeText(MainActivity.this,"user not
matched",Toast.LENGTH_SHORT).show();


                    //Toast.makeText( MainActivity.this,"user not
found",Toast.LENGTH_SHORT).show();
                    databaseReference.child("warden").addListenerForSingleValueEvent(new
ValueEventListener() {
                      @Override
                      public void onDataChange(@NonNull DataSnapshot snapshot) {
                        //check warden exists
                        if(snapshot.hasChild(userTxt)){
                          final String getPass =
snapshot.child(userTxt).child("password").getValue(String.class);
```

```
                        if(getPass.equals(passTxt))
                        {
                            Toast.makeText(MainActivity.this,"Login successfully as
warden",Toast.LENGTH_SHORT).show();
                            startActivity(new Intent(MainActivity.this,wardenNavigation.class));
                            finish();
                        }
                        else
                        {
                            Toast.makeText(MainActivity.this,"user not
found",Toast.LENGTH_SHORT).show();
                        }
                    }


                }


                @Override
                public void onCancelled(@NonNull DatabaseError error) {


                }
            });
        }
    }


    @Override
    public void onCancelled(@NonNull DatabaseError error) {


    }
  });
 }
}});}}
```

# CONCLUSION

This mobile application thus ensures maximum security and removes all the manual work involved in hostel management activities and eases the monitoring of students movement staying in hostel. This mobile application can also be further customized to use in different environments such as corporate industries to decide the number of days an employee can take off from work without loss in pay.

# FUTURE SCOPE

This app can be developed further by adding more functionalities like sending messages to parents to get permission from parents to let go students alone securely , developing an interface for college security and we can use the student outpass data to calculate his /her hostel fee ,mess fee etc.

# REFERENCES

Android Studio:-

https://developer.android.com/studio

https://www.geeksforgeeks.org/learn-java-for-android-app-development-a-complete-guide/

Youtube Videos:-

https://youtu.be/6SrKOBV_hx8

https://youtu.be/43JP5Sr2Ww8

Firebase Database:-

https://console.firebase.google.com/?pli=1