

A
Project Report
On
"NOTE TAKER"

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A Report Submitted to
Charotar University of Science and Technology
for Partial Fulfillment of the Requirements for the
5th Mobile Application Development(MAD) (**CS377**)

Submitted at



CSE
DEPSTAR



CERTIFICATE

This is to certify that the report entitled “**NOTE TAKER**” is a bonafied work carried out by **Parth Patel(19DCS098)** and **Saumya Shah(19DCS133)** under the guidance and supervision of **Assistant Prof. Priyal Vaghela** for the subject **[CS 377] MOBILE APPLICATION DEVELOPMENT (CSE)** of 5th Semester of Bachelor of Technology in **DEPSTAR** at Faculty of Technology & Engineering – CHARUSAT, Gujarat.

To the best of my knowledge and belief, this work embodies the work of candidate himself, has duly been completed, and fulfills the requirement of the ordinance relating to the B.Tech. Degree of the University and is up to the standard in respect of content, presentation and language for being referred to the examiner.

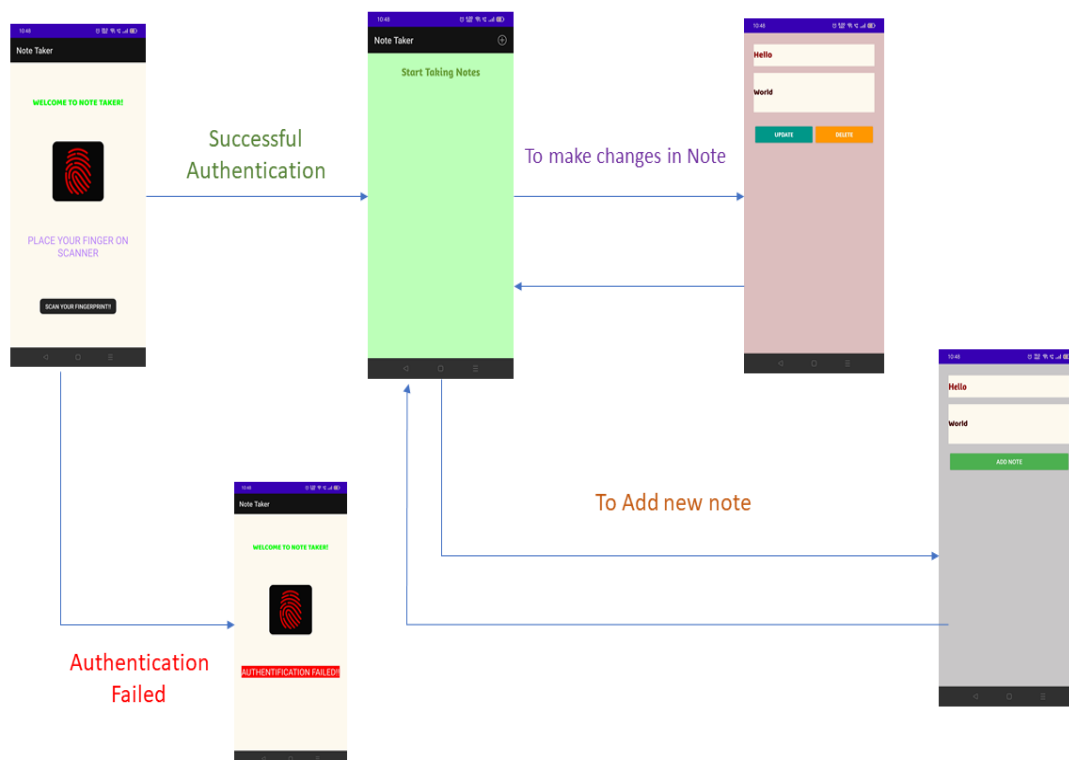
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ABOUT THE PROJECT:

- The project “NOTE TAKER” is an android application in which one can create, update, delete and store their notes.
- For security measures, we have added mandatory finger print authentication, so notes can be only accessed by registered users.
- Programming Language Used:
 - Front-end: **XML**
 - Back-end: **JAVA**
- Data Base Used: **SQLite**
- IDE Used: **ANDROID STUDIO.**

DESIGN OF THE APPLICATION:



PROGRAM CODE OF THE APPLICATION:

MANIFEST.XML:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.parthnpatel.notetaking">

    <uses-permission
        android:name="android.permission.USE_FINGERPRINT"/>

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher"
        android:supportsRtl="true"
        android:theme="@style/Theme.NoteTaking">
        <activity
            android:name=".MainActivity"
            android:exported="true" />
        <activity
            android:name=".ModifyData"
            android:exported="true" />
        <activity
            android:name=".AddNoteAcitivity"
            android:exported="true" />
        <activity
            android:name=".Finger_Print"
            android:exported="true">
```

```
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category
android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>

</manifest>
```

COLORS.XML:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="teal_700">#FF018786</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
    <color name="title">#8E0505</color>
    <color name="title_background">#FEF9EF</color>
    <color name="description">#3D0000</color>
    <color name="background">#DDBEBE</color>
    <color name="green">#00FF00</color>
    <color name="main_background">#BCFFB9</color>
    <color name="add_background">#C8C6C6</color>
    <color name="red">#FF0000</color>

</resources>
```

STRINGS.XML:

```
<resources>
    <string name="app_name">Note Taker</string>
    <string name="notetaking_app">Start Taking Notes</string>
    <string name="enter_the_title">Enter the title</string>
    <string name="enter_the_description">Enter the Description</string>
    <string name="update">UPDATE</string>
    <string name="delete">DELETE</string>
    <string name="add_note">ADD NOTE</string>
    <string name="welcome">WELCOME TO NOTE TAKER!</string>
    <string name="please_authenticate">PLEASE AUTHENTICATE</string>
    <string name="fingerprintlogo">FINGER PRINT LOGO</string>

</resources>
```

FINGER_PRINT_BACKGROUND.XML:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="fingerprint_background">#070707</color>
</resources>
```


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="@color/main_background"
    tools:context=".MainActivity">

    <ListView
        android:id="@+id/list"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:dividerHeight="1px"
        android:minHeight="48dp"
        android:padding="10dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.120000005"
        tools:ignore="TouchTargetSizeCheck" />
```

```
<TextView
    android:id="@+id/text"
    android:layout_width="249dp"
    android:layout_height="49dp"
    android:fontFamily="@font/amaranth_bold"
    android:text="@string/notetaking_app"
    android:textAlignment="center"
    android:textColor="#689F38"
    android:textSize="24sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.041" />

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

ACTIVITY_ADD_NOTE_ACTIVITY.XML:

```
<?xml version="1.0" encoding="utf-8"?>

<LinearLayout
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="@color/add_background"
    android:orientation="vertical"
    android:padding="25dp">

    <EditText
        android:id="@+id/title_editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginBottom="15dp"
        android:background="@color/title_background"
        android:backgroundTint="@color/title_background"
        android:ems="10"
        android:fontFamily="@font/amaranth_bold"
        android:hint="@string/enter_the_title"
        android:importantForAutofill="no"
        android:minHeight="48dp"
        android:textColor="@color/title"
        android:textSize="20sp"
        tools:ignore="TextContrastCheck">

        <requestFocus />

    </EditText>
```

```
<EditText
    android:id="@+id/description_editText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginBottom="15dp"
    android:background="@color/title_background"
    android:backgroundTint="@color/title_background"
    android:ems="10"
    android:fontFamily="@font/baloo_bhai"
    android:hint="@string/enter_the_description"
    android:importantForAutofill="no"
    android:inputType="textMultiLine"
    android:minLines="3"
    android:textColor="@color/description"
    tools:ignore="TextContrastCheck" />
```

```
<Button
    android:id="@+id/addButton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:backgroundTint="#4CAF50"
    android:text="@string/add_note"
    android:textColor="@color/white"
    app:rippleColor="#FFEB3B"
    tools:ignore="TextContrastCheck" />
```

```
</LinearLayout>
```

ACTIVITY_MODIFY_DATA.XML:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    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="@color/background"
    android:orientation="vertical"
    android:padding="25dp">

    <EditText
        android:id="@+id/title_editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginBottom="15dp"
        android:background="@color/title_background"
        android:backgroundTint="@color/title_background"
        android:ems="10"
        android:fontFamily="@font/baloo_bhai"

        android:hint="@string/enter_the_title"
        android:importantForAutofill="no"
        android:minHeight="48dp"
        android:textColor="@color/title"
        android:textSize="20sp"
        tools:ignore="TextContrastCheck" />

    <EditText
        android:id="@+id/description_editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginBottom="25dp"
        android:background="@color/title_background"
```

```
        android:backgroundTint="@color/title_background"
        android:ems="10"
        android:fontFamily="@font/baloo_bhai"
        android:hint="@string/enter_the_description"
        android:importantForAutofill="no"
        android:inputType="textMultiLine"
        android:minLines="3"
        android:textColor="@color/description"
        tools:ignore="TextContrastCheck" />

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:orientation="horizontal"
    android:weightSum="2">
    <Button
        android:id="@+id/updateButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:backgroundTint="#009688"
        android:fontFamily="@font/amaranth_bold"
        android:text="@string/update"
        android:textColor="@color/white"
        app:rippleColor="#8BC34A" />
    <Button
        android:id="@+id/deleteButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:backgroundTint="#FF9800"
        android:fontFamily="@font/amaranth_bold"
        android:text="@string/delete"
        android:textColor="@color/white"
        app:rippleColor="#F44336" />

</LinearLayout>
</LinearLayout>
```

ACTIVITY_VIEW_DATA.XML:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"

        android:orientation="vertical"
        android:padding="3dp">

    <TextView
        android:id="@+id/id"
        android:layout_width="411dp"
        android:layout_height="wrap_content"

        android:background="@color/title_background"
        android:backgroundTint="@color/title_background"
        android:fontFamily="@font/amaranth_bold"
        android:textAlignment="center"
        android:textColor="@color/title"
        android:textSize="16sp"
        android:visibility="invisible" />

    <TextView
        android:id="@+id/title"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="@color/title_background"
        android:backgroundTint="@color/title_background"
        android:fontFamily="@font/amaranth_bold"
        android:maxLines="1"
        android:padding="3dp"
        android:paddingBottom="10dp"
        android:textAlignment="center"
        android:textColor="@color/title"
```

```
        android:textSize="20sp" />

<TextView
    android:id="@+id/description"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginBottom="10dp"
    android:background="@color/title_background"
    android:backgroundTint="@color/title_background"
    android:ellipsize="end"

    android:padding="3dp"
    android:textAlignment="gravity"
    android:textColor="@color/description"
    android:textSize="18sp"
    android:visibility="visible" />

</LinearLayout>
```


ACTIVITY_FINGER_PRINT.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="@color/title_background"
    tools:context=".Finger_Print">

    <TextView
        android:id="@+id/displayView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="76dp"
        android:fontFamily="@font/baloo_bhai"
        android:text="@string/welcome"
        android:textColor="@color/green"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="TextContrastCheck" />

    <TextView
        android:id="@+id/resultDisplay"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="200dp"
        android:text="@string/please_authenticate"
        android:textAlignment="center"
        android:textColor="@color/purple_200"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="TextContrastCheck" />

<ImageView
    android:id="@+id/displayImage"
    android:layout_width="173dp"
    android:layout_height="136dp"
    android:contentDescription="@string/fingerprintlogo"
    app:layout_constraintBottom_toTopOf="@+id/resultDisplay"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/displayView"
    app:srcCompat="@mipmap/finger_print" />

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

MAINACTIVITY.JAVA:

```
package com.parthnpatel.notetaking;

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

import android.content.Intent;
import android.database.Cursor;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ListView;
import android.widget.SimpleCursorAdapter;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    private SqlManager sqlManager;
    private ListView listView;
    private SimpleCursorAdapter simpleCursorAdapter;

    final String[] from=new String[] {
        SqlHelper.ID,SqlHelper.TITLE,SqlHelper.DESRIPTION};
    final int[] to=new int[] {R.id.id,R.id.title,R.id.description};

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

        sqlManager=new SqlManager(this);
        sqlManager.openDataBase();
    }
}
```

```
Cursor cursor=sqlManager.fetchData();
listView=findViewById(R.id.list);
listView.setEmptyView(findViewById(R.id.text));

simpleCursorAdapter=new
SimpleCursorAdapter(this,R.layout.activity_view_data,cursor,from,to,0);
simpleCursorAdapter.notifyDataSetChanged();

listView.setAdapter(simpleCursorAdapter);

listView.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> parent, View view,
int position, long viewid) {
        TextView text_id=view.findViewById(R.id.id);
        TextView text_title=view.findViewById(R.id.title);
        TextView
text_description=view.findViewById(R.id.description);

        String id=text_id.getText().toString();
        String title=text_title.getText().toString();
        String
description=text_description.getText().toString();

        Intent modify_intent= new
Intent(getApplicationContext(),ModifyData.class);

        modify_intent.putExtra("id",id);
        modify_intent.putExtra("title",title);
        modify_intent.putExtra("description",description);

        startActivity(modify_intent);

    }
});
}
```

```
@Override
public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.menu, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {

    int id=item.getItemId();

    if(id==R.id.add_note){

        Intent add_note=new Intent(this,AddNoteAcitivity.class);

        startActivity(add_note);
    }

    return super.onOptionsItemSelected(item);
}
}
```

SQLHELPER.JAVA:

```
package com.parthnpatel.notetaking;

import android.content.Context;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import java.security.PublicKey;

public class SqlHelper extends SQLiteOpenHelper {

    public static final String TABLE_NAME="NOTETAKER";
    public static final String ID="_id";
    public static final String TITLE="title";
    public static final String DESCRIPTION="description";
    public static final String DB_NAME="NOTETAKER_APPLICATION.DB";

    private static final String CREATE_TABLE="create table
    "+TABLE_NAME+ " (" +ID+" INTEGER PRIMARY KEY AUTOINCREMENT, "+
        TITLE+ " TEXT NOT NULL, "+DESCRIPTION+" TEXT NOT NULL);";

    public SqlHelper(Context context){

        super(context,DB_NAME,null,1);
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
```

```
        sqLiteDatabase.execSQL(CREATE_TABLE) ;

    }

    @Override
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1)
    {

        sqLiteDatabase.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);
        onCreate(sqLiteDatabase);
    }
}
```

SQLMANAGER.JAVA:

```
package com.parthnpatel.notetaking;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.SQLException;
import android.database.sqlite.SQLiteDatabase;

public class SqlManager {

    private SqlHelper sqlHelper;
    private Context context;
    private SQLiteDatabase database;

    public SqlManager(Context context){

        this.context=context;

    }

    public SqlManager openDataBase() throws SQLException{

        sqlHelper=new SqlHelper(context);

        database=sqlHelper.getWritableDatabase();

        return this;
    }

    public void closeDataBase() {
        sqlHelper.close();
    }

    public void insert(String title,String description){
```



```
        ContentValues contentValues=new ContentValues();

        contentValues.put(sqlHelper.TITLE,title);
        contentValues.put(sqlHelper.DESCRPTION,description);
        database.insert(sqlHelper.TABLE_NAME,null,contentValues);

    }

    public Cursor fetchData(){

        String columnNames[]=new
String[]{sqlHelper.ID,sqlHelper.TITLE,sqlHelper.DESCRPTION};
        Cursor cursor= database.query(sqlHelper.TABLE_NAME,
            columnNames,
            null,
            null,
            null,
            null,
            null);

        if(cursor!=null){

            cursor.moveToFirst();
        }

        return cursor;
    }

    public int update(long id,String title,String description){

        ContentValues contentValues=new ContentValues();

        contentValues.put(sqlHelper.TITLE,title);
        contentValues.put(sqlHelper.DESCRPTION,description);

        int
status=database.update(sqlHelper.TABLE_NAME,contentValues,sqlHelper.ID+
"="+id,null);
    }
```

```
        return status;
    }

    public void delete(long id) {

        database.delete(sqlHelper.TABLE_NAME, sqlHelper.ID+"="+id, null);
    }
}
```

ADDNOTEACTIVITY.JAVA:

```
package com.parthnpatel.notetaking;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class AddNoteAcitivity extends Activity implements
View.OnClickListener {

    private Button add;
    private EditText title,description;
    private SqlManager sqlManager;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        setTitle("Add Note!");

        setContentView(R.layout.activity_add_note_acitivity);

        add=findViewById(R.id.addButton);
        title=findViewById(R.id.title_editText);
        description=findViewById(R.id.description_editText);

        sqlManager=new SqlManager(this);

        sqlManager.openDataBase();

        add.setOnClickListener(this);
```

```
    }

    @Override
    public void onClick(View view) {

        switch (view.getId()){
            default:
                final String titleText=title.getText().toString();
                final String
descriptionText=description.getText().toString();

                sqlManager.insert(titleText,descriptionText);

                Intent main =new
Intent (AddNoteAcitivity.this,MainActivity.class).setFlags(Intent.FLAG_A
CTIVITY_CLEAR_TOP);

                startActivity(main);

                break;

        }
    }
}
```

MODIFYDATA.JAVA:

```
package com.parthnpatel.notetaking;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class ModifyData extends Activity implements
View.OnClickListener {

    private EditText title,description;
    private Button update_button,delete_button;

    private long _id;
    private SqlManager sqlManager;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        setTitle("MODIFY NOTES");
        setContentView(R.layout.activity_modify_data);

        sqlManager=new SqlManager(this);
        sqlManager.openDataBase();
        title=findViewById(R.id.title_editText);
        description=findViewById(R.id.description_editText);
        update_button=findViewById(R.id.updateButton);
        delete_button=findViewById(R.id.deleteButton);

        Intent intent=getIntent();
```

```
String id=intent.getStringExtra("id");
String titleString=intent.getStringExtra("title");
String descriptionString=intent.getStringExtra("description");

_id=Long.parseLong(id);

title.setText(titleString);
description.setText(descriptionString);

update_button.setOnClickListener(this);
delete_button.setOnClickListener(this);
}
@Override
public void onClick(View view) {

    switch (view.getId()){

        case R.id.updateButton:
            String titleSet= title.getText().toString();
            String descriptionSet=description.getText().toString();

            sqlManager.update(_id,titleSet,descriptionSet);

            this.returnHome();
            break;

        case R.id.deleteButton:
            sqlManager.delete(_id);
            this.returnHome();
            break;

    }
}

private void returnHome() {
    Intent home=new
Intent(getApplicationContext(),MainActivity.class).setFlags(Intent.FLAG
_ACTIVITY_CLEAR_TOP);
    startActivity(home);
}
}
```

FINGERPRINT.JAVA:

```
package com.parthnpatel.notetaking;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.content.ContextCompat;

import android.Manifest;
import android.content.pm.PackageManager;
import android.hardware.fingerprint.FingerprintManager;
import android.os.Bundle;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
import android.os.Bundle;
public class Finger_Print extends AppCompatActivity {

    private TextView result;
    private ImageView image;
    private FingerprintManager fingerprintManager;

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

        result=findViewById(R.id.resultDisplay);
        image=findViewById(R.id.displayImage);

        fingerprintManager=(FingerprintManager)
getSystemService(FINGERPRINT_SERVICE);

        if(!fingerprintManager.isHardwareDetected()){
            result.setText("FingerPrint Scanner is not detected!!");
        }
    }
}
```

```
        Toast.makeText(getApplicationContext(), "YOU CANNOT USE  
THIS APP!!", Toast.LENGTH_SHORT).show();  
    }  
  
    else if (ContextCompat.checkSelfPermission(this,  
Manifest.permission.USE_FINGERPRINT) !=  
PackageManager.PERMISSION_GRANTED) {  
  
        result.setText("Permission Not Granted!!");  
  
        Toast.makeText(getApplicationContext(), "PLEASE GRANT THE  
PERMISSION TO USE FINGERPRINT", Toast.LENGTH_SHORT).show();  
    }  
  
    else if ( !fingerprintManager.hasEnrolledFingerprints()) {  
  
        result.setText("No FingerPrints Enrolled!!");  
  
        Toast.makeText(getApplicationContext(), "PLEASE REGISTER  
FINGERPRINT IN YOUR DEVICE!!", Toast.LENGTH_SHORT).show();  
    }  
  
    else {  
  
        result.setText("PLACE YOUR FINGER ON SCANNER");  
  
        Toast.makeText(getApplicationContext(), "SCAN YOUR  
FINGERPRINT!!", Toast.LENGTH_SHORT).show();  
        FingerPrintAuthentication check=new  
FingerPrintAuthentication(this);  
  
        check.authentication(fingerprintManager,null);  
  
    }  
}  
}
```


FINGERPRINTAUTHENTICATION.JAVA:

```
package com.parthnpatel.notetaking;

import android.app.Activity;
import android.content.Context;
import android.content.Intent;
import android.hardware.fingerprint.FingerprintManager;
import android.os.Build;
import android.os.CancellationSignal;
import android.widget.TextView;

import androidx.core.content.ContextCompat;

public class FingerPrintAuthentication extends
FingerprintManager.AuthenticationCallback {

    private Context context;

    public FingerPrintAuthentication(Context context){

        this.context=context;
    }

    public void authentication(FingerprintManager
fingerprintManager,FingerprintManager.CryptoObject cryptoObject){

        CancellationSignal cancellationSignal=new CancellationSignal();

        fingerprintManager.authenticate(cryptoObject,cancellationSignal,0,this,
null);

    }
```

```
private void update(String str, boolean status){

    TextView textView=(TextView)
((Activity) context).findViewById(R.id.resultDisplay);

    textView.setText(str);

    if(status==false){

textView.setBackgroundColor(ContextCompat.getColor(context,R.color.red)
);

textView.setTextColor(ContextCompat.getColor(context,R.color.white));

    }

    else{

textView.setBackgroundColor(ContextCompat.getColor(context,R.color.green)
);

textView.setTextColor(ContextCompat.getColor(context,R.color.white));

    }

}

@Override
public void onAuthenticationError(int errorCode, CharSequence
errString) {

    this.update("OOPS! SOME ERROR OCCURED : "+errString,false);

}

@Override
public void onAuthenticationFailed() {

    this.update("AUTHENTICATION FAILED!!",false);

}
```

```
@Override
public void onAuthenticationHelp(int helpCode, CharSequence
helpString) {

    this.update(helpString.toString()+" : ",false);
}

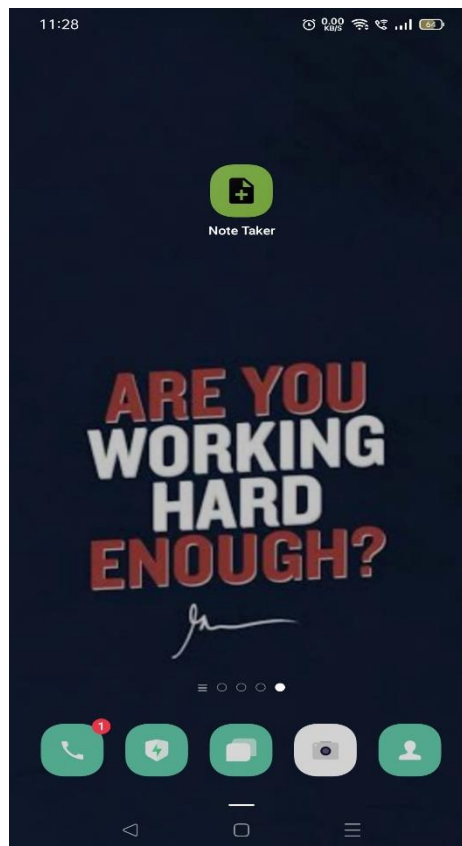
@Override
public void
onAuthenticationSucceeded(FingerprintManager.AuthenticationResult
result) {

    //this.update("AUTHENTICATION SUCCESSFUL!!",true);

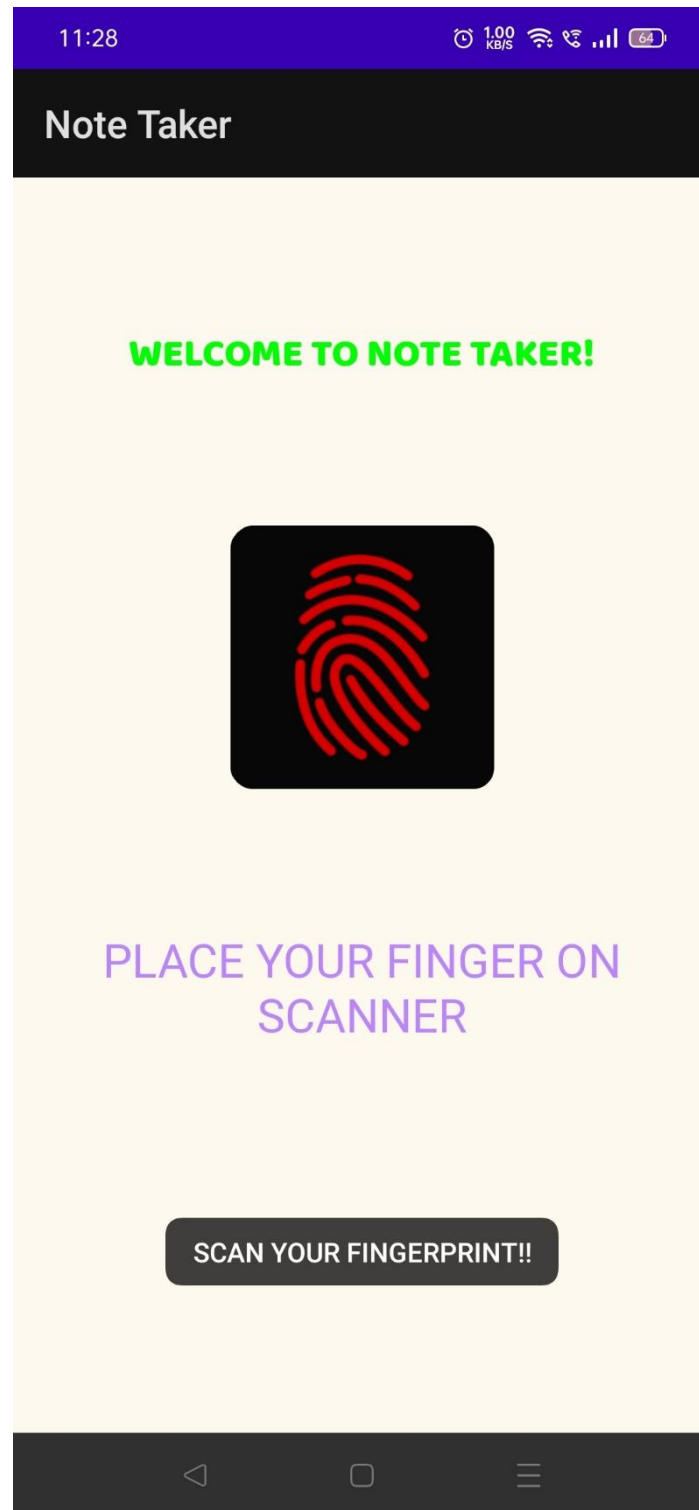
    Intent pass=new
Intent(context.getApplicationContext(),MainActivity.class);
    context.startActivity(pass);

}
}
```

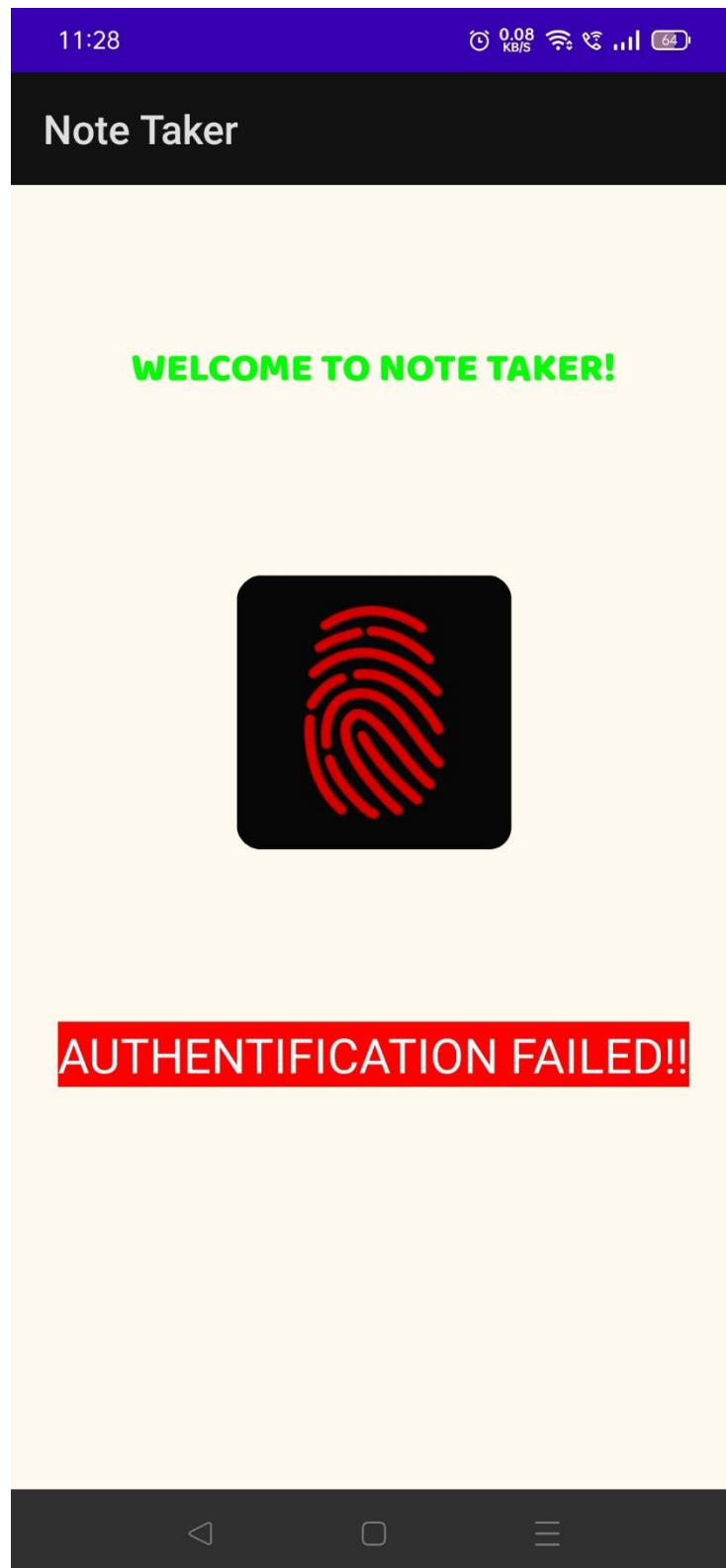
OUTPUT SCREENSHOTS:



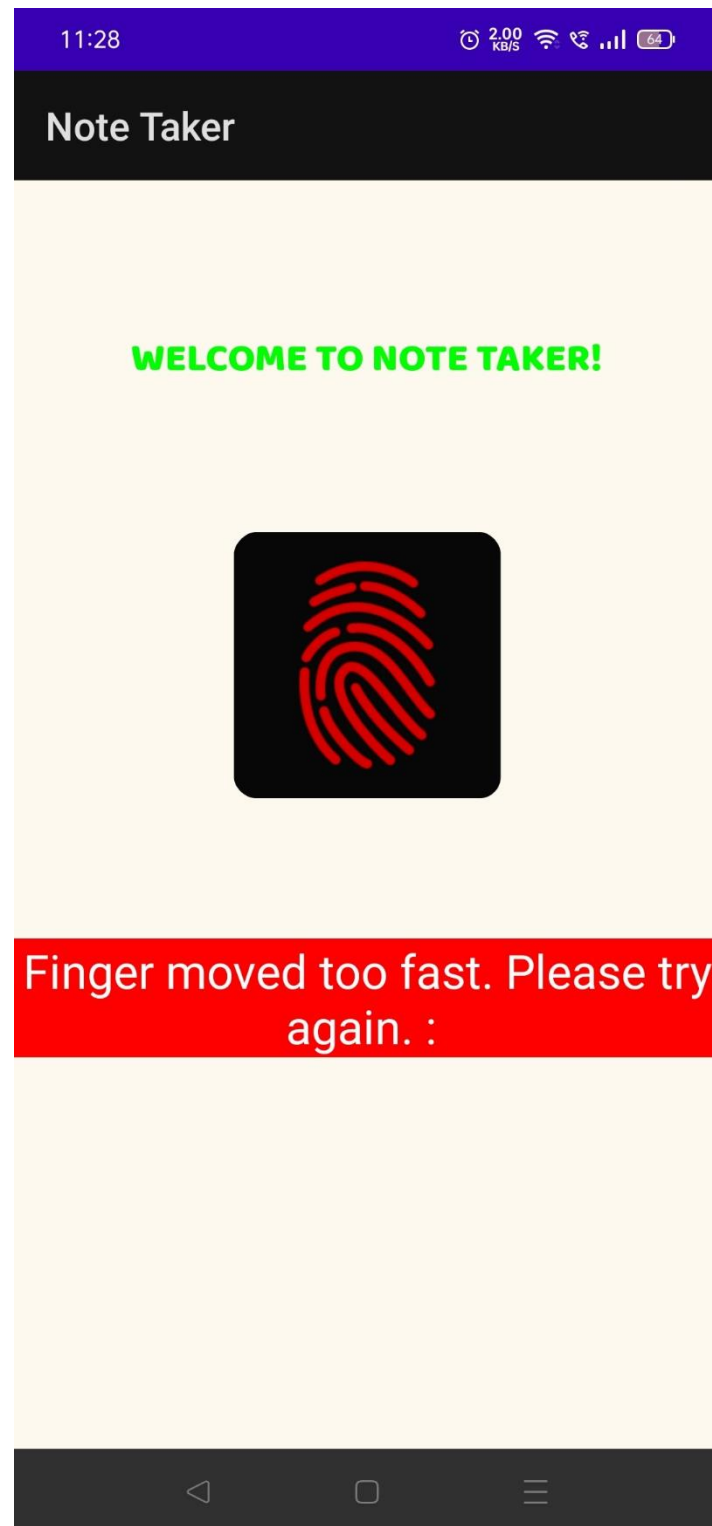
ICON OF NOTE TAKER APP



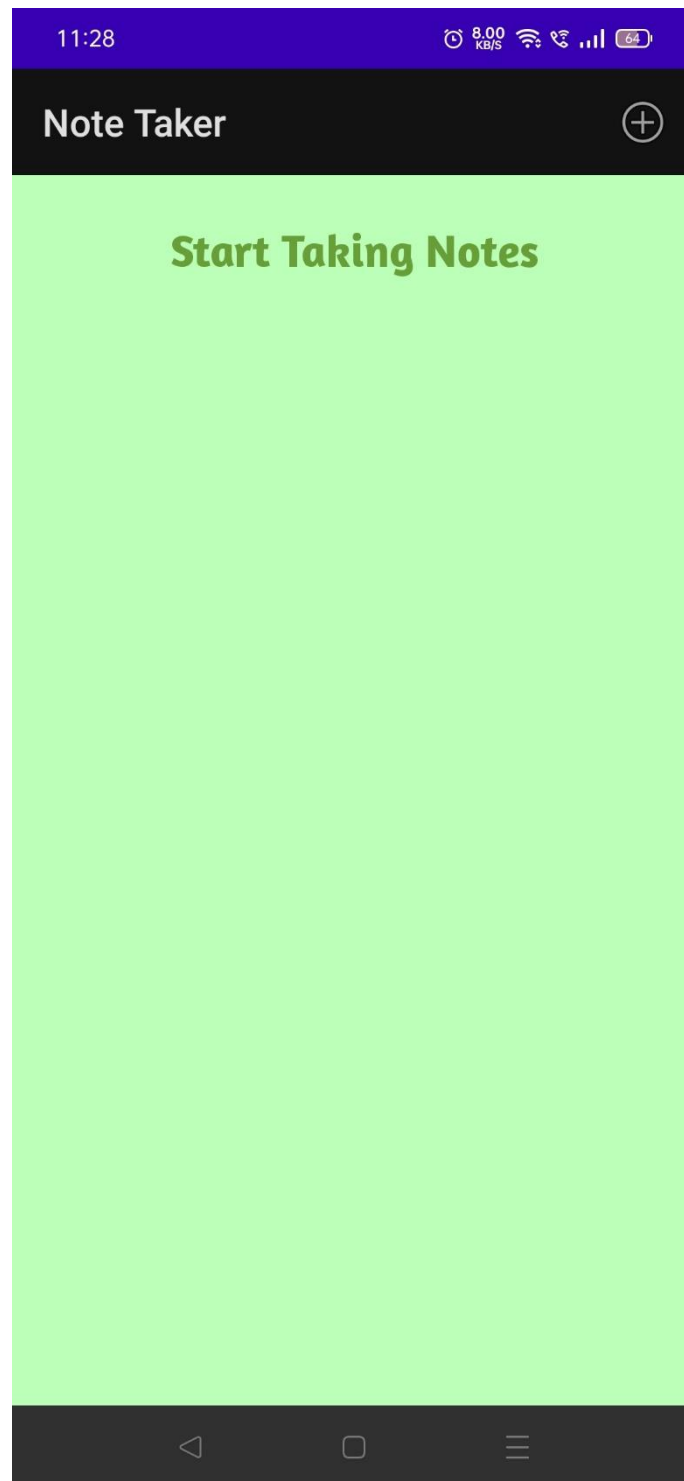
**ON OPENING THE APP, YOU WILL BE ASKED TO SCAN YOUR FINGERPRINT
FOR SECURITY.**



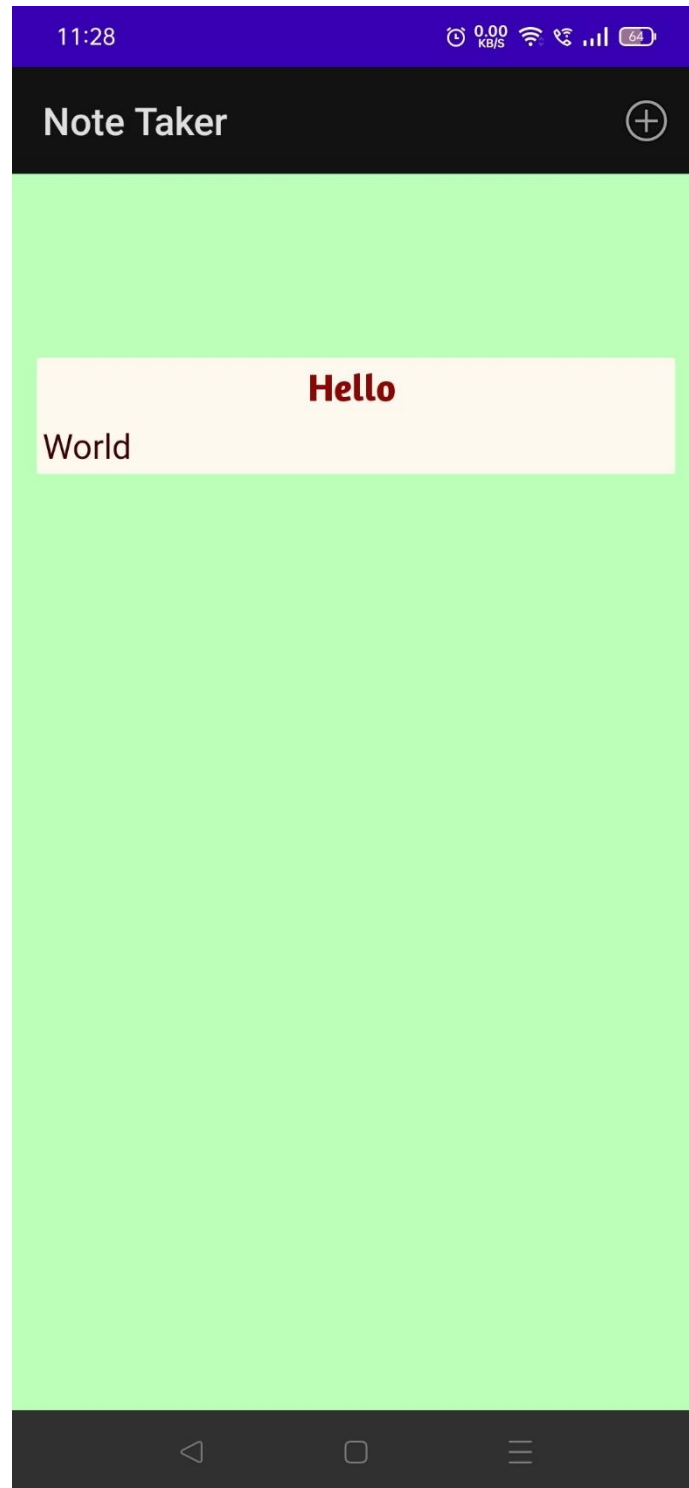
AUTHENTICATION FAILED

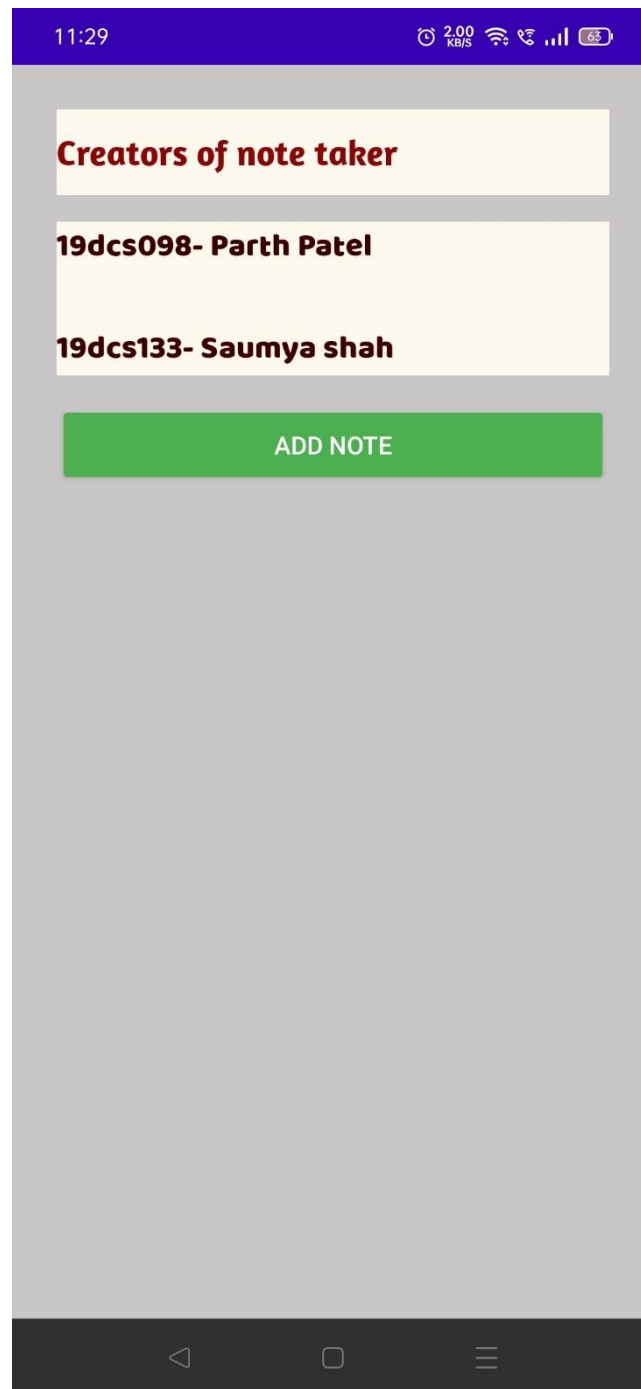


APP CAN DETECT IF AUTHENTICATION FAILED BECAUSE OF OTHER REASONS



UPON SUCCESSFUL AUTHENTICATION, THIS ACTIVITY WILL OPEN.
(IF SOME NOTES ARE ALREADY MADE, THEY WILL BE DISPLAYED)

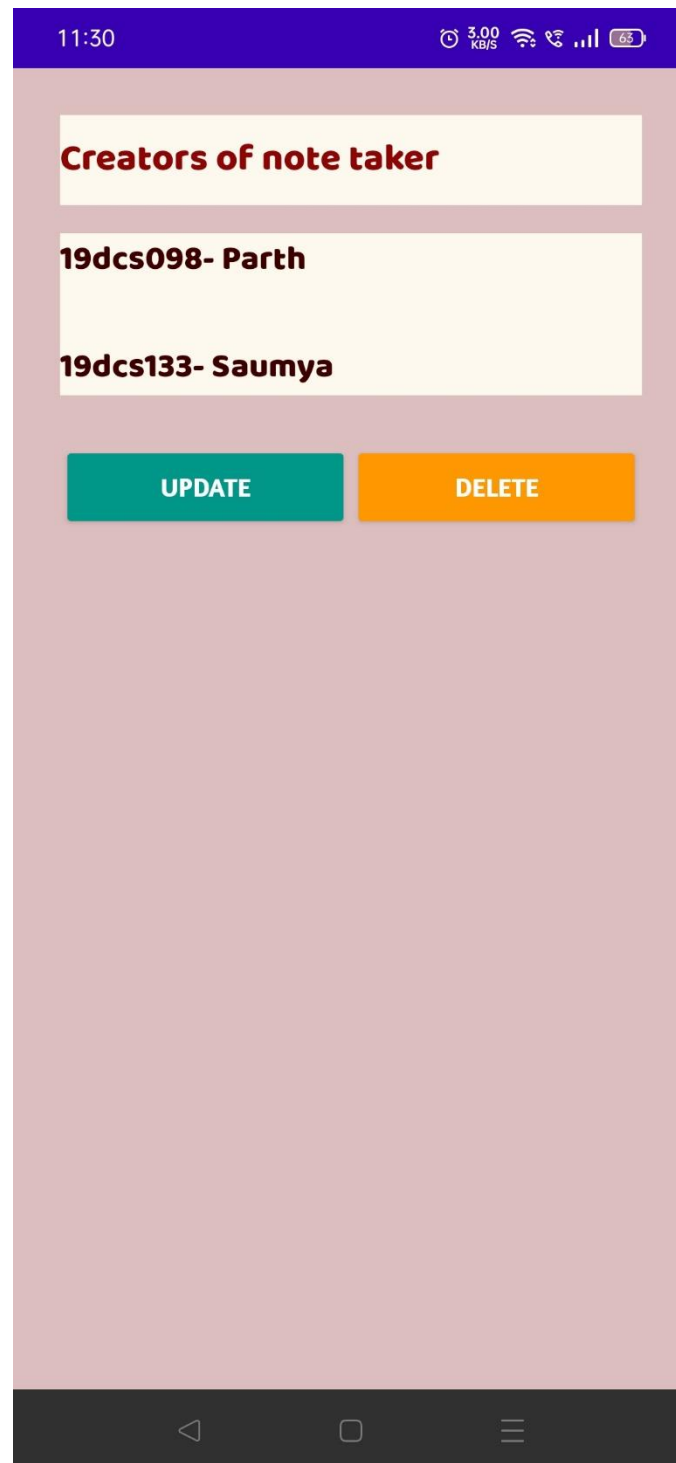




**ON CLICKING + ICON, THE ABOVE SCREEN WILL BE DISPLAYED WHERE
YOU CAN CREATE NEW NOTE.**



ON CLICKING ADD BUTTON, NOTES WILL BE ADDED.



YOU CAN UPDATE AND DELETE YOUR NOTES.