1. Insert,update,delete,display student record

```
<?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:orientation="vertical"
    tools:context=".MainActivity">

    <EditText
        android:layout_width="250dp"
        android:layout_height="60dp"
       android:hint="Enter Roll No"
        android:id="@+id/t1"
        android:textSize="30dp"
        android:layout_marginVertical="50dp"
        android:layout_marginHorizontal="50dp"
        android:background="#F3B2C8"></EditText>

    <EditText
        android:layout_width="250dp"
        android:layout_height="60dp"
        android:hint="Enter Name"
        android:id="@+id/t2"
        android:textSize="30dp"
        android:layout_marginVertical="20dp"
        android:layout_marginHorizontal="50dp"
        android:background="#F3B2C8"></EditText>

    <Button
        android:layout_width="150dp"
        android:layout_height="50dp"
        android:text="Insert"
        android:layout_gravity="center"
        android:textSize="25dp"
        android:layout_marginTop="30dp"
        android:backgroundTint="@color/black"
        android:id="@+id/b1"></Button>

    <Button
        android:layout_width="150dp"
        android:layout_height="50dp"
        android:text="Update"
        android:layout_gravity="center"
        android:textSize="25dp"
        android:layout_marginTop="30dp"
        android:backgroundTint="@color/black"
        android:id="@+id/b2"></Button>

    <Button
        android:layout_width="150dp"
        android:layout_height="50dp"
        android:text="Display"
        android:textSize="25dp"
        android:layout_gravity="center"
        android:layout_marginTop="30dp"
        android:backgroundTint="@color/black"
        android:id="@+id/b3"></Button>
```

```
    <Button
        android:layout_width="150dp"
        android:layout_height="50dp"
        android:text="delete"
        android:textSize="25dp"
        android:layout_gravity="center"
        android:layout_marginTop="30dp"
        android:backgroundTint="@color/black"
        android:id="@+id/b4"></Button>

</LinearLayout>

package com.example.database;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText t1, t2;
    Button b1, b2, b3,b4;

    MahiDb md;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        t1 = findViewById(R.id.t1);
        t2 = findViewById(R.id.t2);
        b1 = findViewById(R.id.b1);
        b2 = findViewById(R.id.b2);
        b3 = findViewById(R.id.b3);
        b4 = findViewById(R.id.b4);

        MahiDb md = new MahiDb(this);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String s1 = t1.getText().toString();
                String s2 = t2.getText().toString();
                boolean x = md.insertData(s1, s2);
                if (x == true) {
                    Toast.makeText(MainActivity.this, "Data inserted successfully",
Toast.LENGTH_LONG).show();
                } else {
                    Toast.makeText(MainActivity.this, "Something went wrong",
Toast.LENGTH_LONG).show();
                }
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
```

```
            public void onClick(View view) {
                Cursor res = md.getData();
                StringBuffer buffer = new StringBuffer();
                while (res.moveToNext()) {
                    buffer.append("Roll:" + res.getString(0) + "\n");
                    buffer.append("Name:" + res.getString(1) + "\n");
                    buffer.append("----------------------------------------\n");
                }
                AlertDialog.Builder ab=new AlertDialog.Builder(MainActivity.this) ;
                ab.setCancelable(true);
                ab.setTitle("Student Data");
                ab.setMessage(buffer.toString());
                ab.show();
            }
        });

        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String s1=t1.getText().toString();
                String s2=t2.getText().toString();
                boolean x1=md.updateData(s1,s2);
                if(x1==true){
                    Toast.makeText(MainActivity.this, "Data updated successfully",
Toast.LENGTH_SHORT).show();
                }
                else{
                    Toast.makeText(MainActivity.this, "Something went Wrong",
Toast.LENGTH_SHORT).show();
                }

            }
        });

        b4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
              String s1=t1.getText().toString();
              boolean x2=md.deleteData(s1);
              if(x2==true){
                  Toast.makeText(MainActivity.this, "Data deleted Successfully",
Toast.LENGTH_SHORT).show();
              }
              else{
                  Toast.makeText(MainActivity.this, "Not deleted", Toast.LENGTH_SHORT).show();
              }
            }
        });

    }
}
package com.example.database;

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

import androidx.annotation.Nullable;
```

```
public class MahiDb  extends SQLiteOpenHelper {

    public MahiDb( Context context) {
        super(context, "TYCO.db",null,1);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE Stud(ROLL TEXT,NAME,TEXT);");

    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int i, int i1) {
        db.execSQL("DROP TABLE IF EXISTS Stud");

    }
    public boolean insertData(String s1,String s2)
    {

        SQLiteDatabase db=this.getWritableDatabase();
        ContentValues cv=new ContentValues();
        cv.put("ROLL",s1);
        cv.put("NAME",s2);

        long res=db.insert("Stud",null,cv);
        db.close();
        if(res==-1) {
            return false;
        }
        else
        {
            return true;
        }
    }
    public Cursor getData()
    {
        SQLiteDatabase db= this.getWritableDatabase();
        Cursor cu=db.rawQuery("SELECT * FROM Stud",null);
        return cu;
    }

    public boolean updateData(String s1, String s2) {
        SQLiteDatabase db=this.getWritableDatabase();
        ContentValues cv=new ContentValues();
        cv.put("Name",s2);

        Cursor cu =db.rawQuery("Select * from stud where Roll = ? ", new String[]{s1});

        if(cu.getCount()>0)
        {
            long res=db.update("stud",cv,"Roll=?",new String[]{s1});

            if(res==-1){
                return false;

            }
            else{
                return true;
```

```
            }
        }
        else {
            return false;
        }
    }

    public boolean deleteData(String s1) {
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cu =db.rawQuery("Select * from stud where Roll = ?",new String[]{s1});
        if(cu.getCount()>0)
        {
            long res=db.delete("stud","Roll =?",new String[]{s1});
            if(res==-1){
                return false;
            }
            else{
                return true;
            }
        }
        else{
            return false;
        }
    }
}
```

2. Async task :

```
<?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:orientation="vertical"
    tools:context=".MainActivity">

    <EditText
        android:layout_width="200dp"
        android:layout_height="50dp"
        android:hint="Enter Roll No"
        android:textSize="25sp"
        android:layout_marginLeft="70dp"
        android:id="@+id/t1"
        android:layout_marginTop="100dp"></EditText>

    <EditText
        android:layout_width="200dp"
        android:layout_height="50dp"
        android:hint="Enter Name"
        android:textSize="25sp"
        android:layout_marginLeft="70dp"
        android:id="@+id/t2"
        android:layout_marginTop="50dp"></EditText>


    <Button
        android:layout_width="200dp"
        android:layout_height="50dp"
```

```
        android:backgroundTint="@color/black"
        android:layout_marginTop="50dp"
        android:layout_marginLeft="70dp"
        android:id="@+id/b1"
        android:onClick="save"
        android:text="submit"
        android:textSize="25sp"></Button>

    <Button
        android:layout_width="200dp"
        android:layout_height="50dp"
        android:backgroundTint="@color/black"
        android:layout_marginTop="50dp"
        android:layout_marginLeft="70dp"
        android:id="@+id/b2"
        android:text="Display"
        android:onClick="display"
        android:textSize="25sp"></Button>

</LinearLayout>
package com.example.asynctask;

import android.content.Context;
import android.os.AsyncTask;
import android.widget.Toast;

import androidx.appcompat.app.AlertDialog;


public class asynctask extends AsyncTask<String,Void,Long> {

    Context context;
    Database db;
    AlertDialog.Builder al;
    asynctask(Context c){
        context=c;
        db=new Database(context);
    }

    @Override
    protected  void onPreExecute(){
        super.onPreExecute();
        al=new AlertDialog.Builder(context);
    }

    @Override
    protected Long doInBackground(String... strings) {
        String t1=strings[0];
        String t2=strings[1];
        long result=db.insert(t1,t2);
        return  result;
    }
    @Override
    protected void onProgressUpdate(Void... values){
        super.onProgressUpdate(values);
    }
    @Override
    protected  void onPostExecute(Long aLong){
        super.onPostExecute(aLong);
        Toast.makeText(context, "Value Inserted", Toast.LENGTH_SHORT).show();
```

```
    }
}
package com.example.asynctask;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText t1,t2;
    Database db;
    asynctask async;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        t1=findViewById(R.id.t1);
        t2=findViewById(R.id.t2);

        db=new Database(this);
        async=new asynctask(this);

    }


    public void save(View view) {
        if((t1.getText().toString()).equals("") && (t2.getText().toString()).equals("")){
            Toast.makeText(this, "Enter Credentials", Toast.LENGTH_SHORT).show();

        }
        else{
            async.execute(t1.getText().toString(),t2.getText().toString());
            t1.setText("");
            t2.setText("");

        }
    }


    public void display(View view) {
        Cursor cu=db.getData();
        if(cu.getCount()==0){
            Toast.makeText(this, "No record found", Toast.LENGTH_SHORT).show();
        }
        else{
            StringBuffer sb=new StringBuffer();
            while(cu.moveToNext()){
                sb.append("Roll No:" +cu.getString(0)+"\n");
                sb.append("Name:" +cu.getString(1)+"\n");
            }
            AlertDialog.Builder al=new AlertDialog.Builder(this);
            al.setTitle("Result");
            al.setMessage(sb.toString());
```

```
            al.show();
        }
    }
}
package com.example.asynctask;

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

import androidx.annotation.Nullable;

public class Database extends SQLiteOpenHelper {

    public Database(Context context) {
        super(context, "std.db", null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("create table std(Roll Text,Name Text);");

    }
    public  long insert(String t1,String t2){
        SQLiteDatabase sd=this.getWritableDatabase();
        ContentValues ctx=new ContentValues();
        ctx.put("Roll",t1);
        ctx.put("Name",t2);
        long result=sd.insert("std",null,ctx);
        return  result;
    }

    public Cursor getData(){
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cu=db.rawQuery("Select * from std",null);
        return cu;
    }

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

    }
}
```

3. Display Topper student names:

```
<?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:orientation="vertical"
```

```
tools:context=".MainActivity">
<EditText
    android:layout_width="200dp"
    android:layout_height="60dp"
    android:hint="Enter Name"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"
    android:textColorHint="@color/black"
    android:backgroundTint="@color/black"
    android:textSize="20sp"
    android:id="@+id/t1"/>
<EditText
    android:layout_width="200dp"
    android:layout_height="60dp"
    android:hint="Enter Marks"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"
    android:textColorHint="@color/black"
    android:backgroundTint="@color/black"
    android:textSize="20sp"
    android:id="@+id/t2"  />
<Button
    android:layout_width="200dp"
    android:layout_height="60dp"
    android:layout_marginTop="30dp"
    android:layout_gravity="center"
    android:text="INSERT"
    android:onClick="insert1"
    android:backgroundTint="@color/black"
    android:textSize="25sp"></Button>
<Button
    android:layout_width="200dp"
    android:layout_height="60dp"
```

```
        android:layout_marginTop="30dp"
        android:layout_gravity="center"
        android:text="DISPLAY"
        android:onClick="show1"
        android:backgroundTint="@color/black"
        android:textSize="25sp"></Button>
</LinearLayout>

package com.example.sqlitedemo;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
  MyDb m;
  EditText t1,t2;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);
       m=new MyDb(this);
       t1=findViewById(R.id.t1);
       t2=findViewById(R.id.t2);
   }

   public void insert1(View view) {
       String s1=t1.getText().toString();
       int s2=Integer.parseInt(t2.getText().toString());
```

```
        boolean x=m.insertData(s1,s2);
        if(x==true)
        {
           Toast.makeText(getApplicationContext(),"Data Inserted Sucessfully",
Toast.LENGTH_LONG).show();
        }
        else
        {
           Toast.makeText(getApplicationContext(),"Something went wrong",
Toast.LENGTH_LONG).show();
        }
    }
    public void show1(View view) {
        Cursor res=m.getdata();
        StringBuffer buffer=new StringBuffer();
        while(res.moveToNext())
        {
           buffer.append("Name: "+res.getString(0)+"\n");
           buffer.append("---------------------------------------- "+"\n");
        }
        AlertDialog.Builder ab= new AlertDialog.Builder(MainActivity.this);
        ab.setCancelable(true);
        ab.setTitle("Student Data");
        ab.setMessage(buffer.toString());
        ab.show();
    }
}
package com.example.sqlitedemo;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
```

```
import androidx.annotation.Nullable;
public class MyDb extends SQLiteOpenHelper {
    public MyDb(@Nullable Context context) {
        super(context, "TYCO.db", null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE Stud(NAME TEXT,MARKS INTEGER);");
    }
    @Override
    public void onUpgrade(SQLiteDatabase db, int i, int i1) {
        db.execSQL("DROP TABlE IF EXISTS Stud");
    }
    public boolean insertData(String s1,int s2)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        ContentValues cv=new ContentValues();
        cv.put("NAME",s1);
        cv.put("MARKS",s2);
        long res=db.insert("Stud",null,cv);
        if(res==-1)
        {
            return false;
        }
        else
        {
          return true;
        }
    }
    public Cursor getdata()
    {
        SQLiteDatabase db=this.getWritableDatabase();
```

```
        Cursor cu=db.rawQuery("select NAME from Stud where MARKS=(select MAX(MARKS) from
Stud)",null);

        return cu;

    }

}
```

4. Displaying all student data :

```
<?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:orientation="vertical"

    tools:context=".MainActivity">


    <EditText

        android:layout_width="200dp"

        android:layout_height="60dp"

        android:hint="Enter Name"

        android:layout_gravity="center"

        android:layout_marginTop="50dp"

        android:textColorHint="@color/black"

        android:backgroundTint="@color/black"

        android:textSize="20sp"

        android:id="@+id/t1"

       />

    <EditText

        android:layout_width="200dp"

        android:layout_height="60dp"

        android:hint="Enter Marks"

        android:layout_gravity="center"

        android:layout_marginTop="50dp"

        android:textColorHint="@color/black"
```

```
        android:backgroundTint="@color/black"
        android:textSize="20sp"
        android:id="@+id/t2"
        />
    <Button
        android:layout_width="200dp"
        android:layout_height="60dp"
        android:layout_marginTop="30dp"
        android:layout_gravity="center"
        android:text="INSERT"
        android:onClick="insert1"
        android:backgroundTint="@color/black"
        android:textSize="25sp"></Button>


    <Button
        android:layout_width="200dp"
        android:layout_height="60dp"
        android:layout_marginTop="30dp"
        android:layout_gravity="center"
        android:text="DISPLAY"
        android:onClick="show1"
        android:backgroundTint="@color/black"
        android:textSize="25sp"></Button>

</LinearLayout>

package com.example.sqlitedemo;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
  MyDb m;
  EditText t1,t2;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);
       m=new MyDb(this);
       t1=findViewById(R.id.t1);
       t2=findViewById(R.id.t2);
   }

   public void insert1(View view) {
       String s1=t1.getText().toString();
       int s2=Integer.parseInt(t2.getText().toString());
       boolean x=m.insertData(s1,s2);
       if(x==true)
       {
          Toast.makeText(getApplicationContext(),"Data Inserted Sucessfully",
Toast.LENGTH_LONG).show();
       }
       else
       {
          Toast.makeText(getApplicationContext(),"Something went wrong",
Toast.LENGTH_LONG).show();
       }

   }
```

```
    public void update1(View view) {
    }

    public void show1(View view) {
        Cursor res=m.getdata();
        StringBuffer buffer=new StringBuffer();
        while(res.moveToNext())
        {
            buffer.append("Name: "+res.getString(0)+"\n");
           buffer.append("Marks: "+res.getInt(1)+"\n");
            buffer.append("---------------------------------------- "+"\n");
        }
        AlertDialog.Builder ab= new AlertDialog.Builder(MainActivity.this);
        ab.setCancelable(true);
        ab.setTitle("Student Data");
        ab.setMessage(buffer.toString());
        ab.show();
    }
}

package com.example.sqlitedemo;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import androidx.annotation.Nullable;

public class MyDb extends SQLiteOpenHelper {
    public MyDb(@Nullable Context context) {
        super(context, "TYCO.db", null, 1);
    }
```

```
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("CREATE TABLE Stud(NAME TEXT,MARKS INTEGER);");
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int i, int i1) {
        db.execSQL("DROP TABlE IF EXISTS Stud");
    }
    public boolean insertData(String s1,int s2)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        ContentValues cv=new ContentValues();
        cv.put("NAME",s1);
        cv.put("MARKS",s2);
        long res=db.insert("Stud",null,cv);
        if(res==-1)
        {
            return false;
        }
        else
        {
            return true;
        }
    }
    public Cursor getdata()
    {
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cu=db.rawQuery("select * from Stud",null);
        return cu;
    }
}
```

5.Customer Details

```
<?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:orientation="vertical"
    android:background="#8ED1EF"
    tools:context=".MainActivity">

    <EditText
        android:layout_width="300dp"
        android:layout_height="60dp"
        android:layout_gravity="center"
        android:layout_marginTop="40dp"
        android:hint="Enter Customer ID"
        android:textColorHint="@color/black"
        android:textSize="25sp"
        android:backgroundTint="@color/black"
        android:id="@+id/t1"></EditText>
    <EditText
        android:layout_width="300dp"
        android:layout_height="60dp"
        android:layout_gravity="center"
        android:layout_marginTop="10dp"
        android:hint="Enter Customer Name"
        android:textColorHint="@color/black"
        android:textSize="25sp"
        android:backgroundTint="@color/black"
        android:id="@+id/t2"></EditText>
    <EditText
        android:layout_width="300dp"
```

```
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:hint="Enter Mobile No."
    android:textColorHint="@color/black"
    android:textSize="25sp"
    android:backgroundTint="@color/black"
    android:id="@+id/t3"></EditText>
<EditText
    android:layout_width="300dp"
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:hint="Enter ADDRESS"
    android:textColorHint="@color/black"
    android:textSize="25sp"
    android:backgroundTint="@color/black"
    android:id="@+id/t4"></EditText>
<EditText
    android:layout_width="300dp"
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:hint="Enter Pin Code"
    android:textColorHint="@color/black"
    android:textSize="25sp"
    android:backgroundTint="@color/black"
    android:id="@+id/t5"></EditText>
<Button
    android:layout_width="250dp"
    android:layout_height="60dp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
```

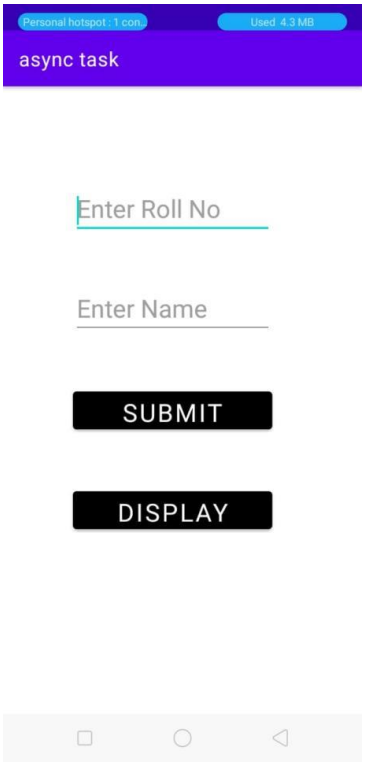
```
        android:text="INSERT DATA"
        android:backgroundTint="@color/black"
        android:textSize="25sp"
        android:id="@+id/b1"></Button>
    <Button
        android:layout_width="250dp"
        android:layout_height="90dp"
        android:layout_gravity="center"
        android:layout_marginTop="10dp"
        android:text="RETRIEVE DATA USING ID"
        android:backgroundTint="@color/black"
        android:textSize="25sp"
        android:id="@+id/b2"></Button>

</LinearLayout>
```

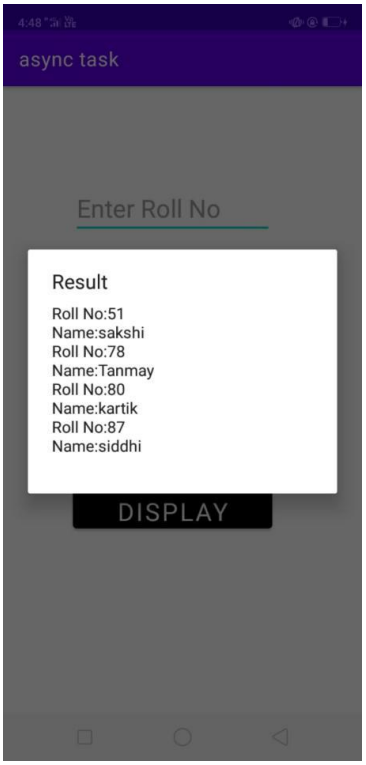
```
package com.example.sqldemo2;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    MyDb m1;
    EditText t1,t2,t3,t4,t5;
    Button b1,b2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

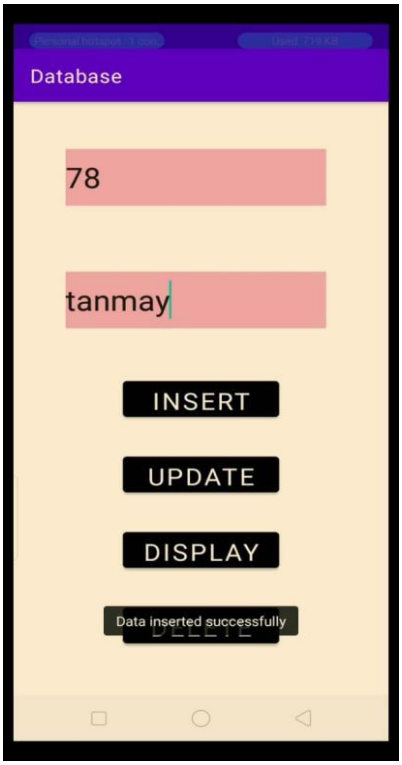
```
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        m1=new MyDb(this);
        t1=findViewById(R.id.t1);
        t2=findViewById(R.id.t2);
        t3=findViewById(R.id.t3);
        t4=findViewById(R.id.t4);
        t5=findViewById(R.id.t5);
        b1=findViewById(R.id.b1);
        b2=findViewById(R.id.b2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int s1=Integer.parseInt(t1.getText().toString());
                String s2=t2.getText().toString();
                String s3=t3.getText().toString();
                String s4=t4.getText().toString();
                String s5=t5.getText().toString();
                boolean x=m1.insertData(s1,s2,s3,s4,s5);
                if(x==true)
                {
                    Toast.makeText(MainActivity.this,"Data Inserted
Successfully",Toast.LENGTH_SHORT).show();
                }
                else
                {
                  Toast.makeText(MainActivity.this,"Data Not inserted",Toast.LENGTH_SHORT).show();
                }
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
```

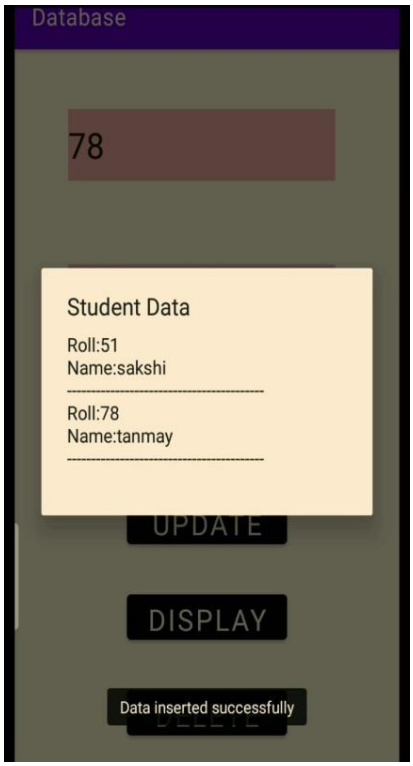
```
            int s1=Integer.parseInt(t1.getText().toString());
            Cursor res=m1.getData(s1);
            StringBuffer b=new StringBuffer();
            while(res.moveToNext())
            {
               b.append("ID: "+res.getInt(0)+"\n");
               b.append("Name: "+res.getString(1)+"\n");
               b.append("Mobile no.: "+res.getString(2)+"\n");
               b.append("Address: "+res.getString(3)+"\n");
               b.append("Pincode: "+res.getString(4)+"\n");

            }
            AlertDialog.Builder ab=new AlertDialog.Builder(MainActivity.this);
            ab.setCancelable(true);
            ab.setTitle("CUSTOMER DATA");
            ab.setMessage(b.toString());
            ab.show();
          }
       });}
}
package com.example.sqldemo2;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import androidx.annotation.Nullable;
public class MyDb extends SQLiteOpenHelper {
   public MyDb(Context context) {
      super(context, "Customer.db", null, 1);
   }
   @Override
   public void onCreate(SQLiteDatabase db) {
```

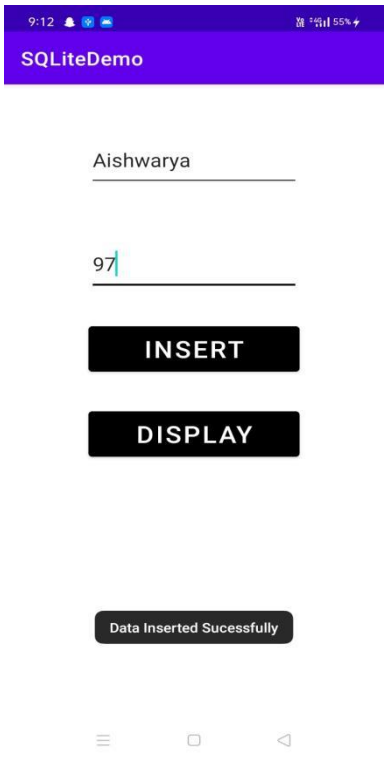
```
     db.execSQL("CREATE TABLE CUST(ID INTEGER,NM TEXT,MOB TEXT,ADDR TEXT,PIN
TEXT);");
    }
    @Override
    public void onUpgrade(SQLiteDatabase db, int i, int i1) {
       db.execSQL("DROP TABLE IF EXISTS CUST");
    }
    public boolean insertData(int s1,String s2,String s3,String s4,String s5)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        ContentValues cv=new ContentValues();
        cv.put("ID",s1);
        cv.put("NM",s2);
        cv.put("MOB",s3);
        cv.put("ADDR",s4);
        cv.put("PIN",s5)
 long res=db.insert("CUST",null,cv);
        if(res==-1)
        {
         return false;
        }
        else
        {
            return true;
        }
    }
    public Cursor getData(int s1)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor cu=db.rawQuery("select * from CUST where ID=?",new String[]{Integer.toString(s1)});
        return cu;
    }
}
```

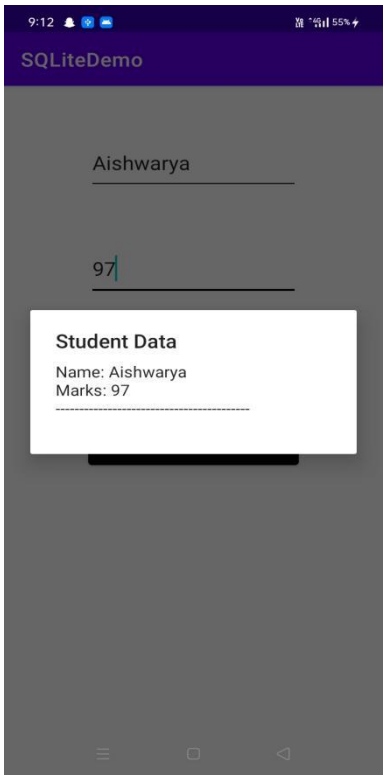

async task
Enter Roll No
Enter Name
SUBMIT
DISPLAY


async task
Enter Roll No
Result
Roll No:51
Name:sakshi
Roll No:78
Name:Tanmay
Roll No:80
Name:kartik
Roll No:87
Name:siddhi
DISPLAY

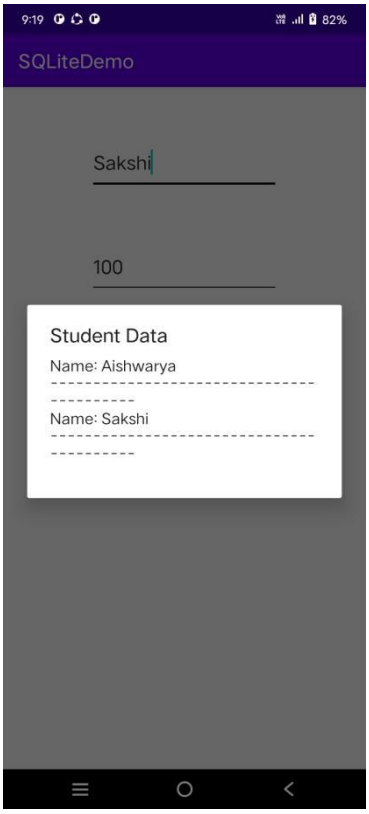

Database
78
tanmay
INSERT
UPDATE
DISPLAY
Data inserted successfully

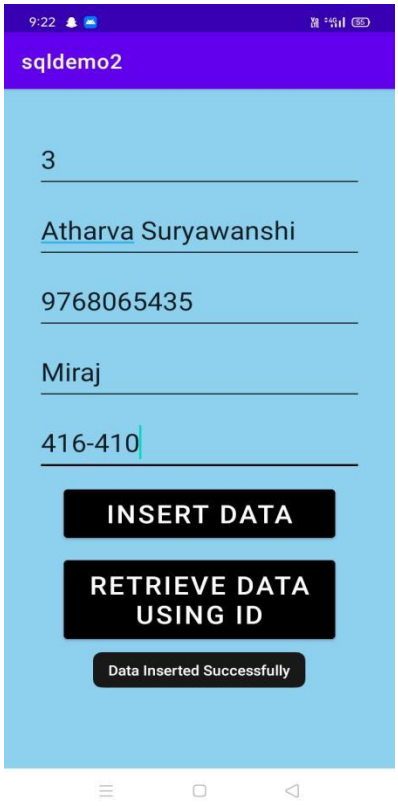

Database
78
Student Data
Roll:51
Name:sakshi
Roll:78
Name:tanmay
UPDATE
DISPLAY
Data inserted successfully


SQLiteDemo
Aishwarya
97
INSERT
DISPLAY
Data Inserted Sucessfully


SQLiteDemo
Aishwarya
97
Student Data
Name: Aishwarya
Marks: 97

9:19
82%
SQLiteDemo
Sakshi
100
INSERT
DISPLAY
Sakshi
Shakshi
Dakshi
Data Inserted Sucessfully


9:19
82%
SQLiteDemo
Sakshi
100
Student Data
Name: Aishwarya
Name: Sakshi


9:22
sqldemo2
3
Atharva Suryawanshi
9768065435
Miraj
416-410
INSERT DATA
RETRIEVE DATA USING ID
Data Inserted Successfully

9:22
sqldemo2
2
Enter Customer Name
CUSTOMER DATA
ID: 2
Name: Aishwarya Suryawanshi
Mobile no.: 7654890765
Address: Miraj,Sangli
Pincode: 416-410
INSERT DATA
RETRIEVE DATA USING ID

1. Sensor Example 1

```
<?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:orientation="vertical"
    android:id="@+id/linear1"
    android:background="#F490B2"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="250dp"
        android:layout_height="50dp"
        android:text="Gravity:"
        android:textSize="25sp"
        android:layout_marginTop="200dp"
        android:layout_gravity="center"
        android:id="@+id/t1"
        android:textColor="@color/black"
         />


</LinearLayout>
```

```
package com.example.sensorexample;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.media.MediaCodec;
import android.os.Bundle;
import android.widget.LinearLayout;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements SensorEventListener {
    LinearLayout linear1;
    TextView t1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        linear1=findViewById(R.id.linear1);
        t1=findViewById(R.id.t1);
        SensorManager sm=(SensorManager) getSystemService(SENSOR_SERVICE);
        if(sm!=null)
        {
            Sensor proxy=sm.getDefaultSensor(Sensor.TYPE_LIGHT);
            if(proxy!=null)
            {
                sm.registerListener(this,proxy,sm.SENSOR_DELAY_NORMAL);
            }
        }
    }
```

```
    @Override
    public void onSensorChanged(SensorEvent Event) {
        if(Event.sensor.getType()==Sensor.TYPE_LIGHT)
        {
            t1.setText("Light value: "+Event.values[0]);
        }
       if(Event.values[0]>0)
        {
            linear1.setBackgroundColor(Color.YELLOW);
        }
        else
        {
            linear1.setBackgroundColor(Color.BLACK);
        }
    }

    @Override
    public void onAccuracyChanged(Sensor sensor, int i) {

    }
}
```

2. sensor Example 2

```
<?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:orientation="vertical"
    android:id="@+id/linear1"
    android:background="#F490B2"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="250dp"
        android:layout_height="50dp"
        android:text="Gravity:"
        android:textSize="25sp"
        android:layout_marginTop="200dp"
        android:layout_gravity="center"
        android:id="@+id/t1"
        android:textColor="@color/black"
         />

</LinearLayout>
```

```
package com.example.sensorexample;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.media.MediaCodec;
import android.os.Bundle;
import android.widget.LinearLayout;
import android.widget.TextView;
```

```
public class MainActivity extends AppCompatActivity implements SensorEventListener {
    LinearLayout linear1;
    TextView t1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        linear1=findViewById(R.id.linear1);
        t1=findViewById(R.id.t1);
        SensorManager sm=(SensorManager) getSystemService(SENSOR_SERVICE);
        if(sm!=null)
        {
            Sensor proxy=sm.getDefaultSensor(Sensor.TYPE_PROXIMITY);
            if(proxy!=null)
            {
                sm.registerListener(this,proxy,sm.SENSOR_DELAY_NORMAL);
            }
        }
    }

    @Override
    public void onSensorChanged(SensorEvent Event) {
        if(Event.sensor.getType()==Sensor.TYPE_PROXIMITY)
        {
            t1.setText("Proximity value: "+Event.values[0]);
        }
       if(Event.values[0]>0)
        {
            linear1.setBackgroundColor(Color.CYAN);
        }
        else
        {
            linear1.setBackgroundColor(Color.BLACK);
        }
    }

    @Override
    public void onAccuracyChanged(Sensor sensor, int i) {

    }
}
```

3. Sensor example 2

```
<?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:orientation="vertical"
    android:id="@+id/linear1"
    android:background="#F490B2"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="290dp"
        android:layout_height="50dp"
        android:text="Gravity:"
        android:textSize="25sp"
```

```
        android:layout_marginTop="200dp"
        android:layout_gravity="center"
        android:id="@+id/t1"
        android:textColor="@color/black"
         />


</LinearLayout>
```

```
package com.example.sensorexample;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.media.MediaCodec;
import android.os.Bundle;
import android.widget.LinearLayout;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements SensorEventListener {
    LinearLayout linear1;
    TextView t1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        linear1=findViewById(R.id.linear1);
        t1=findViewById(R.id.t1);
        SensorManager sm=(SensorManager) getSystemService(SENSOR_SERVICE);
        if(sm!=null)
        {
            Sensor proxy=sm.getDefaultSensor(Sensor.TYPE_GRAVITY);
            if(proxy!=null)
            {
                sm.registerListener(this,proxy,sm.SENSOR_DELAY_NORMAL);
            }
        }
    }

    @Override
    public void onSensorChanged(SensorEvent Event) {
        if(Event.sensor.getType()==Sensor.TYPE_GRAVITY)
        {
            t1.setText("Gravity value: "+Event.values[0]);
        }
       if(Event.values[0]>0)
        {
            linear1.setBackgroundColor(Color.GREEN);
        }
        else
        {
            linear1.setBackgroundColor(Color.BLACK);
        }
    }

    @Override
```

```
    public void onAccuracyChanged(Sensor sensor, int i) {

    }
}
```

4. Sensor Example 4

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:textSize="25sp"
        android:text="" />


</RelativeLayout>
package com.example.sensorshuffled;

import androidx.appcompat.app.AppCompatActivity;

import android.app.Activity;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;

public class MainActivity extends Activity implements SensorEventListener {
    private SensorManager sensorManager;
    private boolean isColor = false;
    private View view;
    private long lastUpdate;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        view = findViewById(R.id.textView);
        view.setBackgroundColor(Color.BLUE);
        sensorManager = (SensorManager) getSystemService(SENSOR_SERVICE);
        lastUpdate = System.currentTimeMillis();
    }

    @Override
    public void onSensorChanged(SensorEvent event) {

        if (event.sensor.getType() == Sensor.TYPE_ACCELEROMETER) {
            getAccelerometer(event);
        }
    }
```

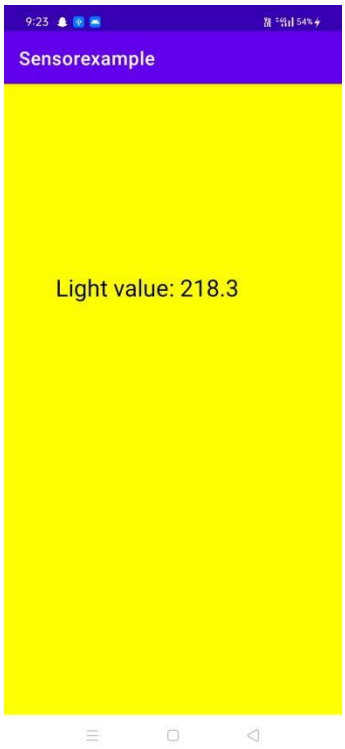
```
    @Override
    public void onAccuracyChanged(Sensor sensor, int i) {}
    private void getAccelerometer(SensorEvent event) {
        float[] values = event.values;
        // Movement
        float x = values[0];
        float y = values[1];
        float z = values[2];

        float accelationSquareRoot = (x * x + y * y + z * z)
                / (SensorManager.GRAVITY_EARTH * SensorManager.GRAVITY_EARTH);

        long actualTime = System.currentTimeMillis();
        Toast.makeText(getApplicationContext(),String.valueOf(accelationSquareRoot)+" "+
                SensorManager.GRAVITY_EARTH, Toast.LENGTH_SHORT).show();

        if (accelationSquareRoot >= 2)
        {

            if (actualTime - lastUpdate < 200) {
                return;
            }
            lastUpdate = actualTime;
            if (isColor) {
                view.setBackgroundColor(Color.YELLOW);

            } else {
                view.setBackgroundColor(Color.RED);
            }
            isColor = !isColor;
        }
    }
    protected void onResume() {
        super.onResume();
sensorManager.registerListener(this,sensorManager.getDefaultSensor(Sensor.TYPE_ACCELEROME
TER),
                SensorManager.SENSOR_DELAY_NORMAL);
    }
    protected void onPause() {

        super.onPause();
        sensorManager.unregisterListener(this);
    }
}
```

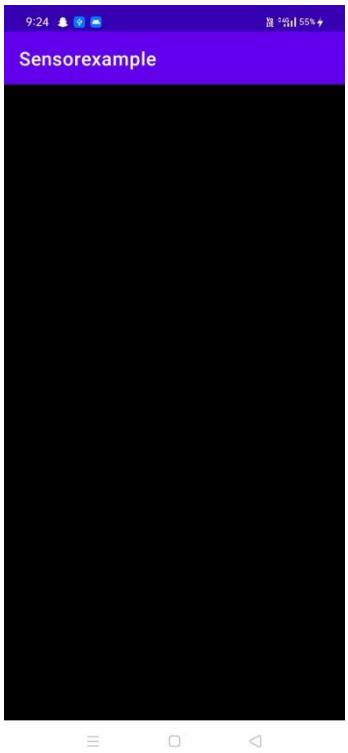
5. Sensor example 5

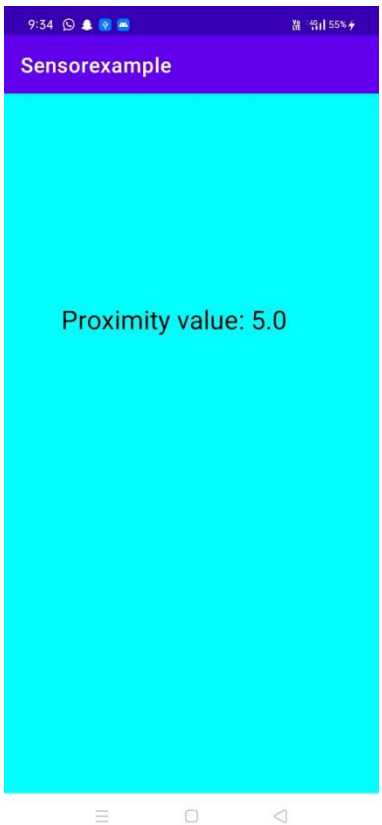
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">


    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
```

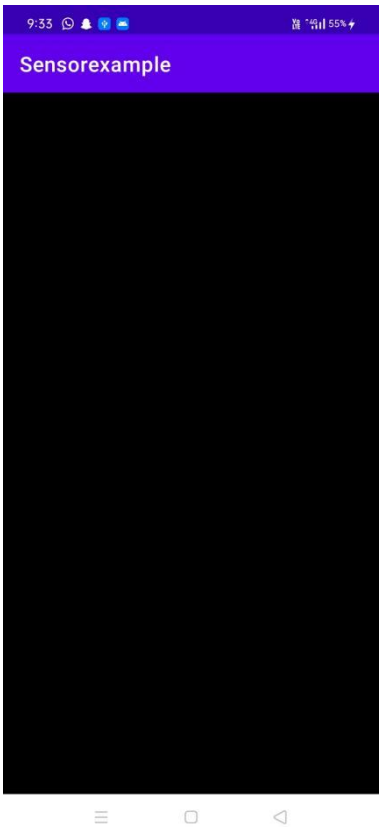
```
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="92dp"
        android:layout_marginTop="114dp"
        android:text="TextView" />



</RelativeLayout>
package com.example.positionsensor;

import androidx.appcompat.app.AppCompatActivity;

import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;

import java.util.List;

public class MainActivity extends AppCompatActivity {
    SensorManager sm = null;
    TextView textView1 = null;
    List list;

    SensorEventListener sel = new SensorEventListener(){
        public void onAccuracyChanged(Sensor sensor, int accuracy) {}
        public void onSensorChanged(SensorEvent event) {
            float[] values = event.values;
            textView1.setText("x: "+values[0]+"\ny: "+values[1]+"\nz: "+values[2]);
        }
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        sm = (SensorManager)getSystemService(SENSOR_SERVICE);

        textView1 = (TextView)findViewById(R.id.textView1);

        list = sm.getSensorList(Sensor.TYPE_ACCELEROMETER);
        if(list.size()>0){
            sm.registerListener(sel, (Sensor) list.get(0), SensorManager.SENSOR_DELAY_NORMAL);
        }else{
            Toast.makeText(getBaseContext(), "Error: No Accelerometer.",
Toast.LENGTH_LONG).show();
        }
    }

    protected void onStop() {
        if(list.size()>0){
            sm.unregisterListener(sel);
        }
        super.onStop();
```

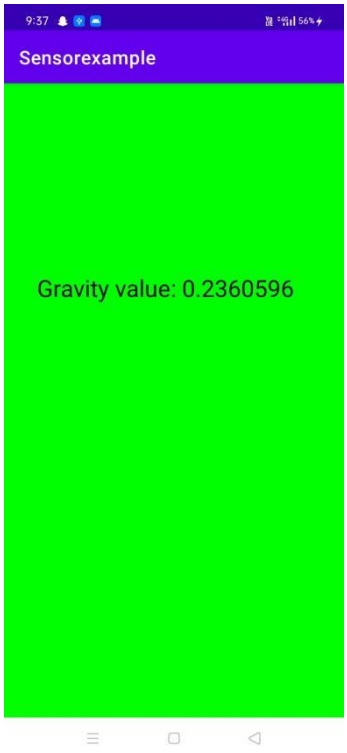
```
    }
}
```

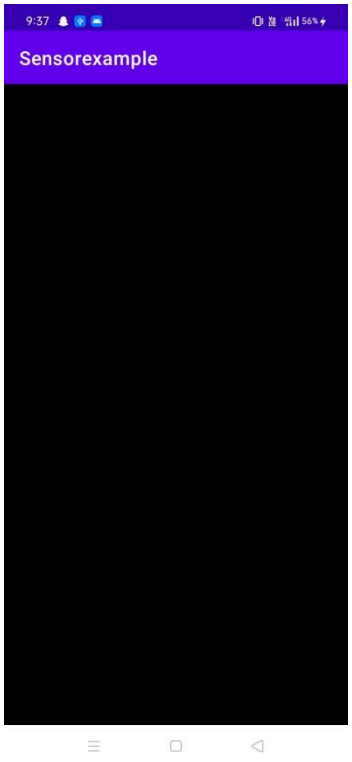

9:23
Sensorexample
Light value: 218.3

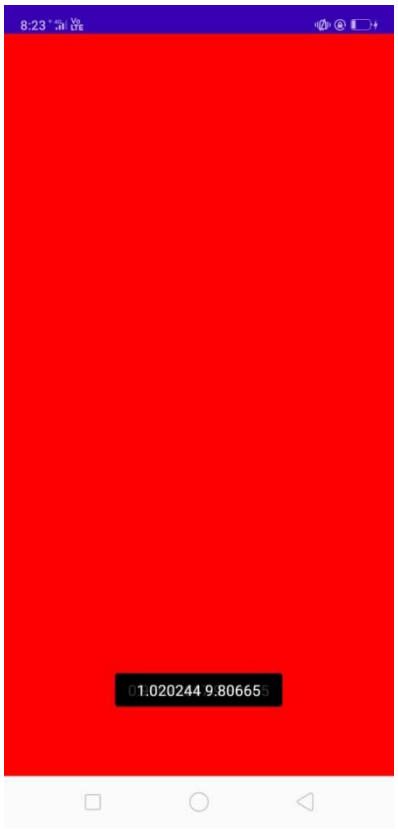

9:24
Sensorexample


9:34
Sensorexample
Proximity value: 5.0


9:33
Sensorexample


9:37
Sensorexample
Gravity value: 0.2360596


9:37
Sensorexample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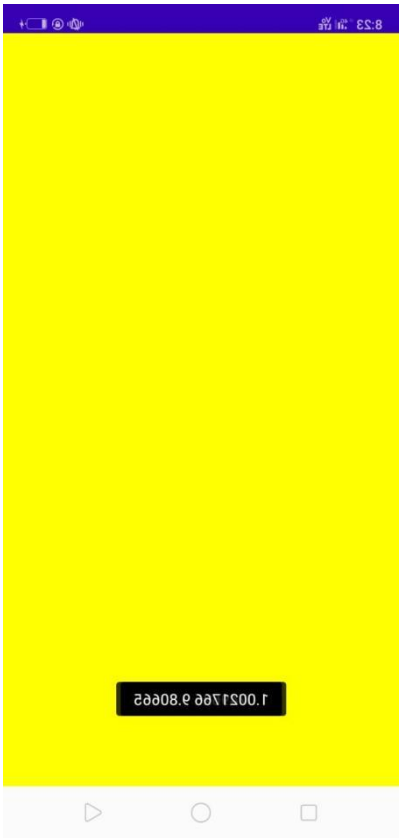

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