

INDEX

Exp.No	DATE	NAME OF THE EXPRIEMENT	MARKS	SIGNATURE
1(a)		Develop an application that uses GUI components, Font and Colors.		
1(b)		Develop an application that uses Layout Managers and event listeners.		
2		Develop an application that makes use of databases.		
3		Develop a native application that uses GPS location information.		
4		Implement an application that creates an alert upon receiving a message		
5		Write a mobile application that creates alarm clock		
6		Develop a native calculator application.		
7		Develop a mobile application to send an email		

EX. NO. : 1(a)	Develop an application that uses GUI components, Font and Colors
DATE :	

AIM:

To develop an android application that uses GUI Components, Font and colors.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android Application Project, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then click Next
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - Click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual Device Manager and click Start.
3. Design the graphical layout with a text view and two command buttons.
4. Run the application.
5. On pressing the change color button, color of the text gets changed.
6. On pressing the change font size button, the size of the font gets altered.
7. Close the Android project.

PROGRAM CODE**MainActivity.java**

```
package com.example.gui;
import android.os.Bundle;
import android.app.Activity;
import android.graphics.Typeface;
import android.graphics.Color;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
```

```
public class MainActivity extends Activity {
    float font = 24;
    int i = 1;
```

```

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    final TextView t1 = (TextView)findViewById(R.id.textView1); Button b1 =
    (Button)findViewById(R.id.button1);
    b1.setOnClickListener(new View.OnClickListener() {

        public void onClick(View view) {
            t1.setTextSize(font);
            font = font+4;
            if(font==40)
                font = 20;
        }
    });
    Button b2 = (Button)findViewById(R.id.button2);
    b2.setOnClickListener(new View.OnClickListener() {

        public void onClick(View view) {switch(i)
        {
            case 1:
                t1.setTextColor(Color.parseColor("#0000FF"));
                break;
            case 2:
                t1.setTextColor(Color.parseColor("#00FF00"));
                break;
            case 3:
                t1.setTextColor(Color.parseColor("#FF0000"));
                break;
            case 4:
                t1.setTextColor(Color.parseColor("#800000"));
                break;

        }

        i++;
        if(i==5)
            i=1;

        }
    }

    t1.setTextCt1.se

```

activity_main.xml

```
<LinearLayoutxmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="fill_parent"
android:layout_height="fill_parent"
android:orientation="vertical"
>
```

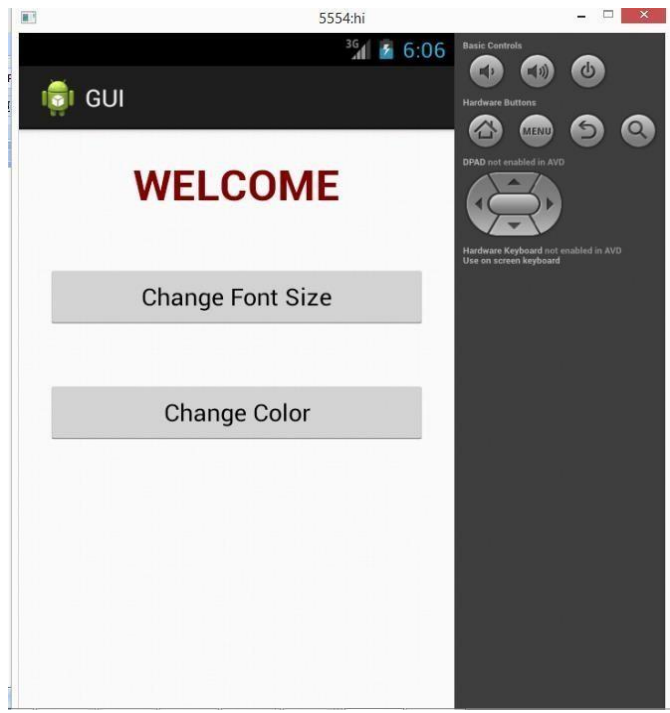
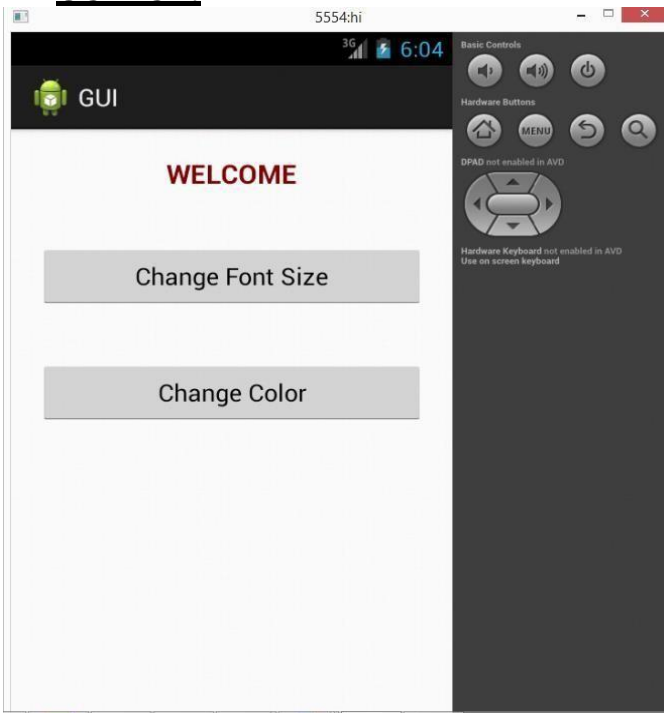
```
<TextView android:id="@+id/textView1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="WELCOME"
android:layout_margin="20sp"
android:gravity="center"
android:textSize="20sp"
android:textStyle="bold"
/>
```

```
<Button
android:id="@+id/button1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="20sp"
android:gravity="center"
android:text="Change Font Size" />
```

```
<Button
android:id="@+id/button2"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:gravity="center"
android:layout_margin="20sp"
android:text="Change Color" />
```

```
</LinearLayout>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application GUI Components, Font and colors was executed successfully.

EX. NO. :1(b)	Develop an application that uses Layout Managers and Event Listeners
DATE :	

AIM:

To develop an android application that uses Layout Managers and event listeners.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android Application Project, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then click Next.
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual Device Manager and click Start.
3. Design the graphical layout with buttons, edit text and text view.
4. Run the application.
5. Provide the required inputs to perform the desired arithmetic operation.
6. Display the result.
7. Close the Android project.

PROGRAM CODE:

MainActivity.java

```
package com.example.layout;
import android.os.Bundle;
import android.app.Activity;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends Activity {
    EditText txtData1, txtData2;
    float num1, num2, result1, result2;
```

```

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

    Button add = (Button)findViewById(R.id.button1);
    add.setOnClickListener(new OnClickListener(){
        public void onClick(View v){
            try
            {
                txtData1 = (EditText)findViewById(R.id.editText1);
                txtData2 = (EditText)findViewById(R.id.editText2);
                num1 = Float.parseFloat(txtData1.getText().toString());
                num2 = Float.parseFloat(txtData2.getText().toString());
                result1 = num1+num2;

                Toast.makeText(getApplicationContext(),"ANSWER:"+result1,Toast.LENGTH_SHORT).show();
            }
            catch(Exception e)
            {
                Toast.makeText(getApplicationContext(),e.getMessage(),Toast.LENGTH_SHORT).show();
            }
        }
    });

    Button sub = (Button)findViewById(R.id.button3);
    sub.setOnClickListener(new OnClickListener(){

        Public void onClick(View v)
        {
            try
            {
                txtData1 = (EditText)findViewById(R.id.editText1);txtData2 =
                (EditText)findViewById(R.id.editText2);
                num1 = Float.parseFloat(txtData1.getText().toString());
                num2 = Float.parseFloat(txtData2.getText().toString());
                result2 = num1-num2;

                Toast.makeText(getApplicationContext(),"ANSWER:"+result2,Toast.LENGTH_SHORT).show();
            }

            catch(Exception e)
            {
                Toast.makeText(getApplicationContext(),e.getMessage(),Toast.LENGTH_SHORT).show();
            }
        }
    });
}

```

```

Button clear = (Button)findViewById(R.id.button2);
clear.setOnClickListener(new OnClickListener() {
    public void onClick(View v)
    {
        try
        {
            txtData1.setText("");
            txtData2.setText("");
        }

        catch (Exception e)
        {

        }

        Toast.makeText(getApplicationContext(), e.getMessage(), Toast.LENGTH_SHORT).show();
    }
});
}
}

```

activity_main.xml

```

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/relativeLayout1"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent">

    <LinearLayout
        android:id="@+id/linearLayout1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentTop="true">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="ADDITION"
            android:layout_gravity="center"
            android:textSize="20dp">
        </TextView>
    </LinearLayout>
    <LinearLayout
        android:id="@+id/linearLayout2"

```



```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_below="@+id/linearLayout1">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Enter No 1" />
<EditText android:id="@+id/editText1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="0.20"
android:inputType="number">
</EditText>
</LinearLayout>
```

```
<LinearLayout android:id="@+id/linearLayout3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_below="@+id/linearLayout2">
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Enter No 2" />
```

```
<EditText android:id="@+id/editText2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="0.20"
android:inputType="number">
</EditText>
</LinearLayout>
```

```
<LinearLayout android:id="@+id/linearLayout4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentLeft="true"
android:layout_alignParentRight="true"
android:layout_below="@+id/linearLayout3">
```

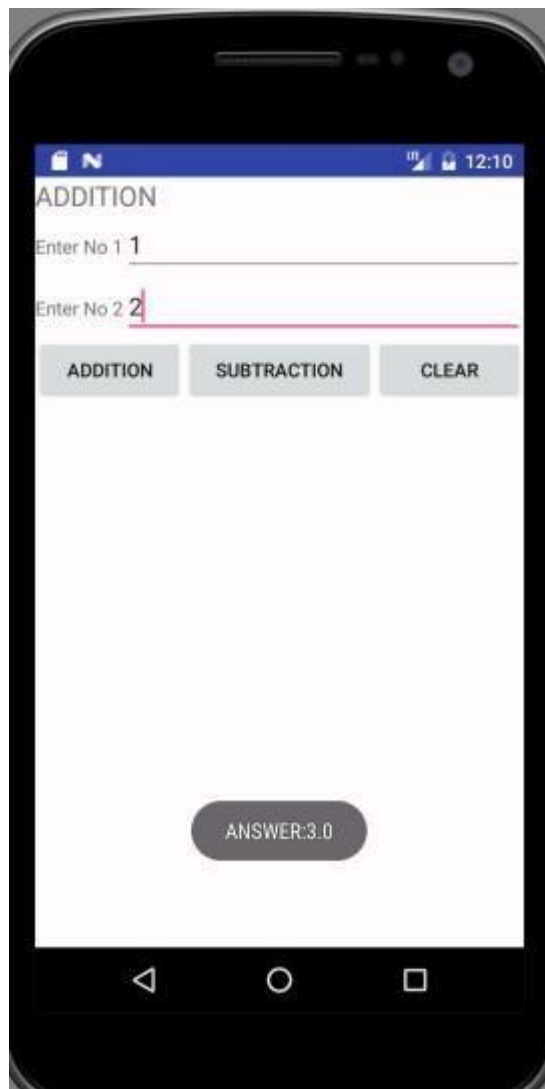
```
<Button
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="0.50"
android:text="Addition" />
```

```
<Button
android:id="@+id/button3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="0.50"
android:text="Subtraction" />
```

```
<Button
android:id="@+id/button2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_weight="0.50"
android:text="Clear" />
</LinearLayout>
```

```
<View
android:id="@+id/linearLayout4"
android:layout_width="fill_parent"
android:layout_height="2px"
android:background="#DDFFDD" />
</RelativeLayout>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application that uses layout managers and event listeners was executed successfully.

EX. NO:2	Develop an application that makes use of database
DATE :	

AIM:

To develop an android application that makes use of database.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android Application Project, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then click Next
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual Device Manager and click Start.
3. Design the graphical layout.
4. Run the application.
5. Perform the database operation.(Insert/delete/view/update)
6. Close the Android project.

PROGRAM CODE

MainActivity.java

```
package com.example.admin.myapplication;
```

```
import android.app.Activity;
import android.app.AlertDialog.Builder;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends Activity implements OnClickListener
{
    EditText Rollno, Name, Marks;
```

```

    Button Insert,Delete,Update,View,ViewAll;
    SQLiteDatabase db;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Rollno=(EditText)findViewById(R.id.Rollno);
        Name=(EditText)findViewById(R.id.Name);
        Marks=(EditText)findViewById(R.id.Marks);
        Insert=(Button)findViewById(R.id.Insert);
        Delete=(Button)findViewById(R.id.Delete);
        Update=(Button)findViewById(R.id.Update);
        View=(Button)findViewById(R.id.View);
        ViewAll=(Button)findViewById(R.id.ViewAll);

        Insert.setOnClickListener(this);
        Delete.setOnClickListener(this);
        Update.setOnClickListener(this);
        View.setOnClickListener(this);
        ViewAll.setOnClickListener(this);
    }
    // Creating database and table
    db=openOrCreateDatabase("StudentDB", Context.MODE_PRIVATE, null);
    db.execSQL("CREATE TABLE IF NOT EXISTS
    student(rollno VARCHAR,name VARCHAR,marks VARCHAR);");
    }
    public void onClick(View view)
    {
        // Inserting a record to the Student table
        if(view==Insert)
        {
            // Checking for empty fields
            if(Rollno.getText().toString().trim().length()==0||
            Name.getText().toString().trim().length()==0||
            Marks.getText().toString().trim().length()==0)
            {
                showMessage("Error", "Please enter all values");
                return;
            }
            db.execSQL("INSERT INTO student VALUES('"+Rollno.getText()+"','"+Name.getText()+"',
            '"+Marks.getText()+"');");
            showMessage("Success", "Record added");
            clearText();
        }
        // Deleting a record from the Student table
        if(view==Delete)
        {
            // Checking for empty roll number
            if(Rollno.getText().toString().trim().length()==0)
            {
                showMessage("Error", "Please enter Rollno");
                return;
            }
        }
    }

```

```

    }
    Cursor c=db.rawQuery("SELECT * FROM student WHERE
    rollno='"+Rollno.getText()+"", null);
    if(c.moveToFirst())
    {
    db.execSQL("DELETE FROM student WHERE rollno='"+Rollno.getText()+"");
    showMessage("Success", "Record Deleted");
    }
    else
    {
    showMessage("Error", "Invalid Rollno");
    }
    clearText();
    }
    // Updating a record in the Student table
    if(view==Update)
    {
    // Checking for empty roll number
    if(Rollno.getText().toString().trim().length()==0)
    {
    showMessage("Error", "Please enter Rollno");return;
    }
    Cursor c=db.rawQuery("SELECT * FROM student WHERE
    rollno='"+Rollno.getText()+"", null);
    if(c.moveToFirst()) {
    db.execSQL("UPDATE student SET name='" + Name.getText() + "',marks='" +
    Marks.getText() +
    "' WHERE rollno='"+Rollno.getText()+"");
    showMessage("Success", "Record Modified");
    }
    else {
    showMessage("Error", "Invalid Rollno");
    }
    clearText();
    }
    // Display a record from the Student table
    if(view==View)
    {
    // Checking for empty roll number
    if(Rollno.getText().toString().trim().length()==0)
    {
    showMessage("Error", "Please enter Rollno");return;
    }
    Cursor c=db.rawQuery("SELECT * FROM student WHERE
    rollno='"+Rollno.getText()+"", null);
    if(c.moveToFirst())
    {
    Name.setText(c.getString(1));
    Marks.setText(c.getString(2));
    }
    else{
    showMessage("Error", "Invalid Rollno");

```

```

clearText();
    }
}
// Displaying all the records
if(view==ViewAll)
{
    Cursor c=db.rawQuery("SELECT * FROM student", null);
    if(c.getCount()==0)
    {
        showMessage("Error", "No records found");
        return;
    }
    StringBuffer buffer=new StringBuffer();
    while(c.moveToNext())
    {
        buffer.append("Rollno: "+c.getString(0)+"\n");
        buffer.append("Name: "+c.getString(1)+"\n");
        buffer.append("Marks: "+c.getString(2)+"\n\n");
    }
    showMessage("Student Details", buffer.toString());
}
}
public void showMessage(String title,String message)
{
    Builder builder=new Builder(this);
    builder.setCancelable(true);
    builder.setTitle(title);
    builder.setMessage(message);
    builder.show();
}
public void clearText()
{
    Rollno.setText("");
    Name.setText("");
    Marks.setText("");
    Rollno.requestFocus();
}
}

```

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<AbsoluteLayoutxmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent" android:layout_height="match_parent">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_x="50dp"
        android:layout_y="20dp"
        android:text="Student Details"
        android:textSize="30sp" />

    <TextView
        android:layout_width="wrap_content"

```

```
android:layout_height="wrap_content"
android:layout_x="20dp"
android:layout_y="110dp"
android:text="Enter Rollno:"
android:textSize="20sp" />
```

```
<EditText
android:id="@+id/Rollno"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="175dp"
android:layout_y="100dp"
android:inputType="number"
android:textSize="20sp" />
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_x="20dp"
android:layout_y="160dp"
android:text="Enter Name:"
android:textSize="20sp" />
```

```
<EditText android:id="@+id/Name"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="175dp"
android:layout_y="150dp"
android:inputType="text"
android:textSize="20sp" />
```

```
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_x="20dp"
android:layout_y="210dp"
android:text="Enter Marks:"
android:textSize="20sp" />
```

```
<EditText
android:id="@+id/Marks"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="175dp"
android:layout_y="200dp"
android:inputType="number"
android:textSize="20sp" />
```

```
<Button android:id="@+id/Insert"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="25dp"
android:layout_y="300dp"
```



```
android:text="Insert"
android:textSize="30dp" />
```

```
<Button android:id="@+id/Delete"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="200dp"
android:layout_y="300dp"
android:text="Delete"
android:textSize="30dp" />
```

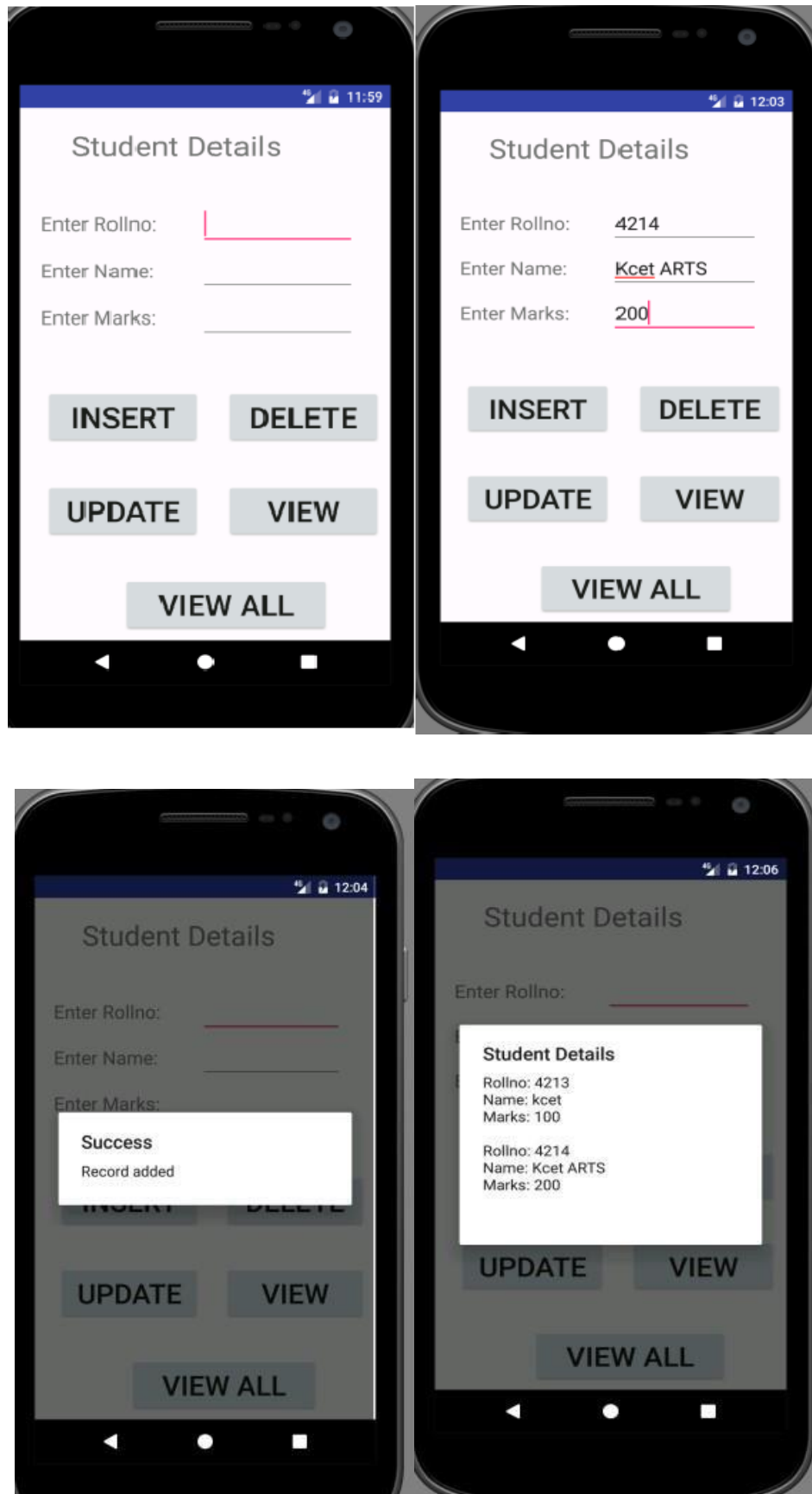
```
<Button android:id="@+id/Update"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="25dp"
android:layout_y="400dp"
android:text="Update"
android:textSize="30dp" />
```

```
<Button android:id="@+id/View"
android:layout_width="150dp"
android:layout_height="wrap_content"
android:layout_x="200dp"
android:layout_y="400dp"
android:text="View"
android:textSize="30dp" />
```

```
<Button
android:id="@+id/ViewAll"
android:layout_width="200dp"
android:layout_height="wrap_content"
android:layout_x="100dp"
android:layout_y="500dp"
android:text="View All"
android:textSize="30dp" />
```

```
</AbsoluteLayout>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application that makes use of database was executed successfully.

EX. NO:3	Develop a native application that uses GPS location information
DATE :	

AIM:

To develop an android application that uses GPS location information.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android Application Project, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then click Next
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual DeviceManager and click Start.
3. Design the graphical layout.
4. Run the application.
5. The requested data is retrieved from the database named myFriendsDb.
6. Close the Android project.

PROGRAM CODE

UseGps.java

```
package com.emergency; import
android.app.Activity; import
android.content.Context;
import android.location.Location;
import android.location.LocationListener;
import android.location.LocationManager;
import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
```

```

public class UseGps extends Activity
{
    Button buttonSend;
    EditTexttextSMS;
    EditTexttextlon;
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        buttonSend = (Button) findViewById(R.id.buttonSend);
        textSMS = (EditText) findViewById(R.id.editTextSMS);
        textlon = (EditText) findViewById(R.id.textlon);
        LocationManagermlocManager
        (LocationManager) getSystemService(Context.LOCATION_SERVICE);
        LocationListenermlocListener = new MyLocationListener();
        mlocManager.requestLocationUpdates( LocationManager.GPS_PROVIDER, 0, 0, mlocListener);
    }
    public class MyLocationListener implements LocationListener
    {
        public void onLocationChanged(Location loc)
        {
            loc.getLatitude();
            loc.getLongitude();
            Double lat=loc.getLatitude();
            Double lon=loc.getLongitude();
            textSMS.setText(lat.toString());
            textlon.setText(lon.toString());
        }
        public void onProviderDisabled(String provider)
        {
            Toast.makeText( getApplicationContext(),"Gps Disabled",Toast.LENGTH_SHORT ).show();
        }
        public void onProviderEnabled(String provider)
        {
            Toast.makeText( getApplicationContext(), "Gps Enabled", Toast.LENGTH_SHORT).show();
        }
    }
}

```

main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayoutxmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Emergency Alert System"
        />

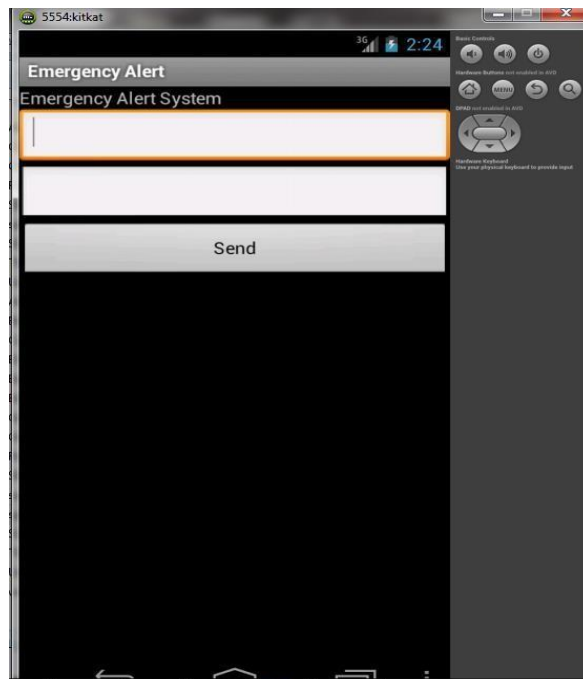
    <EditText android:id="@+id/editTextSMS"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="top" />

    <EditText android:id="@+id/textlon"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="top" />

    <Button android:id="@+id/buttonSend"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Send" />

</LinearLayout>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application that makes use of GPS information was executed successfully.

EX. NO. :4	Implementation an application that creates an alert upon receiving a message
DATE :	

AIM:

To develop an android application that creates an alert upon receiving a message.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android Application Project, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then click Next
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual Device Manager and click Start.
3. Design the layout by adding a text box and a command button.
4. Run the application.
5. If the entered E-mail doesn't match the given E-mail id, then an alert will be displayed.
6. If the entered E-mail id matches with the provided mail-id then login is successful.
7. Close the Android project.

PROGRAM CODE:

MainActivity.java package

```
com.pa.Alert; import
android.os.Bundle;
import android.app.Activity; import
android.content.Intent; import
android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText; import
android.widget.Toast;
```

```
public class MainActivity extends Activity {
```



```

private Button BTN;
private EditText email;

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main); BTN =
    (Button) findViewById(R.id.btn);
    email = (EditText) findViewById(R.id.emailInput);
    BTN.setOnClickListener(new OnClickListener() {
        public void onClick(View v) {
            String val = email.getText().toString();if
            (val == null || val.length() <= 0) {
                Toast.makeText(getApplicationContext(),
                    "Please Enter the email", Toast.LENGTH_LONG).show();
            } else if (val.equals("enpboss@gmail.com")) {
                Intent intent = new Intent(getApplicationContext(),
                    SecondActivity.class);
                startActivity(intent);
                Toast.makeText(getApplicationContext(),
                    "Login Success", Toast.LENGTH_LONG).show();
            } else {
                Toast.makeText(getApplicationContext(),
                    "Please Enter valid email", Toast.LENGTH_LONG)
                    .show();
            }
        }
    });
}
}

```

SecondActivity.java

```

package com.pa.Alert;

import android.app.Activity;
import android.os.Bundle;

public class SecondActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second_activity);
    }
}

```

Main activity.xml

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

    <EditText android:id="@+id/emailInput"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10" />

    <Button
        android:id="@+id/btn"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20sp"
        android:gravity="center"
        android:text="Login" />

</LinearLayout>
```

AndroidManifest.Xml

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

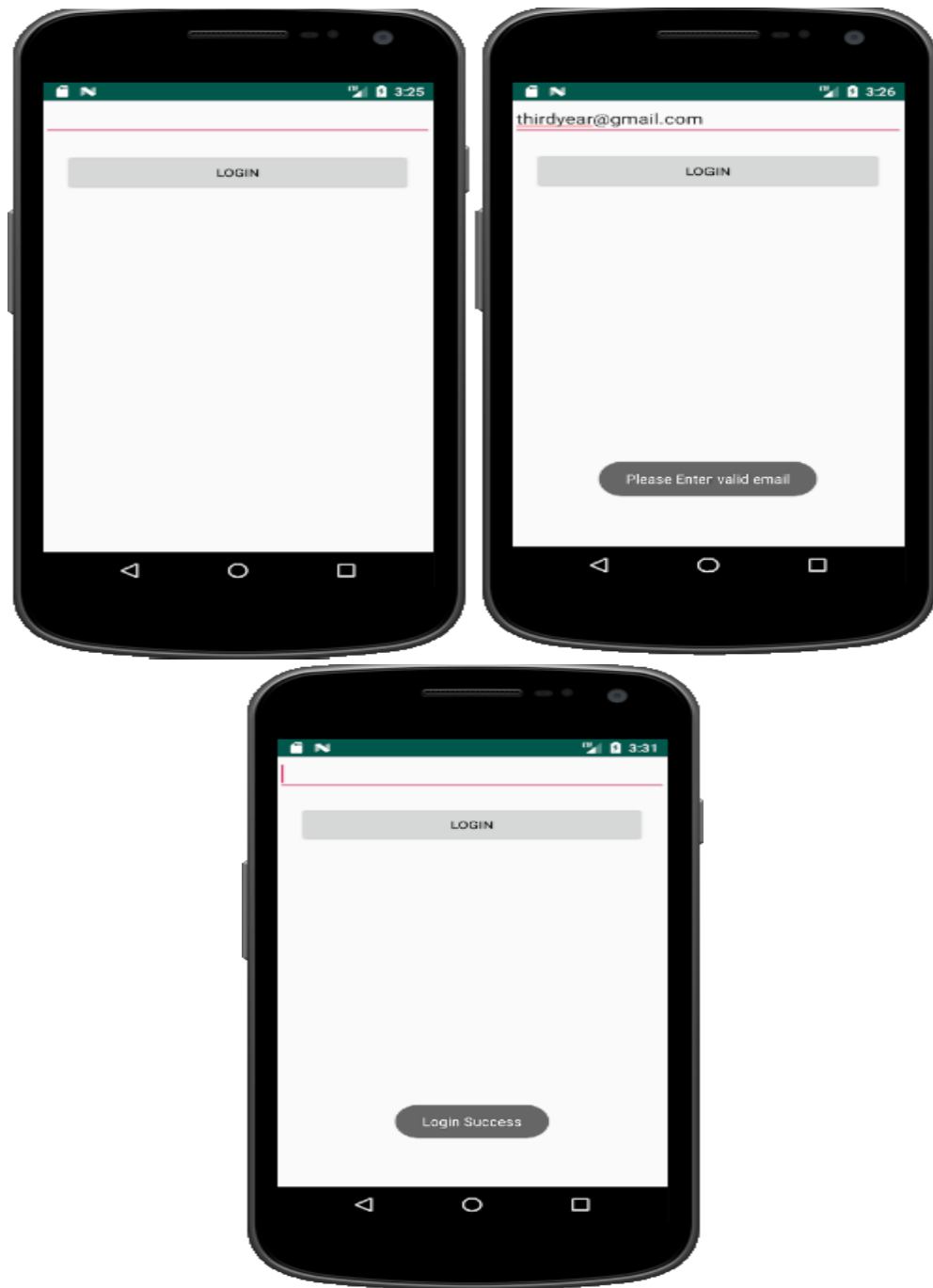
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">

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

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

        <activity android:name=".SecondActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application that creates an alert upon receiving a message was executed successfully.

EX. NO. : 5	Write a mobile application that creates alarm clock
DATE :	

AIM:

To develop an android application that creates alarm clock.

ALGORITHM:

1. Create a New Android Project:

- Click New in the toolbar.
- In the window that appears, open the Android folder, select Android Application Project, and click next.
- Provide the application name and the project name and then finally give the desired package name.
- Choose a launcher icon for your application and then select Blank Activity and then click Next
- Provide the desired Activity name for your project and then click Finish.

2. Create a New AVD (Android Virtual Device):

- click Android Virtual Device Manager from the toolbar.
- In the Android Virtual Device Manager panel, click New.
- Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
- Click Create AVD and Select the new AVD from the Android Virtual Device Manager and click Start.

3. Design the graphical layout.

4. Run the application.

5. When the application starts alarm sound will be invoked. 6. Stop alarm button is clicked to stop the alarm.

7. Close the Android project.

PROGRAM CODE:

MainActivity.java

```
package com.example.admin.myapplication;
```

```
import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent; import
android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.TimePicker;
import android.widget.Toast;
import android.widget.ToggleButton; import java.util.Calendar
```

```
public class MainActivity extends AppCompatActivity
{
    TimePicker alarmTimePicker;
    PendingIntent pendingIntent;
```

```
AlarmManager alarmManager;
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState)
{
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    alarmTimePicker= (TimePicker) findViewById(R.id.timePicker);
    alarmManager= (AlarmManager) getSystemService(ALARM_SERVICE);
}

public void OnToggleClicked(View view)
{
    long time;
    if (((ToggleButton) view).isChecked())
    {
        Toast.makeText(MainActivity.this, "ALARM ON", Toast.LENGTH_SHORT).show();
        Calendar calendar = Calendar.getInstance();
        calendar.set(Calendar.HOUR_OF_DAY, alarmTimePicker.getCurrentHour());
        calendar.set(Calendar.MINUTE, alarmTimePicker.getCurrentMinute());
        Intent intent = new Intent(this, AlarmReceiver.class);
        pendingIntent= PendingIntent.getBroadcast(this, 0, intent, 0);

        time=(calendar.getTimeInMillis()-(calendar.getTimeInMillis()%60000));
        if(System.currentTimeMillis()>time)
        {
            if (calendar.AM_PM== 0)
                time = time + (1000*60*60*12);
            else
                time = time + (1000*60*60*24);
        }
        alarmManager.setRepeating(AlarmManager.RTC_WAKEUP, time, 10000, pendingIntent);
    }
    else
    {
        alarmManager.cancel(pendingIntent);
        Toast.makeText(MainActivity.this, "ALARM OFF", Toast.LENGTH_SHORT).show();
    }
}
}
```

AlarmReceiverActivity.java

```
package com.example.admin.myapplication;
```

```
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.media.Ringtone;
import android.media.RingtoneManager;
import android.net.Uri;
```

```
import android.widget.Toast;
```

```
public class AlarmReceiver extends BroadcastReceiver  
{
```

```
    @Override
```

```
    public void onReceive(Context context, Intent intent)
```

```
    {
```

```
        Toast.makeText(context, "Alarm! Wake up! Wake up!", Toast.LENGTH_LONG).show();
```

```
        Uri alarmUri = RingtoneManager.getDefaultUri(RingtoneManager.TYPE_ALARM);
```

```
        if (alarmUri == null)
```

```
        {
```

```
            alarmUri = RingtoneManager.getDefaultUri(RingtoneManager.TYPE_NOTIFICATION);
```

```
        }
```

```
        Ringtone ringtone = RingtoneManager.getRingtone(context, alarmUri);
```

```
        ringtone.play();
```

```
    }
```

```
}
```

activity_main.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="match_parent"
```

```
    android:orientation="vertical">
```

```
    <TimePicker android:id="@+id/timePicker"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_gravity="center" />
```

```
    <ToggleButton
```

```
        android:id="@+id/toggleButton"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_gravity="center"
```

```
        android:layout_margin="20dp"
```

```
        android:checked="false"
```

```
        android:onClick="OnToggleClicked" />
```

```
</LinearLayout>
```

AndroidManifest.xml

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
```

```
    package="com.example.admin.myapplication">
```

```
    <application
```

```
        android:allowBackup="true"
```

```
        android:icon="@mipmap/ic_launcher"
```

```
        android:label="@string/app_name"
```

```
        android:roundIcon="@mipmap/ic_launcher_round"
```

```
        android:supportRtl="true"
```

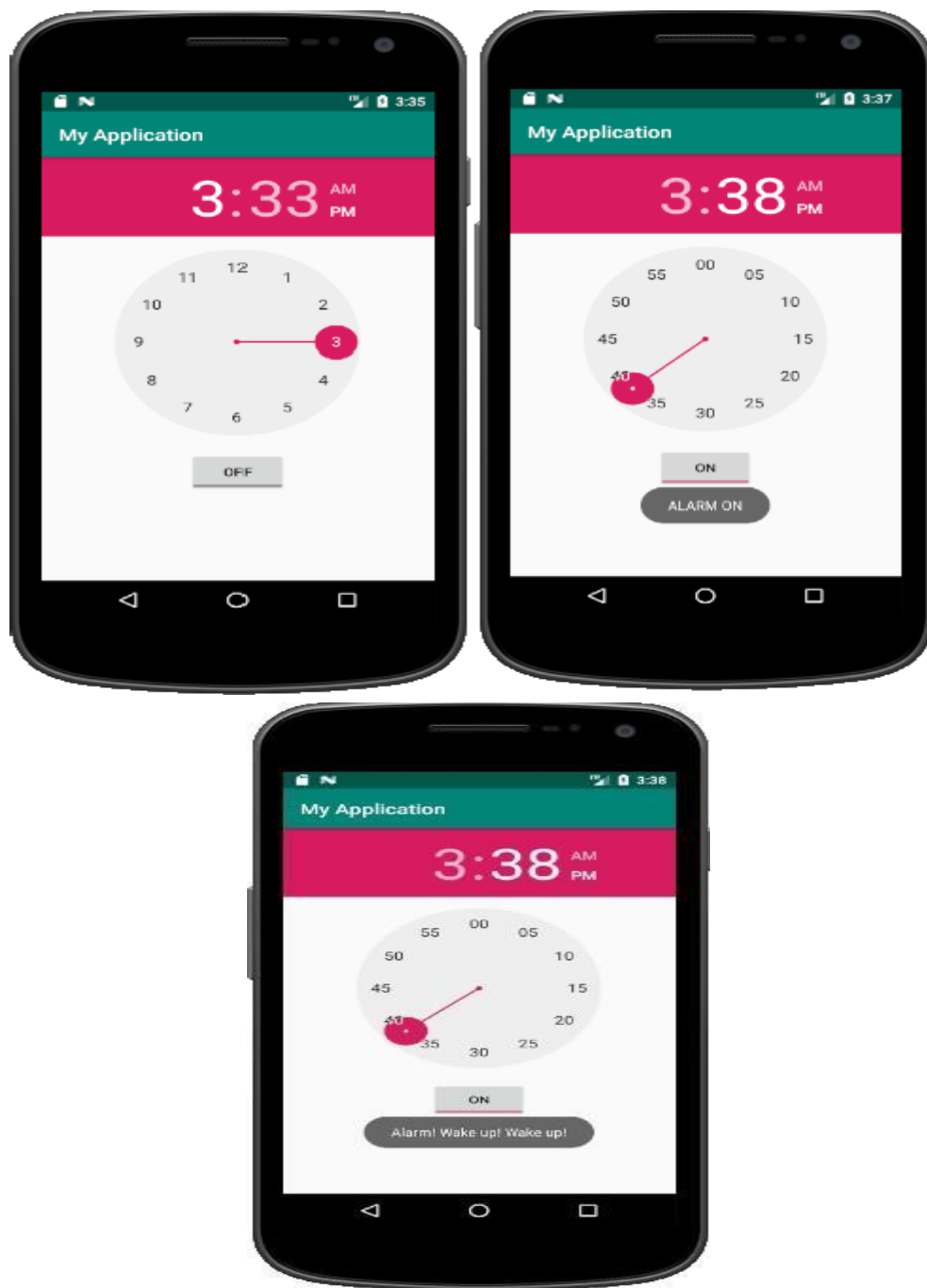
```
        android:theme="@style/AppTheme">
```

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

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

</manifest>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application for an alarm was executed successfully.

EX. NO. : 6	Develop a native calculator application
DATE :	

AIM:

To develop a calculator android application.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android ApplicationProject, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then click Next
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual DeviceManager and click Start.
3. Run the application.
4. Provide any two input numbers.
5. Choose any arithmetic operations of your choice and the output gets displayed on the display screen of the calculator application.
6. Close the Android project.

PROGRAM CODE:

MainActivity.java

```
package com.example.calculator_two;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity implements OnClickListener {
    private Button nine, eig, sev, six, fiv, four, thr, two, one, zero, dot,
        plus, mins, div, mul, eq, cl;
    private EditText et;
```

```
private String s = "0";  
private int result = 0;  
private char IO = ' ';
```

```
protected void onCreate(Bundle savedInstanceState) {  
    // TODO Auto-generated method stub super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
    nine = (Button) findViewById(R.id.b9);  
    eig = (Button) findViewById(R.id.b8);  
    sev = (Button) findViewById(R.id.b7);  
    six = (Button) findViewById(R.id.b6);  
    fiv = (Button) findViewById(R.id.b5);  
    four = (Button) findViewById(R.id.b4);  
    thr = (Button) findViewById(R.id.b3);  
    two = (Button) findViewById(R.id.b2);  
    one = (Button) findViewById(R.id.b1);  
    zero = (Button) findViewById(R.id.b0);  
    dot = (Button) findViewById(R.id.bd);  
    plus = (Button) findViewById(R.id.bpl);  
    mins = (Button) findViewById(R.id.bmin);  
    div = (Button) findViewById(R.id.bdiv);  
    mul = (Button) findViewById(R.id.bmul);  
    eq = (Button) findViewById(R.id.beq);  
    cl = (Button) findViewById(R.id.bcl);  
    et = (EditText) findViewById(R.id.tv);  
    zero.setOnClickListener(this);  
    nine.setOnClickListener(this);  
    eig.setOnClickListener(this);  
    sev.setOnClickListener(this);  
    six.setOnClickListener(this);  
    fiv.setOnClickListener(this);  
    four.setOnClickListener(this);  
    thr.setOnClickListener(this);  
    two.setOnClickListener(this);  
    one.setOnClickListener(this);  
    dot.setOnClickListener(this);  
    plus.setOnClickListener(this);  
    mins.setOnClickListener(this);  
    div.setOnClickListener(this);  
    mul.setOnClickListener(this);  
    eq.setOnClickListener(this);  
    cl.setOnClickListener(this);  
    et.setOnClickListener(this);  
}
```

```
public void onClick(View v) {
```

```
switch (v.getId()) {case R.id.b0:  
case R.id.b1:  
case R.id.b2:  
case R.id.b3:  
case R.id.b4:  
case R.id.b5:  
case R.id.b6:  
case R.id.b7:  
case R.id.b8:  
case R.id.b9:
```

```
String inDigit = ((Button) v).getText().toString();if (s.equals("0")) {  
s = inDigit;  
} else {  
s += inDigit;  
}  
et.setText(s); if (lO == '=') {  
result = 0;  
lO = ' ';  
}  
break;  
case R.id.bpl:  
compute();  
lO = '+';  
break;  
case R.id.bmin:  
compute();lO = '-';  
break;  
case R.id.bdiv:  
compute();  
lO = '/';  
break;  
case R.id.bmul:  
compute();lO = '*';  
break;  
case R.id.beq:  
compute();lO = '=';  
break;  
case R.id.bcl:  
result = 0;  
s = "0";
```

```

        IO = ' ';
        et.setText("0");
        break;
    }
}

private void compute() {
    int inNum = Integer.parseInt(s);
    s = "0";
    if (IO == ' ') {
        result = inNum;
    } else if (IO == '+') {
        result += inNum;
    } else if (IO == '-') {
        result -= inNum;
    } else if (IO == '*') {
        result *= inNum;
    } else if (IO == '/') {
        result /= inNum;
    } else if (IO == '=') {
        // Keep the result for the next operation
    }
    et.setText(String.valueOf(result));
}
}

```

activity_main.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="match_parent"
    android:orientation="vertical">

    <EditText
        android:id="@+id/tv"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="enter no. here"
        android:textSize="30dp" />

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="100dp"
        android:orientation="horizontal"
        android:weightSum="4">

```

```
<Button
android:id="@+id/b9"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="9"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b8"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="8"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b7"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="7"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/bpl"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="+"
android:textColor="#ff0000" />
```

```
</LinearLayout>
```

```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:weightSum="4">
```

```
<Button
android:id="@+id/b6"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="6"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b5"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="5"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b4"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="4"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/bmin"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1"
android:text="-"
android:textColor="#ff0000" /></LinearLayout>
```

```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:weightSum="4">
```

```
<Button
android:id="@+id/b3"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="3"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b2"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="2"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b1"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="1"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/bmul"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="*"
android:textColor="#ff0000" />
</LinearLayout>
```

```
<LinearLayout
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:weightSum="5">
```

```
<Button
android:id="@+id/bd"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="."
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/b0"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1" android:text="0"
android:textColor="#ff0000" />
```

```
<Button
android:id="@+id/bcl"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_weight="1"
```

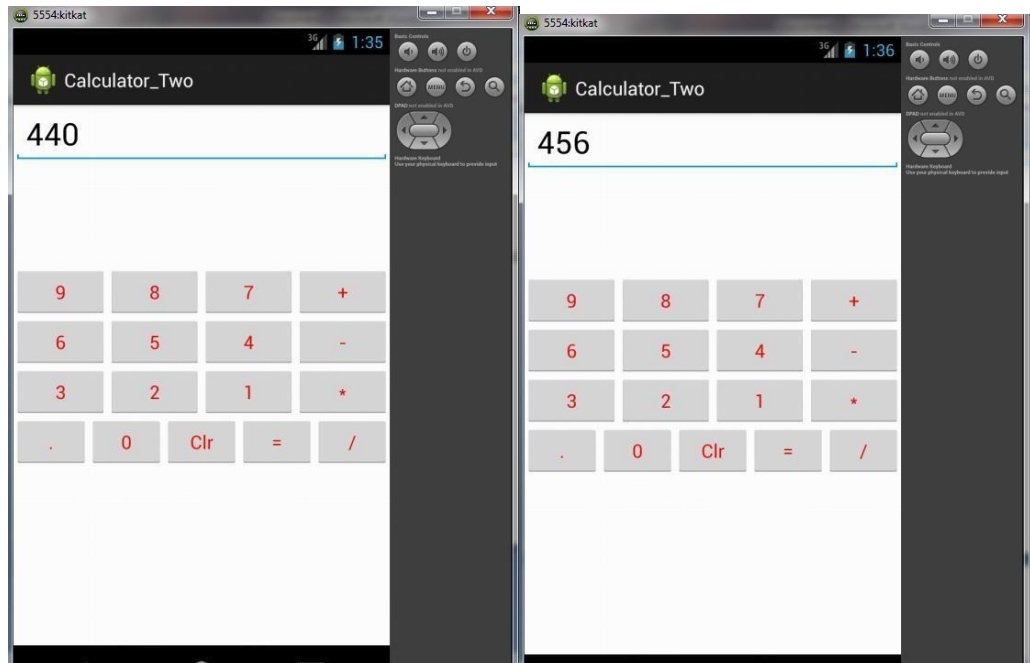
```
android:text="Clr"  
android:textColor="#ff0000" />
```

```
<Button  
android:id="@+id/beq"  
android:layout_width="match_parent"  
android:layout_height="wrap_content"  
android:layout_weight="1" android:text="="  
android:textColor="#ff0000" />
```

```
<Button  
android:id="@+id/bdiv"  
android:layout_width="match_parent"  
android:layout_height="wrap_content"  
android:layout_weight="1" android:text="/"  
android:textColor="#ff0000" />  
</LinearLayout>
```

```
</LinearLayout>
```


OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android based calculator application was executed successfully.

EX. NO. : 7	Develop a mobile application to send an email.
DATE :	

AIM:

To develop an android application that send an email.

ALGORITHM:

1. Create a New Android Project:
 - Click New in the toolbar.
 - In the window that appears, open the Android folder, select Android Application Project, and click next.
 - Provide the application name and the project name and then finally give the desired package name.
 - Choose a launcher icon for your application and then select Blank Activity and then clickNext
 - Provide the desired Activity name for your project and then click Finish.
2. Create a New AVD (Android Virtual Device):
 - click Android Virtual Device Manager from the toolbar.
 - In the Android Virtual Device Manager panel, click New.
 - Fill in the details for the AVD. Give it a name, a platform target, an SD card size, and a skin (HVGA is default).
 - Click Create AVD and Select the new AVD from the Android Virtual DeviceManager and click Start.
3. Design the graphical layout.
4. Run the application.
5. When the application starts alarm sound will be invoked.
6. Stop alarm button is clicked to stop the alarm.
7. Close the Android project.

PROGRAM CODE:

MainActivity.java

```
package com.example.admin.myapplication;

import android.content.Intent;import
android.net.Uri;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.util.Log;
import android.view.View; import
android.widget.Button;import
android.widget.Toast;
public class MainActivity extends AppCompatActivity {
@Override
```

```

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Button startBtn = (Button) findViewById(R.id.sendbtn);
    startBtn.setOnClickListener(new View.OnClickListener() {
        public void onClick(View view) {
            sendEmail();
        }
    });
}

protected void sendEmail() {
    Log.i("Send email", "");
    String[] TO = {
        "muthuramalingam566@gmail.com"
    };
    String[] CC = {
        "ramdurai25@gmail.com"
    };
    Intent emailIntent = new Intent(Intent.ACTION_SEND);
    emailIntent.setData(Uri.parse("mailto:")); emailIntent.setType("text/plain");
    emailIntent.putExtra(Intent.EXTRA_EMAIL, TO);
    emailIntent.putExtra(Intent.EXTRA_CC, CC);
    emailIntent.putExtra(Intent.EXTRA_SUBJECT, "Your subject");
    emailIntent.putExtra(Intent.EXTRA_TEXT, "Email message goes here");try {
    startActivity(Intent.createChooser(emailIntent, "Send mail..."));
        finish();
    Log.i("Finished sending email...", "");
    } catch (android.content.ActivityNotFoundException ex) {
        Toast.makeText(MainActivity.this, "There is no email client installed.",
        Toast.LENGTH_SHORT).show();
    }
}
}

```

activity_main.xml

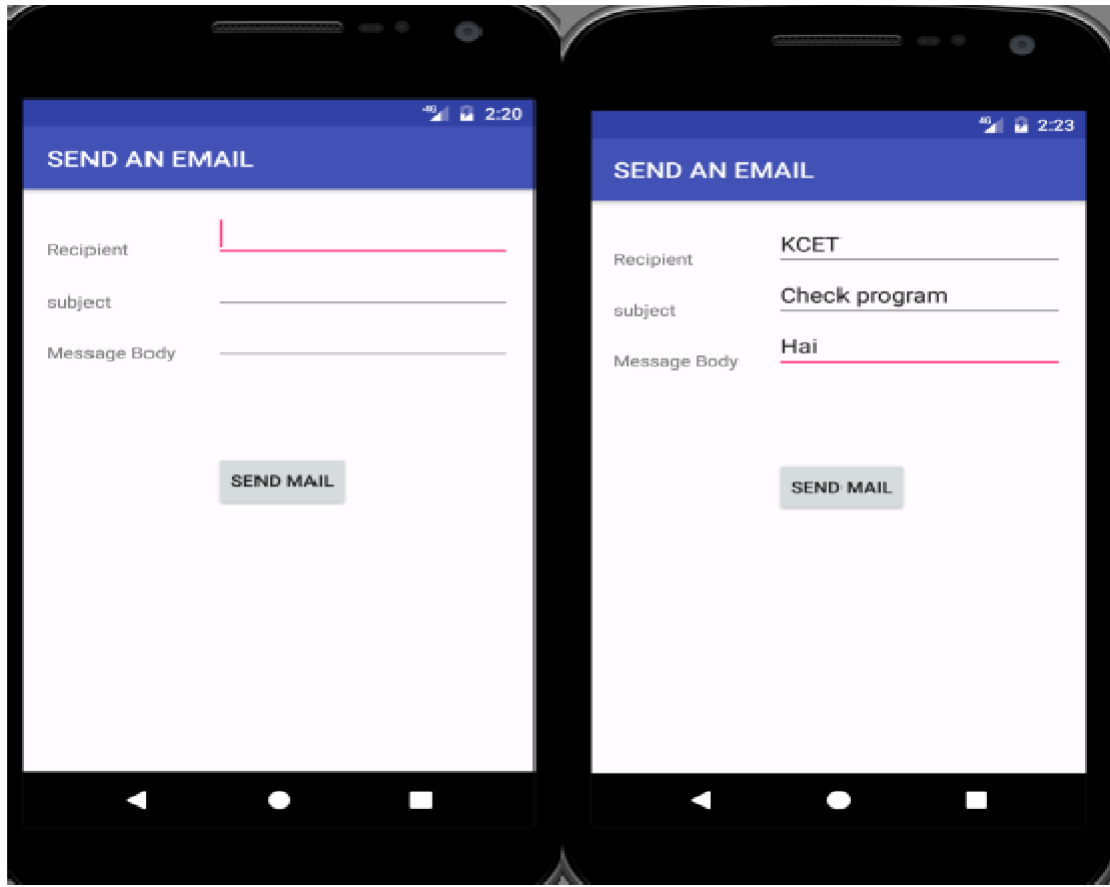
```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayoutxmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools" android:layout_width="match_parent"
android:layout_height="match_parent"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context="com.example.admin.myapplication.MainActivity">
<EditTextandroid:layout_width="wrap_content"
android:layout_height="wrap_content"
android:inputType="textEmailAddress"
android:ems="10"

```

```
android:id="@+id/editText"
android:layout_alignParentTop="true"
android:layout_alignParentRight="true"
android:layout_alignParentEnd="true" />
<EditText android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:inputType="textEmailAddress"
android:ems="10" android:id="@+id/editText2"
android:layout_below="@+id/editText"
android:layout_alignRight="@+id/editText"
android:layout_alignEnd="@+id/editText" />
<EditText android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:inputType="textEmailAddress"
android:ems="10" android:id="@+id/editText3"
android:layout_below="@+id/editText2"
android:layout_alignRight="@+id/editText2"
android:layout_alignEnd="@+id/editText2" />
<Button android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="SEND MAIL"
android:id="@+id/sendbtn"
android:layout_centerVertical="true"
android:layout_alignLeft="@+id/editText3"
android:layout_alignStart="@+id/editText3" />
<TextView android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Recipient" android:id="@+id/textView"
android:layout_alignBottom="@+id/editText"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true" />
<TextView android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="subject" android:id="@+id/textView2"
android:layout_alignBottom="@+id/editText2"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true" />
<TextView android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Message Body"
android:id="@+id/textView3"
android:layout_alignBottom="@+id/editText3"
android:layout_alignParentLeft="true"
android:layout_alignParentStart="true" />
</RelativeLayout>
```

OUTPUT:



Class Performance	
Record	
Viva	
Total	

RESULT:

Thus, the program for android application that uses to send an email was executed successful.