1. GUI component, color, font

activity\_main.xml

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_alignParentBottom="true"

android:layout\_marginBottom="347dp"

android:gravity="center"

android:text="hello world"

android:textSize="30dp"

android:id="@+id/text"/>

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="159dp"

android:layout\_marginBottom="210dp"

android:text="color"

/>

<Button

android:id="@+id/button2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginEnd="159dp"

android:layout\_marginBottom="109dp"

android:text="size" />

</RelativeLayout>

MainActivity.java

package com.example.t1;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

TextView t1 = (TextView) findViewById(R.id.text);

Button b1 = (Button) findViewById(R.id.button);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

t1.setTextColor(Color.RED);

}

});

Button b2 = (Button) findViewById(R.id.button2);

float s=40;

b2.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

t1.setTextSize(s);

}

});

}

}

1. Shapes

MainActivity.xml:

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

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

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<ImageView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:id="@+id/imageView" />

</RelativeLayout>

MainActivity.java:

package com.example.exno4;

import android.app.Activity;

import android.graphics.Bitmap;

import android.graphics.Canvas;

import android.graphics.Color;

import android.graphics.Paint;

import android.graphics.drawable.BitmapDrawable;

import android.os.Bundle;

import android.widget.ImageView;

public class MainActivity extends Activity

{

@Override

public void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

//Creating a Bitmap

Bitmap bg = Bitmap.createBitmap(720, 1280, Bitmap.Config.ARGB\_8888);

//Setting the Bitmap as background for the ImageView

ImageView i = (ImageView) findViewById(R.id.imageView);

i.setBackgroundDrawable(new BitmapDrawable(bg));

//Creating the Canvas Object

Canvas canvas = new Canvas(bg);

//Creating the Paint Object and set its color & TextSize

Paint paint = new Paint();

paint.setColor(Color.BLUE);

paint.setTextSize(50);

//To draw a Rectangle

canvas.drawText("Rectangle", 420, 150, paint);

canvas.drawRect(400, 200, 650, 700, paint);

//To draw a Circle

canvas.drawText("Circle", 120, 150, paint);

canvas.drawCircle(200, 350, 150, paint);

//To draw a Square

canvas.drawText("Square", 120, 800, paint);

canvas.drawRect(50, 850, 350, 1150, paint);

//To draw a Line

canvas.drawText("Line", 480, 800, paint);

canvas.drawLine(520, 850, 520, 1150, paint);

}

}

1. Layout and event listeners

Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:text="Enter the Form details"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.261" />  
  
 <GridLayout  
 android:layout\_width="322dp"  
 android:layout\_height="123dp"  
 android:columnCount="2"  
 android:rowCount="3"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent">  
  
  
 <TextView  
 android:id="@+id/t1"  
 android:layout\_width="175dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_row="0"  
 android:layout\_column="0"  
 android:text="Enter your name: "  
 android:textSize="20sp" />  
  
 <EditText  
 android:id="@+id/e1"  
 android:layout\_width="146dp"  
 android:layout\_row="0"  
 android:layout\_column="1" />  
  
 <TextView  
 android:id="@+id/t2"  
 android:layout\_width="170dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_row="1"  
 android:layout\_column="0"  
 android:text="Enter your Roll no:"  
 android:textSize="20dp" />  
  
 <EditText  
 android:id="@+id/e2"  
 android:layout\_width="146dp"  
 android:layout\_row="1"  
 android:layout\_column="1" />  
  
 <TextView  
 android:id="@+id/t3"  
 android:layout\_width="175dp"  
 android:layout\_row="2"  
 android:layout\_column="0"  
 android:text="choose dept:"  
 android:textSize="20sp" />  
  
 <Spinner  
 android:id="@+id/s"  
 android:layout\_width="146dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_row="2"  
 android:layout\_column="1" />  
 </GridLayout>  
  
 <Button  
 android:id="@+id/submit"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:text="SUBMIT"  
 android:textSize="24sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.569"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.817" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Main activity.java

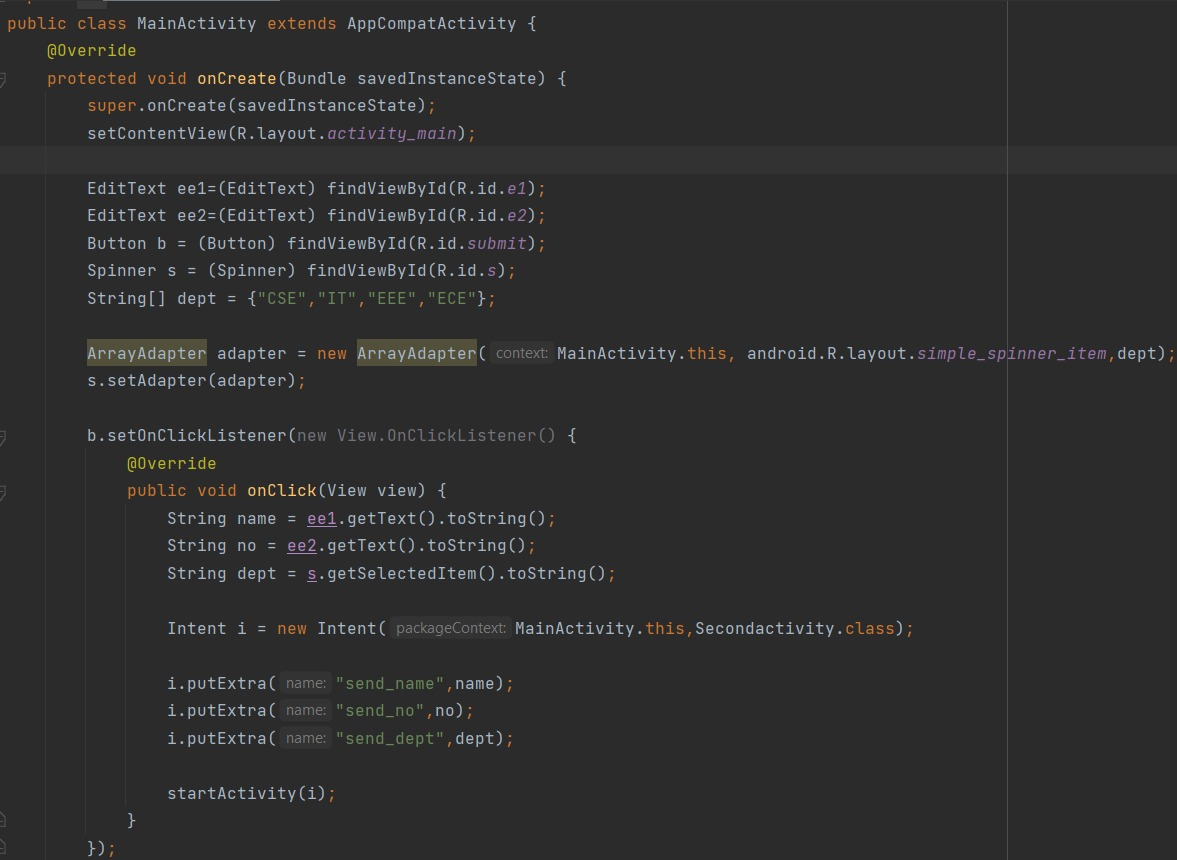
package com.example.layoutswitch;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.ArrayAdapter;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Spinner;  
public class MainActivity extends AppCompatActivity {  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 EditText ee1=(EditText) findViewById(R.id.e1);  
 EditText ee2=(EditText) findViewById(R.id.e2);  
 Button b = (Button) findViewById(R.id.submit);  
 Spinner s = (Spinner) findViewById(R.id.s);  
 String[] dept = {"CSE","IT","EEE","ECE"};  
  
 ArrayAdapter adapter = new ArrayAdapter(MainActivity.this, android.R.layout.simple\_spinner\_item,dept);  
 s.setAdapter(adapter);  
  
 b.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String name = ee1.getText().toString();  
 String no = ee2.getText().toString();  
 String dept = s.getSelectedItem().toString();  
  
 Intent i = new Intent(MainActivity.this,Secondactivity.class);  
  
 i.putExtra("send\_name",name);  
 i.putExtra("send\_no",no);  
 i.putExtra("send\_dept",dept);  
  
 startActivity(i);  
 }  
 });  
  
 }  
}

activity\_secondactivity.xml

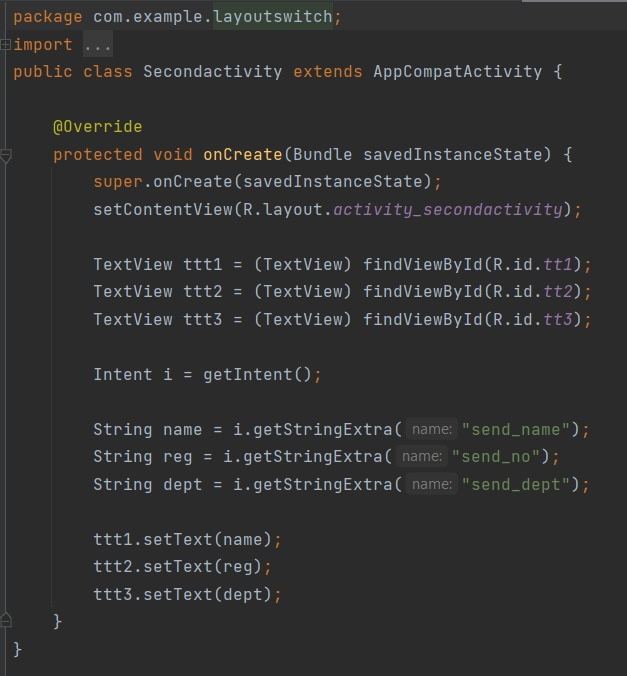
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".Secondactivity">  
  
 <TextView  
 android:id="@+id/tt1"  
 android:layout\_width="204dp"  
 android:layout\_height="71dp"  
 android:textSize="25dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.404" />  
  
 <TextView  
 android:id="@+id/tt2"  
 android:layout\_width="205dp"  
 android:layout\_height="57dp"  
 android:textSize="25dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.517" />  
 <TextView  
 android:id="@+id/tt3"  
 android:layout\_width="203dp"  
 android:layout\_height="58dp"  
 android:textSize="25dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.615" />  
</androidx.constraintlayout.widget.ConstraintLayout>

Secondactivity.java

package com.example.layoutswitch;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.widget.TextView;  
public class Secondactivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_secondactivity);  
  
 TextView ttt1 = (TextView) findViewById(R.id.tt1);  
 TextView ttt2 = (TextView) findViewById(R.id.tt2);  
 TextView ttt3 = (TextView) findViewById(R.id.tt3);  
  
 Intent i = getIntent();  
  
 String name = i.getStringExtra("send\_name");  
 String reg = i.getStringExtra("send\_no");  
 String dept = i.getStringExtra("send\_dept");  
  
 ttt1.setText(name);  
 ttt2.setText(reg);  
 ttt3.setText(dept);  
 }  
}



Secondactivity.java



1. Database

Activitymain.xml

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"  
 tools:layout\_editor\_absoluteX="0dp"  
 tools:layout\_editor\_absoluteY="-16dp">  
  
 <EditText  
 android:id="@+id/name"  
 android:layout\_width="151dp"  
 android:layout\_height="49dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.892"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.326" />  
  
 <EditText  
 android:id="@+id/mark"  
 android:layout\_width="159dp"  
 android:layout\_height="57dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.935"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.435" />  
  
 <EditText  
 android:id="@+id/roll"  
 android:layout\_width="149dp"  
 android:layout\_height="50dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.885"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.236" />  
  
 <Button  
 android:id="@+id/viewall"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="View All"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.498"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.814" />  
  
 <Button  
 android:id="@+id/View"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="View"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.684"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.695" />  
  
 <Button  
 android:id="@+id/Insert"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Insert"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.266"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.581" />  
  
 <Button  
 android:id="@+id/update"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Update"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.27"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.695" />  
  
 <TextView  
 android:id="@+id/namee"  
 android:layout\_width="182dp"  
 android:layout\_height="59dp"  
 android:gravity="center"  
 android:text="Enter the Name: "  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.215"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.332" />  
  
 <TextView  
 android:id="@+id/t"  
 android:layout\_width="271dp"  
 android:layout\_height="60dp"  
 android:text="Enter the student data"  
 android:textSize="25dp"  
 android:gravity="center"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.128" />  
  
 <TextView  
 android:id="@+id/rollno"  
 android:layout\_width="182dp"  
 android:layout\_height="42dp"  
 android:gravity="center"  
 android:text="Enter the rollno: "  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.215"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.245" />  
  
 <TextView  
 android:id="@+id/Marks"  
 android:layout\_width="183dp"  
 android:layout\_height="45dp"  
 android:gravity="center"  
 android:text="Enter the marks: "  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.215"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.442" />  
  
 <Button  
 android:id="@+id/Delete"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Delete"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.679"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.581" />  
</androidx.constraintlayout.widget.ConstraintLayout>

Mainactivity.java

package com.example.database;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.app.AlertDialog;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.os.Bundle;  
import android.view.View.OnClickListener;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity implements OnClickListener {  
  
 EditText e1,e2,e3;  
 Button insert,delete,update,View,viewall;  
 SQLiteDatabase db;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 e1 = (EditText) findViewById(R.id.*roll*);  
 e2 = (EditText) findViewById(R.id.*name*);  
 e3 = (EditText) findViewById(R.id.*mark*);  
  
 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);  
  
 db=openOrCreateDatabase("StudentDB", Context.*MODE\_PRIVATE*,null);  
 db.execSQL("CREATE TABLE IF NOT EXISTS student(rollno VARCHAR,Name VARCHAR,Marks VARCHAR);");  
 }  
  
 public void onClick(android.view.View view){  
  
 if(view == insert)  
 {  
 if(e1.getText().toString().trim().length()==0||e2.getText().toString().trim().length()==0||e3.getText().toString().trim().length()==0)  
 {  
 showMessage("Error","Enter all the values!!!");  
 return;  
 }  
  
 db.execSQL("Insert into student values ('"+e1.getText()+"','"+e2.getText()+"','"+e3.getText()+"')");  
 showMessage("SUCCESS!!","Record added successfully");  
 cleartext();  
 }  
  
 if(view == delete)  
 {  
 if(e1.getText().toString().trim().length()==0)  
 {  
 showMessage("Error","Record not found");  
 return;  
 }  
  
 Cursor c = db.rawQuery("Select \* from student where rollno ='"+e1.getText()+"'",null);  
  
 if(c.moveToFirst())  
 {  
 db.execSQL("delete from student where rollno = '"+e1.getText()+"'");  
 showMessage("SUCCESS","Record deleted!!");  
 }  
  
 cleartext();  
 }  
  
 if(view == update)  
 {  
 if(e1.getText().toString().trim().length()==0)  
 {  
 showMessage("Error","Please enter roll no:");  
 return;  
 }  
  
 Cursor c = db.rawQuery("Select \* from student where rollno ='"+e1.getText()+"'",null);  
 if(c.moveToFirst())  
 {  
 db.execSQL("update student set Name = '"+e2.getText()+"',Marks = '"+e3.getText()+"' where rollno = '"+e1.getText()+"'");  
 showMessage("SUCCESS","Record updated!!");  
 }  
  
 cleartext();  
 }  
  
 if(view == View)  
 {  
 if(e1.getText().toString().trim().length()==0)  
 {  
 showMessage("Error", "Please enter Rollno");  
 return;  
 }  
 Cursor c=db.rawQuery("SELECT \* FROM student WHERE rollno='"+e1.getText()+"'", null);  
  
 if(c.moveToFirst())  
 {  
 e2.setText(c.getString(1));  
 e3.setText(c.getString(2));  
 }  
 else  
 {  
 showMessage("Error", "Invalid Rollno");  
 cleartext();  
 }  
 }  
  
 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)  
 {  
 AlertDialog.Builder builder = new AlertDialog.Builder(this);  
 builder.setCancelable(true);  
 builder.setTitle(title);  
 builder.setMessage(message);  
 builder.show();  
 }  
  
 public void cleartext()  
 {  
 e1.setText("");  
 e2.setText("");  
 e3.setText("");  
 e1.requestFocus();  
 }  
  
}

1. Calculator



1. RSS

Activity main.xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="fill\_parent"  
 android:orientation="vertical" >  
  
 <ListView  
 android:id="@+id/listView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
</LinearLayout>

Main activity.java

package com.example.rssfeed;  
import android.app.ListActivity;  
import android.content.Intent;  
import android.net.Uri;  
import android.os.AsyncTask;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.ArrayAdapter;  
  
import android.widget.ListView;  
import org.xmlpull.v1.XmlPullParser;  
import org.xmlpull.v1.XmlPullParserException;  
import org.xmlpull.v1.XmlPullParserFactory;  
import java.io.IOException;  
import java.io.InputStream;  
import java.net.MalformedURLException;  
import java.net.URL;  
import java.util.ArrayList;  
import java.util.List;  
public class MainActivity extends ListActivity  
{  
 List headlines;  
 List links;  
 @Override  
 protected void onCreate(Bundle savedInstanceState)  
 {  
 super.onCreate(savedInstanceState);  
 new MyAsyncTask().execute();  
 }  
 class MyAsyncTask extends AsyncTask<Object,Void,ArrayAdapter>  
 {  
 @Override  
 protected ArrayAdapter doInBackground(Object[] params)  
 {  
 headlines = new ArrayList();  
 links = new ArrayList();  
 try  
 {  
 URL url = new URL("https://timesofindia.indiatimes.com/rssfeedmostrecent.cms");  
 XmlPullParserFactory factory = XmlPullParserFactory.*newInstance*();  
 factory.setNamespaceAware(false);  
 XmlPullParser xpp = factory.newPullParser();  
 // We will get the XML from an input stream  
 xpp.setInput(getInputStream(url), "UTF\_8");  
 boolean insideItem = false;  
 // Returns the type of current event: START\_TAG, END\_TAG, etc..  
 int eventType = xpp.getEventType();  
 while (eventType != XmlPullParser.*END\_DOCUMENT*)  
 {  
 if (eventType == XmlPullParser.*START\_TAG*)  
 {  
 if (xpp.getName().equalsIgnoreCase("item"))  
 {  
 insideItem = true;  
 }  
 else if (xpp.getName().equalsIgnoreCase("title"))  
 {  
 if (insideItem)  
 headlines.add(xpp.nextText()); //extract the headline  
 }  
 else if (xpp.getName().equalsIgnoreCase("link"))  
 {  
 if (insideItem)  
 links.add(xpp.nextText()); //extract the link of article  
 }  
 }  
 else if(eventType==XmlPullParser.*END\_TAG* && xpp.getName().equalsIgnoreCase("item"))  
 {  
 insideItem=false;  
 }  
 eventType = xpp.next(); //move to next element  
 }  
  
 }  
 catch (MalformedURLException e)  
 {  
 e.printStackTrace();  
 }  
 catch (XmlPullParserException e)  
 {  
 e.printStackTrace();  
 }  
 catch (IOException e)  
 {  
  
 e.printStackTrace();  
 }  
 return null;  
 }  
 protected void onPostExecute(ArrayAdapter adapter)  
 {  
 adapter = new ArrayAdapter(MainActivity.this, android.R.layout.*simple\_list\_item\_1*, headlines);  
 setListAdapter(adapter);  
 }  
 }  
  
  
 @Override  
 protected void onListItemClick(ListView l, View v, int position, long id)  
 {  
 Uri uri = Uri.*parse*((links.get(position)).toString()); Intent intent = new Intent(Intent.*ACTION\_VIEW*, uri);  
 startActivity(intent);  
 }  
  
 public InputStream getInputStream(URL url)  
 {  
 try  
 {  
 return url.openConnection().getInputStream();  
 }  
 catch (IOException e)  
 {  
 return null;  
 }  
 }  
}

1. GPS

Activity\_main.xml

<?xml version = "1.0" encoding = "utf-8"?>  
<LinearLayout xmlns:android = "http://schemas.android.com/apk/res/android"  
 android:layout\_width = "fill\_parent"  
 android:layout\_height = "fill\_parent"  
 android:orientation = "vertical" >  
  
 <Button  
 android:id = "@+id/button"  
 android:layout\_width = "fill\_parent"  
 android:layout\_height = "wrap\_content"  
 android:text = "getlocation"/>  
  
</LinearLayout>

Activity\_gpstracker.xml

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".GPSTracker">  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Mainactivity.java

package com.example.gps;  
import android.Manifest;  
import android.app.Activity;  
import android.os.Bundle;  
import android.content.pm.PackageManager;  
import android.view.View;  
import android.widget.Button;  
import android.widget.Toast;  
import androidx.core.app.ActivityCompat;  
public class MainActivity extends Activity {  
 Button btnShowLocation;  
 private static final int *REQUEST\_CODE\_PERMISSION* = 2;  
 String mPermission = Manifest.permission.*ACCESS\_FINE\_LOCATION*;  
  
 GPSTracker gps;  
 @Override  
 public void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 try {  
 if (ActivityCompat.*checkSelfPermission*(this, mPermission)  
 != PackageManager.*PERMISSION\_GRANTED*) {  
 ActivityCompat.*requestPermissions*(this, new String[]{mPermission},  
 *REQUEST\_CODE\_PERMISSION*);  
 }  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 btnShowLocation = (Button) findViewById(R.id.*button*);  
 btnShowLocation.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View arg0) {  
 gps = new GPSTracker(MainActivity.this);  
 if(gps.canGetLocation()){  
 double latitude = gps.getLatitude();  
 double longitude = gps.getLongitude();  
 Toast.*makeText*(getApplicationContext(), "Your Location is - \nLat: "+ latitude + "\nLong: " + longitude, Toast.*LENGTH\_LONG*).show();  
 }else{  
 gps.showSettingsAlert();  
 }  
 }  
 });  
 }  
}

GPSTracker.java

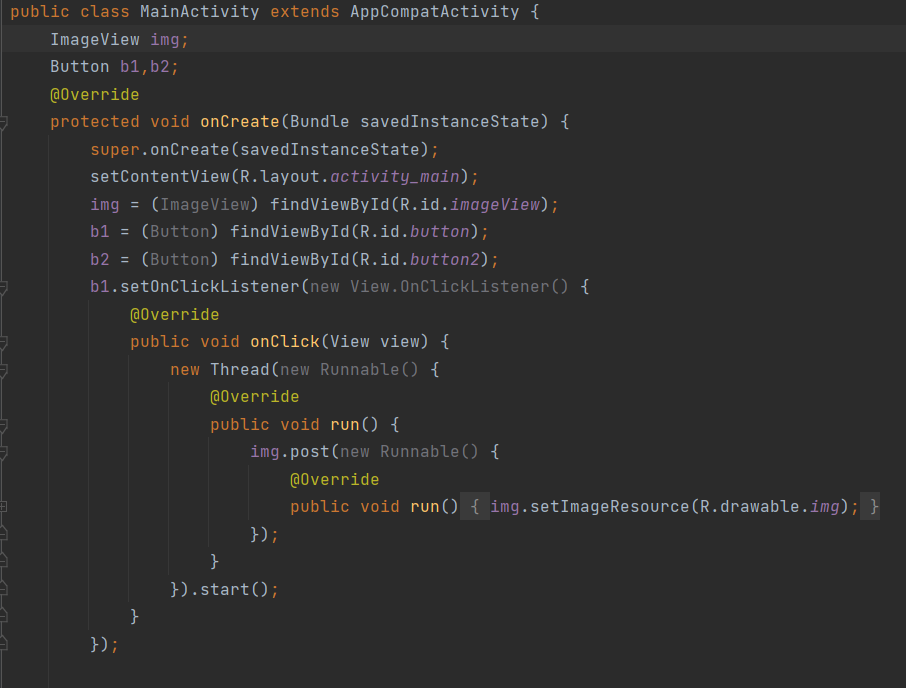
package com.example.gps;  
  
import android.annotation.SuppressLint;  
import android.app.AlertDialog;  
import android.app.Service;  
import android.content.Context;  
import android.content.DialogInterface;  
import android.content.Intent;  
import android.location.Location;  
import android.location.LocationListener;  
import android.location.LocationManager;  
import android.os.Bundle;  
import android.os.IBinder;  
import android.provider.Settings;  
import android.util.Log;  
  
public class GPSTracker extends Service implements LocationListener {  
 private final Context mContext;  
 boolean isGPSEnabled = false;  
 boolean isNetworkEnabled = false;  
 boolean canGetLocation = false;  
 Location location;  
 double latitude;  
 double longitude;  
 private static final long *MIN\_DISTANCE\_CHANGE\_FOR\_UPDATES* = 10;  
 private static final long *MIN\_TIME\_BW\_UPDATES* = 1000 \* 60 \* 1;  
 protected LocationManager locationManager;  
 public GPSTracker(Context context) {  
 this.mContext = context;  
 getLocation();  
 }  
 @SuppressLint("MissingPermission")  
  
 public Location getLocation() {  
 try {  
 locationManager = (LocationManager) mContext.getSystemService(*LOCATION\_SERVICE*);  
 isGPSEnabled = locationManager.isProviderEnabled(LocationManager.*GPS\_PROVIDER*);  
 isNetworkEnabled = locationManager.isProviderEnabled(LocationManager.*NETWORK\_PROVIDER*);  
 if (!isGPSEnabled && !isNetworkEnabled) {  
 } else {  
 this.canGetLocation = true;  
 if (isNetworkEnabled) {  
 locationManager.requestLocationUpdates(LocationManager.*NETWORK\_PROVIDER*, *MIN\_TIME\_BW\_UPDATES*, *MIN\_DISTANCE\_CHANGE\_FOR\_UPDATES*, this);  
 Log.*d*("Network", "Network");  
 if (locationManager != null) {  
 location = locationManager.getLastKnownLocation(LocationManager.*NETWORK\_PROVIDER*);  
 if (location != null) {  
 latitude = location.getLatitude();  
 longitude = location.getLongitude();  
 }  
 }  
 }  
 if (isGPSEnabled) {  
 if (location == null) {  
 locationManager.requestLocationUpdates(LocationManager.*GPS\_PROVIDER*, *MIN\_TIME\_BW\_UPDATES*, *MIN\_DISTANCE\_CHANGE\_FOR\_UPDATES*, this);  
 Log.*d*("GPS Enabled", "GPS Enabled");  
 if (locationManager != null) {  
 location = locationManager.getLastKnownLocation(LocationManager.*GPS\_PROVIDER*);  
 if (location != null) {  
 latitude = location.getLatitude();  
 longitude = location.getLongitude();  
 }  
 }  
 }  
 }  
 }  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 return location;  
 }  
 public void stopUsingGPS(){  
 if(locationManager != null){  
 locationManager.removeUpdates(GPSTracker.this);  
 }  
 }  
 public double getLatitude(){  
 if(location != null){  
 latitude = location.getLatitude();  
 }  
 // return latitude  
 return latitude;  
 }  
 public double getLongitude(){  
 if(location != null){  
 longitude = location.getLongitude();  
 }  
 // return longitude  
 return longitude;  
 }  
 public boolean canGetLocation() {  
 return this.canGetLocation;  
 }  
  
 public void showSettingsAlert(){  
 AlertDialog.Builder alertDialog = new AlertDialog.Builder(mContext);  
 alertDialog.setTitle("GPS is settings");  
 alertDialog.setMessage("GPS is not enabled. Do you want to go to settings menu?");  
 alertDialog.setPositiveButton("Settings", new DialogInterface.OnClickListener() {  
 public void onClick(DialogInterface dialog,int which) {  
 Intent intent = new Intent(Settings.*ACTION\_LOCATION\_SOURCE\_SETTINGS*);  
 mContext.startActivity(intent);  
 }  
 });  
  
 alertDialog.setNegativeButton("Cancel", new DialogInterface.OnClickListener() {  
 public void onClick(DialogInterface dialog, int which) {  
 dialog.cancel();  
 }  
 });  
  
 alertDialog.show();  
 }  
 @Override  
 public void onLocationChanged(Location location) { }  
 @Override  
 public void onProviderDisabled(String provider) { }  
 @Override  
 public void onProviderEnabled(String provider) { }  
 @Override  
 public void onStatusChanged(String provider, int status, Bundle extras) { }  
 @Override  
 public IBinder onBind(Intent arg0) {  
 return null;  
 }  
}

1. Multithread

Activitymain.xml

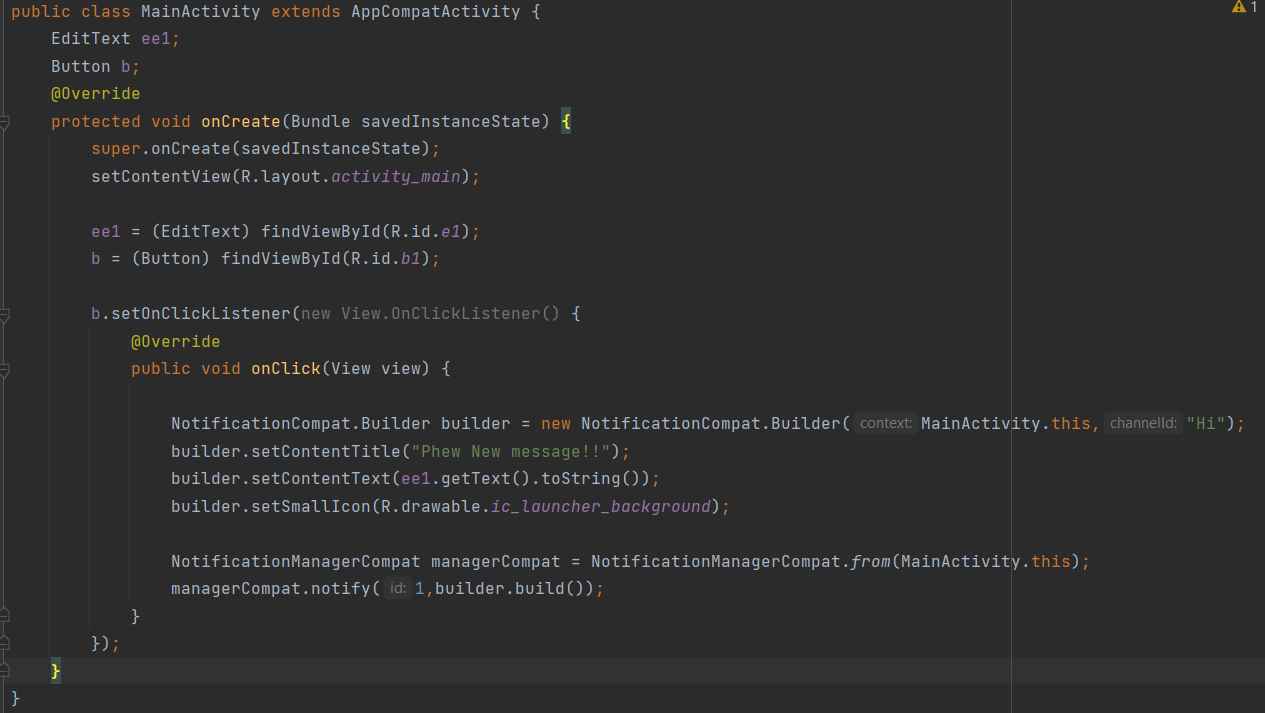
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="348dp"  
 android:layout\_height="462dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.315"  
 />  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="124dp"  
 android:layout\_height="58dp"  
 android:text="Button1"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.243"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.882" />  
  
 <Button  
 android:id="@+id/button2"  
 android:layout\_width="131dp"  
 android:layout\_height="58dp"  
 android:text="Button2"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.803"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.882" />  
</androidx.constraintlayout.widget.ConstraintLayout>

package com.example.multithread;  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.ImageView;  
  
public class MainActivity extends AppCompatActivity {  
  
 ImageView img;  
 Button b1,b2;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 img = (ImageView) findViewById(R.id.*imageView*);  
 b1 = (Button) findViewById(R.id.*button*);  
 b2 = (Button) findViewById(R.id.*button2*);  
  
 b1.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 new Thread(new Runnable() {  
 @Override  
 public void run() {  
 img.post(new Runnable() {  
 @Override  
 public void run() {  
 img.setImageResource(R.drawable.*img*);  
 }  
 });  
 }  
 }).start();  
 }  
 });  
  
 b2.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 new Thread(new Runnable() {  
 @Override  
 public void run() {  
 img.post(new Runnable() {  
 @Override  
 public void run() {  
 img.setImageResource(R.drawable.*img\_1*);  
 }  
 });  
 }  
 }).start();  
 }  
 });  
 }  
}





1. Alert on message



1. SD card

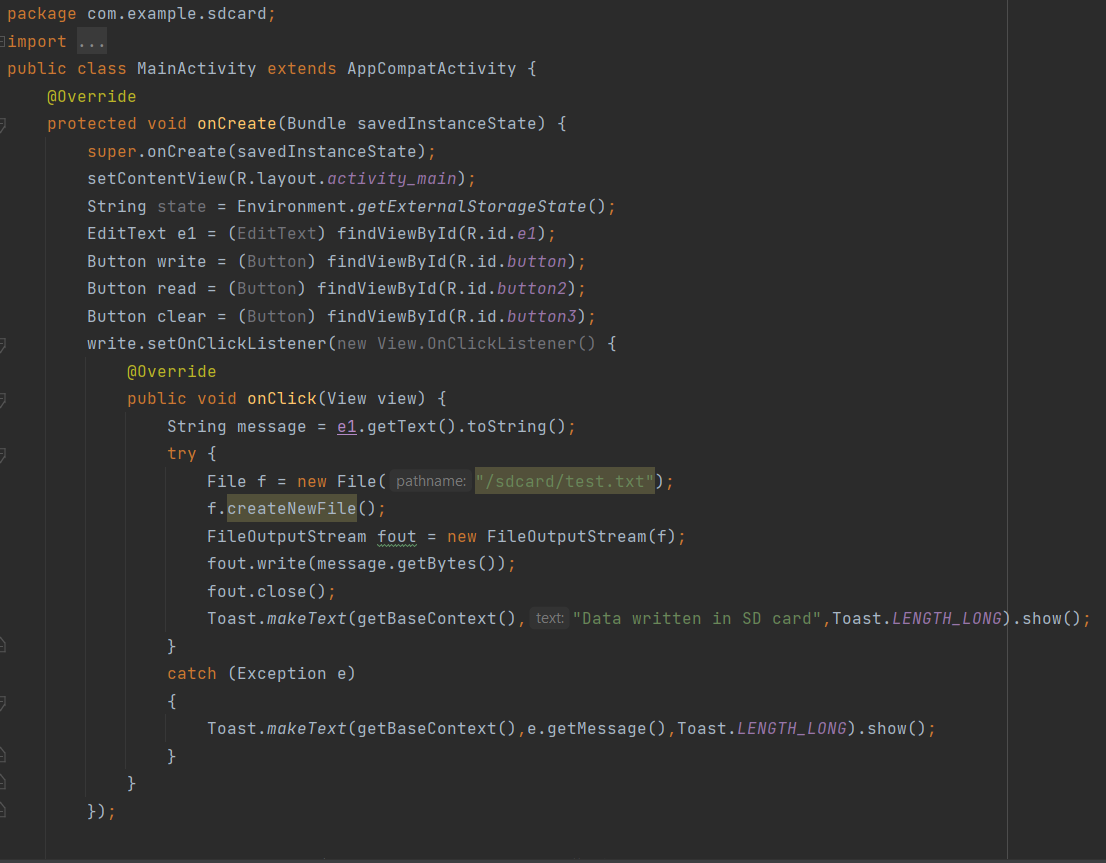
Activity\_main.xml

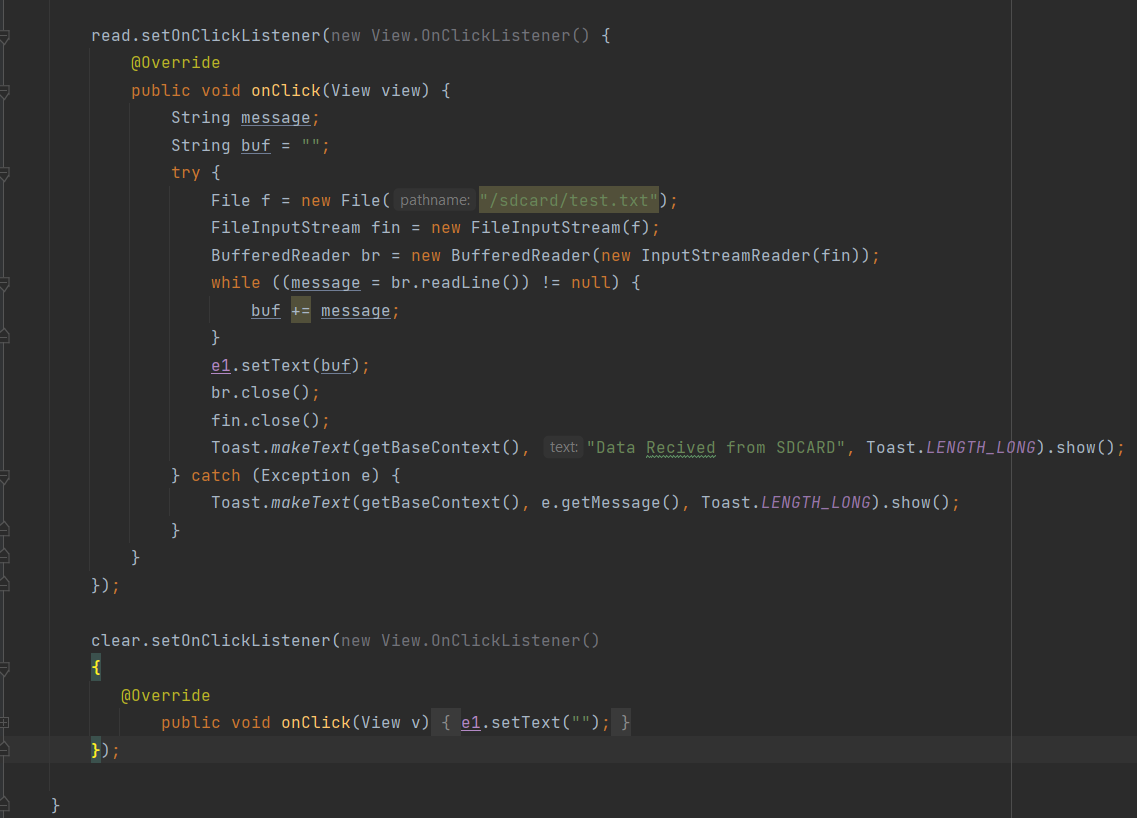
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/e1"  
 android:layout\_width="338dp"  
 android:layout\_height="73dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.493"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.185" />  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="320dp"  
 android:layout\_height="61dp"  
 android:text="Write to SD card"  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.472"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.325" />  
  
 <Button  
 android:id="@+id/button2"  
 android:layout\_width="317dp"  
 android:layout\_height="61dp"  
 android:text="Read from SD Card"  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.457"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.431" />  
  
 <Button  
 android:id="@+id/button3"  
 android:layout\_width="320dp"  
 android:layout\_height="59dp"  
 android:text="Clear"  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.494"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.541" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

package com.example.sdcard;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.os.Environment;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import java.io.BufferedInputStream;  
import java.io.BufferedReader;  
import java.io.File;  
import java.io.FileInputStream;  
import java.io.FileOutputStream;  
import java.io.InputStreamReader;  
import java.nio.charset.StandardCharsets;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 String state = Environment.*getExternalStorageState*();  
  
 EditText e1 = (EditText) findViewById(R.id.*e1*);  
 Button write = (Button) findViewById(R.id.*button*);  
 Button read = (Button) findViewById(R.id.*button2*);  
 Button clear = (Button) findViewById(R.id.*button3*);  
  
 write.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String message = e1.getText().toString();  
 try {  
 File f = new File("/sdcard/test.txt");  
 f.createNewFile();  
 FileOutputStream fout = new FileOutputStream(f);  
 fout.write(message.getBytes());  
 fout.close();  
 Toast.*makeText*(getBaseContext(),"Data written in SD card",Toast.*LENGTH\_LONG*).show();  
 }  
 catch (Exception e)  
 {  
 Toast.*makeText*(getBaseContext(),e.getMessage(),Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 });  
  
 read.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String message;  
 String buf = "";  
 try {  
 File f = new File("/sdcard/test.txt");  
 FileInputStream fin = new FileInputStream(f);  
 BufferedReader br = new BufferedReader(new InputStreamReader(fin));  
 while ((message = br.readLine()) != null) {  
 buf += message;  
 }  
 e1.setText(buf);  
 br.close();  
 fin.close();  
 Toast.*makeText*(getBaseContext(), "Data Recived from SDCARD", Toast.*LENGTH\_LONG*).show();  
 } catch (Exception e) {  
 Toast.*makeText*(getBaseContext(), e.getMessage(), Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 });  
  
 clear.setOnClickListener(new View.OnClickListener()  
 {  
 @Override  
 public void onClick(View v)  
 {  
 e1.setText("");  
 }  
 });  
  
 }  
}

Manifest.xml

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
  
 <uses-permission android:name="android.permission.WRITE\_EXTERNAL\_STORAGE" />  
 <uses-permission android:name="android.permission.READ\_EXTERNAL\_STORAGE"/>  
  
 <application  
 android:allowBackup="true"  
 android:requestLegacyExternalStorage="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.SDcard"  
 tools:targetApi="31">  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 </application>  
  
</manifest>





1. Gmail

Main activity.java

package com.example.email;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import androidx.appcompat.app.AppCompatActivity;  
public class MainActivity extends AppCompatActivity {  
 private EditText eTo;  
 private EditText eSubject;  
 private EditText eMsg;  
 private Button btn;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 eTo = (EditText)findViewById(R.id.*txtTo*);  
 eSubject = (EditText)findViewById(R.id.*txtSub*);  
 eMsg = (EditText)findViewById(R.id.*txtMsg*);  
 btn = (Button)findViewById(R.id.*btnSend*);  
 btn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent it = new Intent(Intent.*ACTION\_SEND*);  
 it.putExtra(Intent.*EXTRA\_EMAIL*, new String[]{eTo.getText().toString()});  
 it.putExtra(Intent.*EXTRA\_SUBJECT*,eSubject.getText().toString());  
 it.putExtra(Intent.*EXTRA\_TEXT*,eMsg.getText());  
 it.setType("message/rfc822");  
 startActivity(Intent.*createChooser*(it,"Choose Mail App"));  
 }  
 });  
 }  
}

activitymain.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:paddingLeft="20dp"  
 android:paddingRight="20dp"  
 android:orientation="vertical" >  
 <EditText  
 android:id="@+id/txtTo"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="To"/>  
 <EditText  
 android:id="@+id/txtSub"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Subject"/>  
 <EditText  
 android:id="@+id/txtMsg"  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"  
 android:gravity="top"  
 android:hint="Message"/>  
 <Button  
 android:layout\_width="100dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="right"  
 android:text="Send"  
 android:id="@+id/btnSend"/>  
</LinearLayout>

Android manifest

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.Email"  
 tools:targetApi="31">  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
 <category android:name="android.intent.category.LAUNCHER" />  
 <action android:name="android.intent.action.SEND"/>  
 <category android:name="android.intent.category.DEFAULT"/>  
 <data android:mimeType="message/rfc822"/>  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 </application>  
  
</manifest>

1. Alarm clock

AlarmReceiver.java

package com.example.alarmclock;  
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();  
 }  
}

Mainactivity.java

package com.example.alarmclock;  
import android.app.AlarmManager;  
import android.app.PendingIntent;  
import android.content.Intent;  
import android.os.Bundle;  
import androidx.appcompat.app.AppCompatActivity;  
import android.view.View;  
import android.widget.TimePicker;  
import android.widget.Toast;  
import android.widget.ToggleButton;  
  
import com.example.alarmclock.AlarmReceiver;  
  
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();  
 }  
 }  
}

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>