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Develop an application that uses GUI components, Font and Colors.

Activity_main.xml

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

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="30dp"
        android:gravity="center"
        android:text="Hello World!"
        android:textSize="25sp"
        android:textStyle="bold" />
     <Button
        android:id="@+id/button1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:gravity="center"
        android:text="Change font size"
        android:textSize="25sp" />
    <Button
        android:id="@+id/button2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:gravity="center"
        android:text="Change color"
        android:textSize="25sp" />
</LinearLayout>
```

MainActivity.java:

```
package com.example.exno1;

import android.graphics.Color;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity
{
    int ch=1;
    float font=30;
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final TextView t= (TextView) findViewById(R.id.textView);
        Button b1= (Button) findViewById(R.id.button1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                t.setTextSize(font);
                font = font + 5;
                if (font == 50)
                    font = 30;
            }
        });
        Button b2= (Button) findViewById(R.id.button2);
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                switch (ch) {
                    case 1:
                        t.setTextColor(Color.RED);
                        break;
                    case 2:
                        t.setTextColor(Color.GREEN);
                        break;
                    case 3:
                        t.setTextColor(Color.BLUE);
                        break;
                    case 4:
                        t.setTextColor(Color.CYAN);
                        break;
                    case 5:
                        t.setTextColor(Color.YELLOW);
                        break;
                    case 6:
                        t.setTextColor(Color.MAGENTA);
                        break;
                }
                ch++;
                if (ch == 7)
                    ch = 1;
            }
        });
    }
}
```

Output:


25% 10:53
ex.no.1
Hello World!
CHANGE FONT SIZE
CHANGE COLOR


25% 10:56
ex.no.1
Hello World!
CHANGE FONT SIZE
CHANGE COLOR

Develop an application that uses Intent and Activity.

activity_main.xml

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

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="88dp"
        android:text="Enter your Name "
        android:textAlignment="center"
        android:textSize="20sp" />

    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/textView"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_toEndOf="@id/textView"
        android:layout_toRightOf="@id/textView"
        android:minHeight="48dp"
        tools:ignore="SpeakableTextPresentCheck" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit"
        android:layout_below="@id/textView"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="61dp"
        />
</RelativeLayout>
```

activity_next.xml

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

```
    android:layout_height="match_parent"
    tools:context=".NextActivity">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="203dp"
        android:textSize="20sp" />
</RelativeLayout>
```

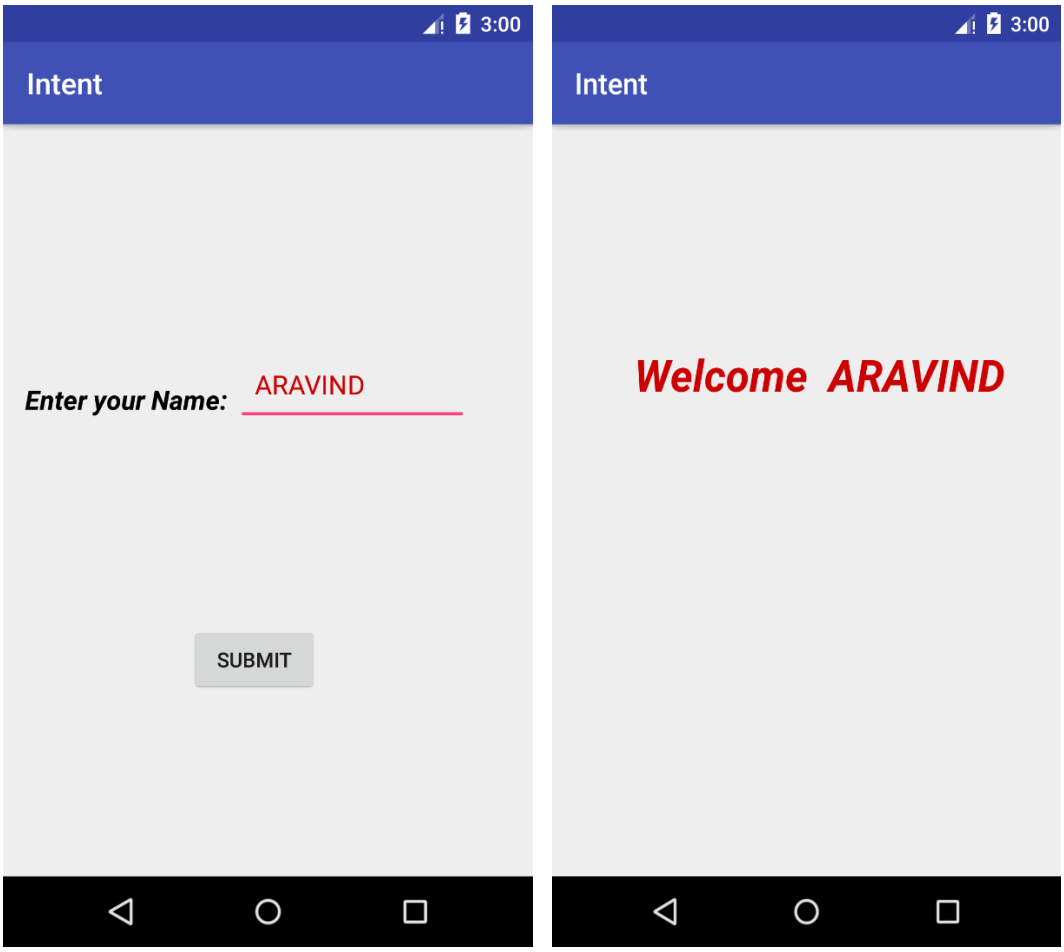
MainActivity.java

```
package com.example.intentprg;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

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

        EditText nameEdit = (EditText) findViewById(R.id.editText);
        Button btnSubmit = (Button) findViewById(R.id.button);

        btnSubmit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = nameEdit.getText().toString();
                Intent intObj = new Intent(MainActivity.this, NextActivity.class);
                intObj.putExtra("USERNAME",name);
                startActivity(intObj);

            }
        });
    }
}
```

NextActivity.java

```
package com.example.intentprg;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class NextActivity extends AppCompatActivity {

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

        TextView txtName = (TextView) findViewById(R.id.textView2);
        Intent intename = getIntent();

        String uname = (String) intename.getSerializableExtra("USERNAME");
        txtName.setText("Welcome" + uname);
    }
}
```

OUTPUT:


3:00
Intent
Enter your Name:
ARAVIND
SUBMIT
3:00
Intent
Welcome ARAVIND

Develop an application that uses Layout Managers and event listeners.

Activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
    tools:context=".MainActivity">
     <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="100dp">
        <TextView
            android:id="@+id/textView"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="30dp"
            android:text="Details Form"
            android:textSize="25sp"
            android:gravity="center"/>
    </LinearLayout>
     <GridLayout
        android:id="@+id/gridLayout"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginTop="100dp"
        android:layout_marginBottom="200dp"
        android:columnCount="2"
        android:rowCount="3">
        <TextView
            android:id="@+id/textView1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:layout_row="0"
            android:layout_column="0"
            android:text="Name"
            android:textSize="20sp"
            android:gravity="center"/>
         <EditText
            android:id="@+id/editText"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:layout_row="0"
            android:layout_column="1"
            android:ems="10"/>
         <TextView
            android:id="@+id/textView2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
```

```
        android:layout_row="1"
        android:layout_column="0"
        android:text="Reg.No"
        android:textSize="20sp"
        android:gravity="center"/>
      <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="1"
        android:layout_column="1"
        android:inputType="number"
        android:ems="10"/>
      <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="2"
        android:layout_column="0"
        android:text="Dept"
        android:textSize="20sp"
        android:gravity="center"/>
      <Spinner
        android:id="@+id/spinner"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="2"
        android:layout_column="1"
        android:spinnerMode="dropdown"/>
    </GridLayout>
    <Button
      android:id="@+id/button"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_alignParentBottom="true"
      android:layout_centerInParent="true"
      android:layout_marginBottom="150dp"
      android:text="Submit"/>
</RelativeLayout>
```

Activity_second.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"
    tools:context="com.example.devang.exno2.SecondActivity"
    android:orientation="vertical"
    android:gravity="center">
     <TextView
```

```
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="New Text"
        android:textSize="30sp"/>
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="New Text"
        android:textSize="30sp"/>
    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="New Text"
        android:textSize="30sp"/>
</LinearLayout>
```

MainActivity.java:

```
package com.example.exno2;

import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
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 {

    //Defining the Views
    EditText e1,e2;
    Button bt;
    Spinner s;

    //Data for populating in Spinner
    String [] dept_array={"CSE","ECE","IT","Mech","Civil"};

    String name,reg,dept;

    @Override
```

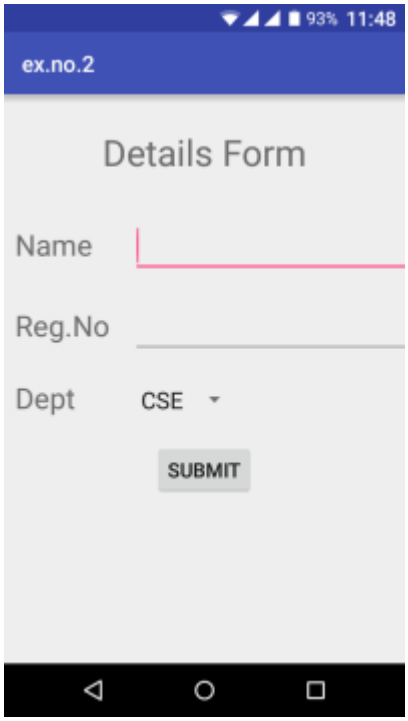
```
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        //Referring the Views
        e1= (EditText) findViewById(R.id.editText);
        e2= (EditText) findViewById(R.id.editText2);

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

        s= (Spinner) findViewById(R.id.spinner);

        //Creating Adapter for Spinner for adapting the data from array to Spinner
        ArrayAdapter adapter= new
ArrayAdapter(MainActivity.this,android.R.layout.simple_spinner_item,dept_array);
        s.setAdapter(adapter);

        //Creating Listener for Button
        bt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                //Getting the Values from Views(Edittext & Spinner)
                name=e1.getText().toString();
                reg=e2.getText().toString();
                dept=s.getSelectedItem().toString();

                //Intent For Navigating to Second Activity
                Intent i = new Intent(MainActivity.this,SecondActivity.class);

                //For Passing the Values to Second Activity
                i.putExtra("name_key", name);
                i.putExtra("reg_key",reg);
                i.putExtra("dept_key", dept);

                startActivity(i);

            }
        });
    }
}
```

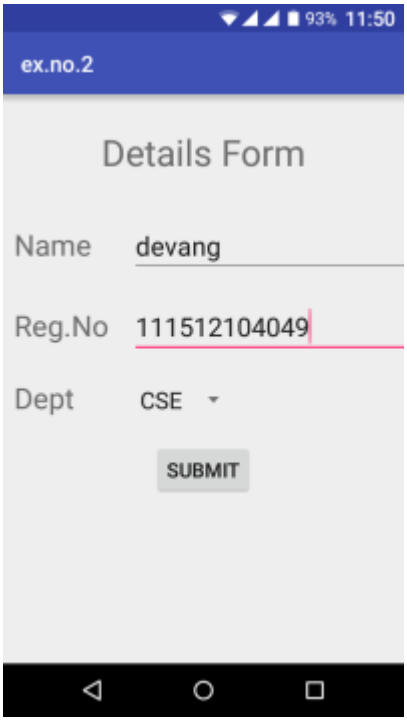
SecondActivity.java:

```
package com.example.exno2;

import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
```

```
public class SecondActivity extends AppCompatActivity {

    TextView t1,t2,t3;

    String name,reg,dept;

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

        t1= (TextView) findViewById(R.id.textView1);
        t2= (TextView) findViewById(R.id.textView2);
        t3= (TextView) findViewById(R.id.textView3);

        //Getting the Intent
        Intent i = getIntent();

        //Getting the Values from First Activity using the Intent received
        name=i.getStringExtra("name_key");
        reg=i.getStringExtra("reg_key");
        dept=i.getStringExtra("dept_key");

        //Setting the Values to Intent
        t1.setText(name);
        t2.setText(reg);
        t3.setText(dept);

    }
}
```

Output:


93% 11:48
ex.no.2
Details Form
Name
Reg.No
Dept
CSE
SUBMIT


93% 11:50
ex.no.2
Details Form
Name
devang
Reg.No
111512104049
Dept
CSE
SUBMIT


93% 11:50
ex.no.2
devang
111512104049
CSE

Write an application that draws basic graphical primitives on the screen.

Activity_main.xml:

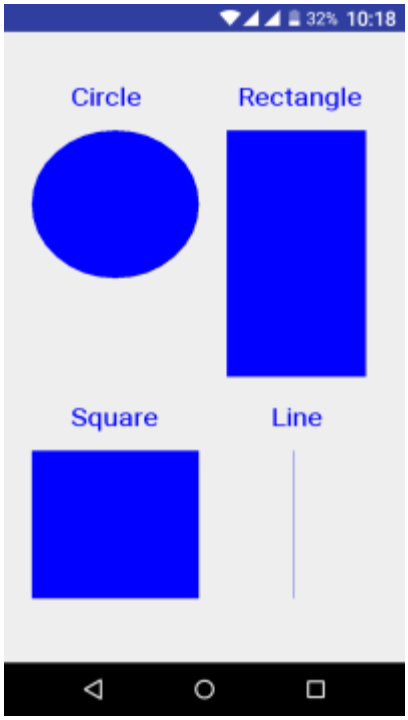
```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent">

   <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);
    }
}
```

Output:



Develop an application that makes use of RSS Feed.

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>
```

AndroidManifest.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
   package="com.example.exno6" >

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

   <application
      android:allowBackup="true"
      android:icon="@mipmap/ic_launcher"
      android:label="@string/app_name"
      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>
   </application>

</manifest>
```

MainActivity.java:

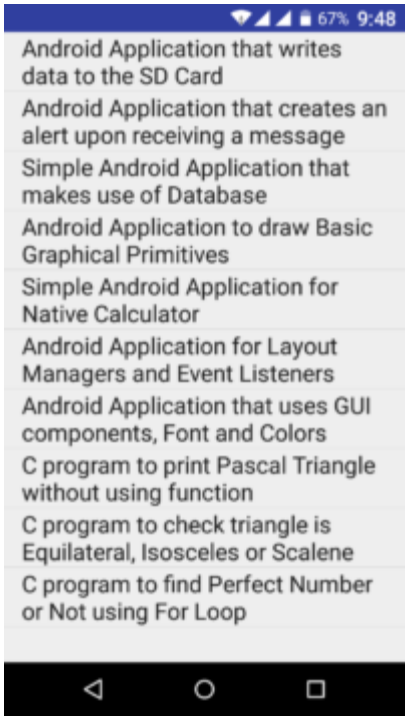
```
package com.example.exno6;

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://codingconnect.net/feed");
            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"))
                  {
```

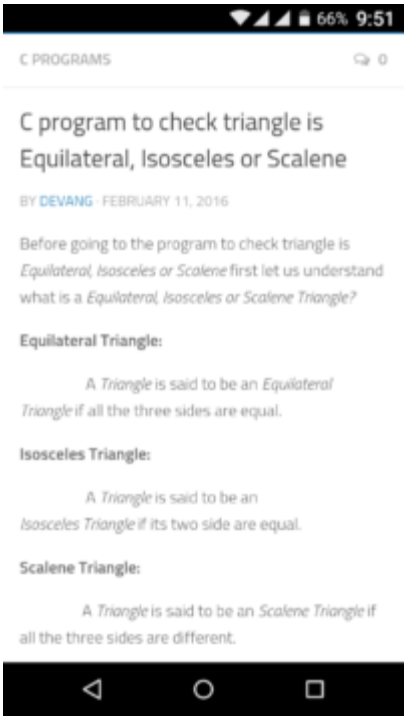
```
                    insideItem = true;
                }
                else if (xpp.getName().equalsIgnoreCase("title"))
                {
                    if (insideItem)
                        headlines.add(xpp.nextText()); //extract the headline
                }
                else if (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;
        }
    }
}
```

Output:


67% 9:48
Android Application that writes data to the SD Card
Android Application that creates an alert upon receiving a message
Simple Android Application that makes use of Database
Android Application to draw Basic Graphical Primitives
Simple Android Application for Native Calculator
Android Application for Layout Managers and Event Listeners
Android Application that uses GUI components, Font and Colors
C program to print Pascal Triangle without using function
C program to check triangle is Equilateral, Isosceles or Scalene
C program to find Perfect Number or Not using For Loop


67% 9:50
C PROGRAMS
C program to check triangle is Equilateral, Isosceles or Scalene
BY DEVANG - FEBRUARY 11, 2016
Before going to the program to check triangle is Equilateral, Isosceles or Scalene first let us understand what is a Equilateral, Isosceles or Scalene Triangle?
Equilateral Triangle:
A Triangle is said to be an Equilateral


66% 9:51
C PROGRAMS
C program to check triangle is Equilateral, Isosceles or Scalene
BY DEVANG - FEBRUARY 11, 2016
Before going to the program to check triangle is Equilateral, Isosceles or Scalene first let us understand what is a Equilateral, Isosceles or Scalene Triangle?
Equilateral Triangle:
A Triangle is said to be an Equilateral Triangle if all the three sides are equal.
Isosceles Triangle:
A Triangle is said to be an Isosceles Triangle if its two side are equal.
Scalene Triangle:
A Triangle is said to be an Scalene Triangle if all the three sides are different.

Implement an application that implements Multi-threading.

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" >

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="250dp"
        android:layout_height="250dp"
        android:layout_margin="50dp"
        android:layout_gravity="center" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_gravity="center"
        android:text="Load Image 1" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_gravity="center"
        android:text="Load image 2" />

</LinearLayout>
```

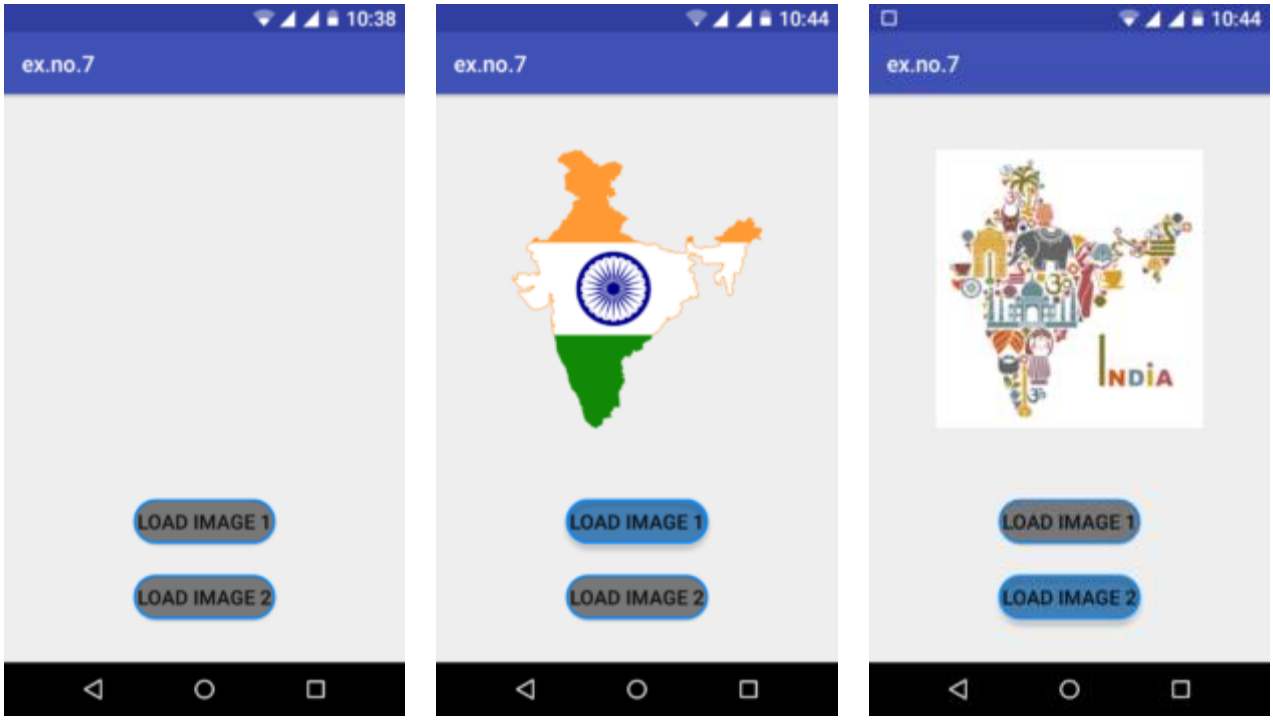
MainActivity.java:

```
package com.example.exno7;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
public class MainActivity extends AppCompatActivity
{
    ImageView img;
    Button bt1,bt2;
```

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

   bt1 = (Button)findViewById(R.id.button);
   bt2= (Button) findViewById(R.id.button2);
   img = (ImageView)findViewById(R.id.imageView);

   bt1.setOnClickListener(new View.OnClickListener()
   {
      @Override
      public void onClick(View v)
      {
         new Thread(new Runnable()
         {
            @Override
            public void run()
            {
               img.post(new Runnable()
               {
                  @Override
                  public void run()
                  {
                     img.setImageResource(R.drawable.india1);
                  }
               });
            }
         }).start();
      }
   });

   bt2.setOnClickListener(new View.OnClickListener()
   {
      @Override
      public void onClick(View v)
      {
         new Thread(new Runnable()
         {
            @Override
            public void run()
            {
               img.post(new Runnable()
               {
                  @Override
                  public void run()
                  {
                     img.setImageResource(R.drawable.india2);
                  }
               });
```

```
                }
            }).start();
        }
    });
  }
}
```

Output:


10:38
ex.no.7
LOAD IMAGE 1
LOAD IMAGE 2
10:44
ex.no.7
LOAD IMAGE 1
LOAD IMAGE 2
10:44
ex.no.7
INDIA
LOAD IMAGE 1
LOAD IMAGE 2

Develop an application that create alarm clock.

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:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.exno11" >

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        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>
        <receiver android:name=".AlarmReceiver" >
        </receiver>
    </application>

</manifest>
```

MainActivity.java:

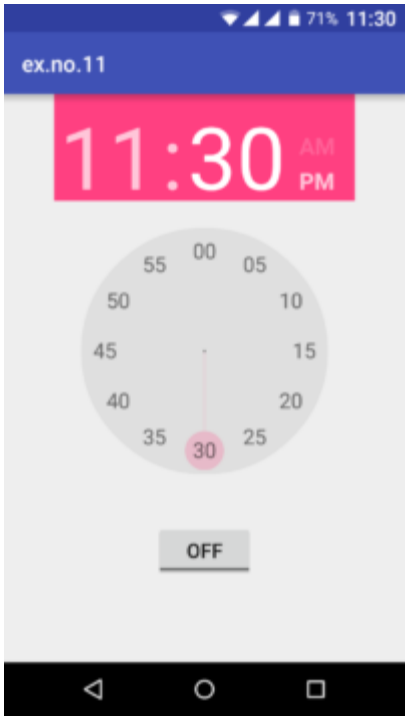
```
package com.example.exno11;

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);
```

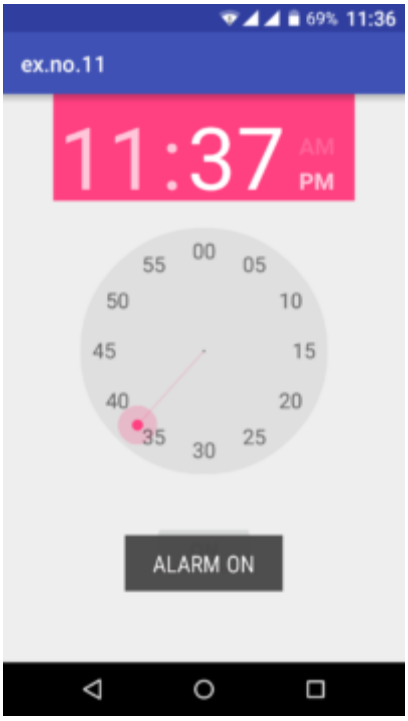
```
        }
        else
        {
            alarmManager.cancel(pendingIntent);
            Toast.makeText(MainActivity.this, "ALARM OFF", Toast.LENGTH_SHORT).show();
        }
    }
}
```

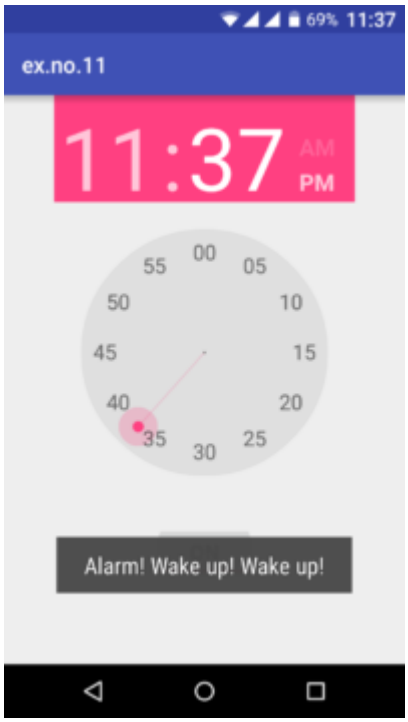
AlarmReceiver.java:

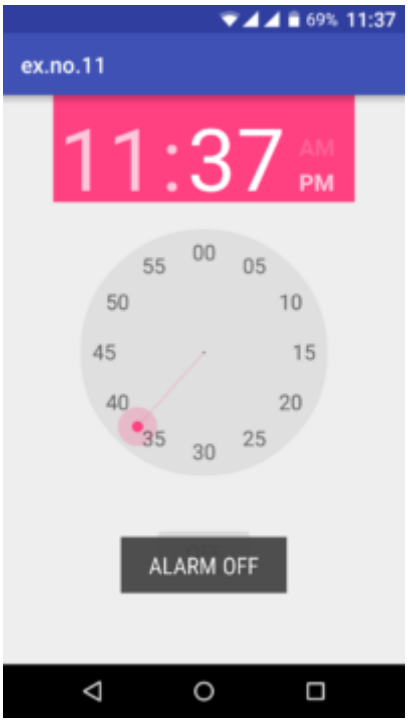
```
package com.example.exno11;

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();
    }
}
```

Output:


71% 11:30
ex.no.11
11:30 AM PM
OFF


69% 11:36
ex.no.11
11:37 AM PM
ALARM ON


69% 11:37
ex.no.11
11:37 AM PM
Alarm! Wake up! Wake up!


69% 11:37
ex.no.11
11:37 AM PM
ALARM OFF

Develop an application Using Widgets.

MainActivity.java

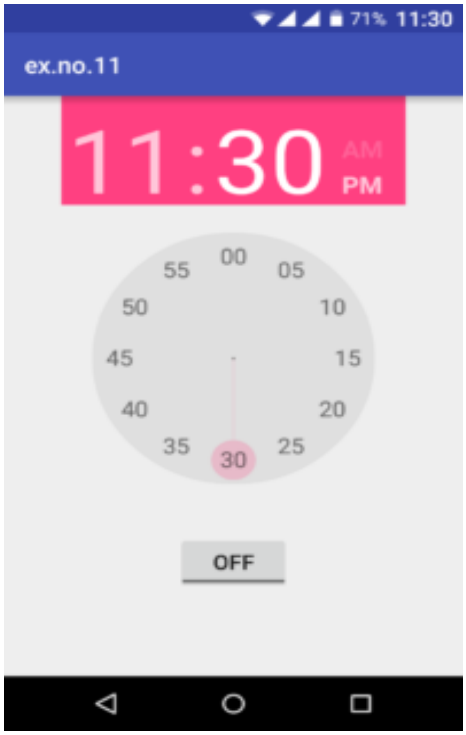
```
package com.example.exno09;

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
```

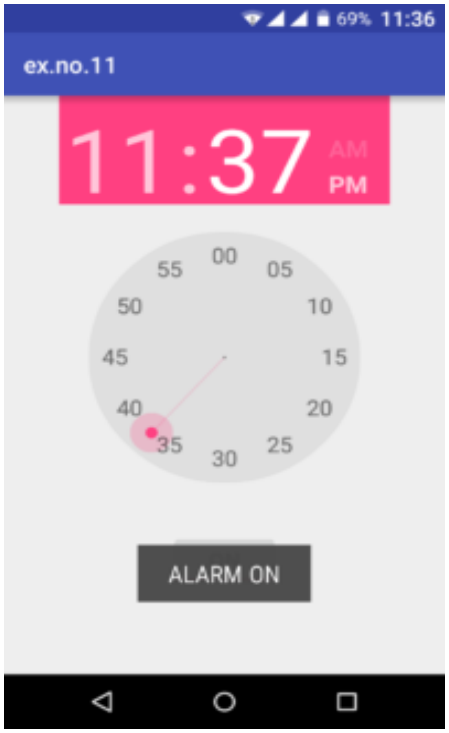
```
        {
            alarmManager.cancel(pendingIntent);
            Toast.makeText(MainActivity.this, "ALARM OFF", Toast.LENGTH_SHORT).show();
        }
    }
}
```

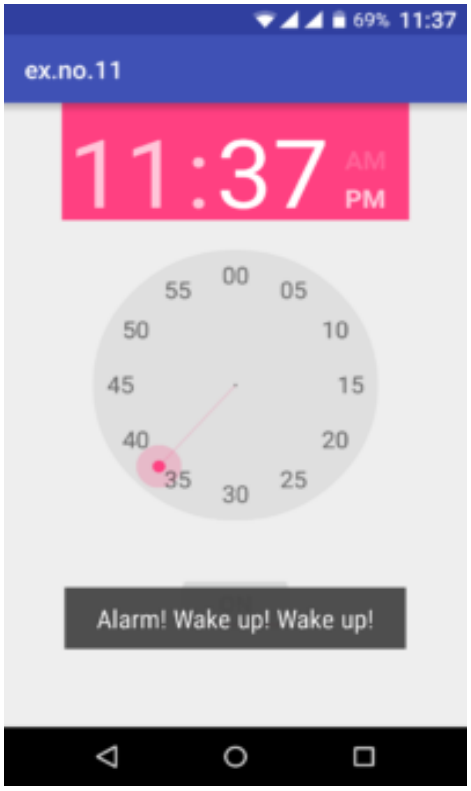
AlarmReceiver.java

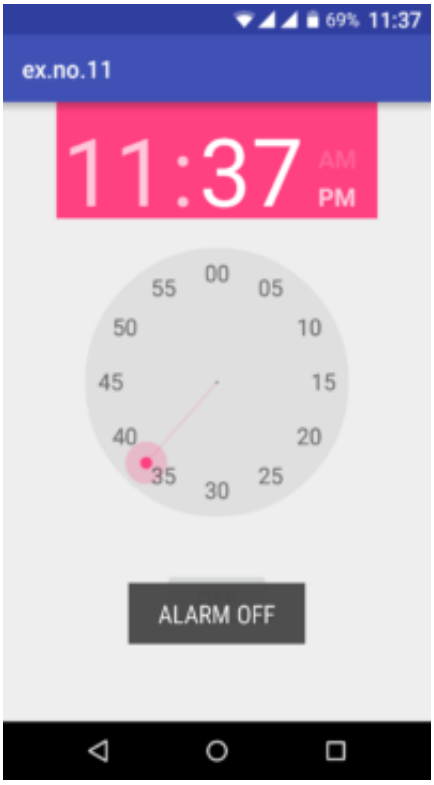
```
package com.example.exno09;

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();
    }
}
```

OUTPUT


71% 11:30
ex.no.11
11:30 AM PM
OFF


69% 11:36
ex.no.11
11:37 AM PM
ALARM ON


69% 11:37
ex.no.11
11:37 AM PM
Alarm! Wake up! Wake up!


69% 11:37
ex.no.11
11:37 AM PM
ALARM OFF

Implement an application that writes data to the SD card.

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:layout_margin="20dp"
    android:orientation="vertical">

    <EditText
        android:id="@+id/editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:singleLine="true"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Write Data"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Read data"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:text="Clear"
        android:textSize="30dp" />

</LinearLayout>
```

AndroidManifest.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.exno9" >
```

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

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        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>
    </application>
</manifest>
```

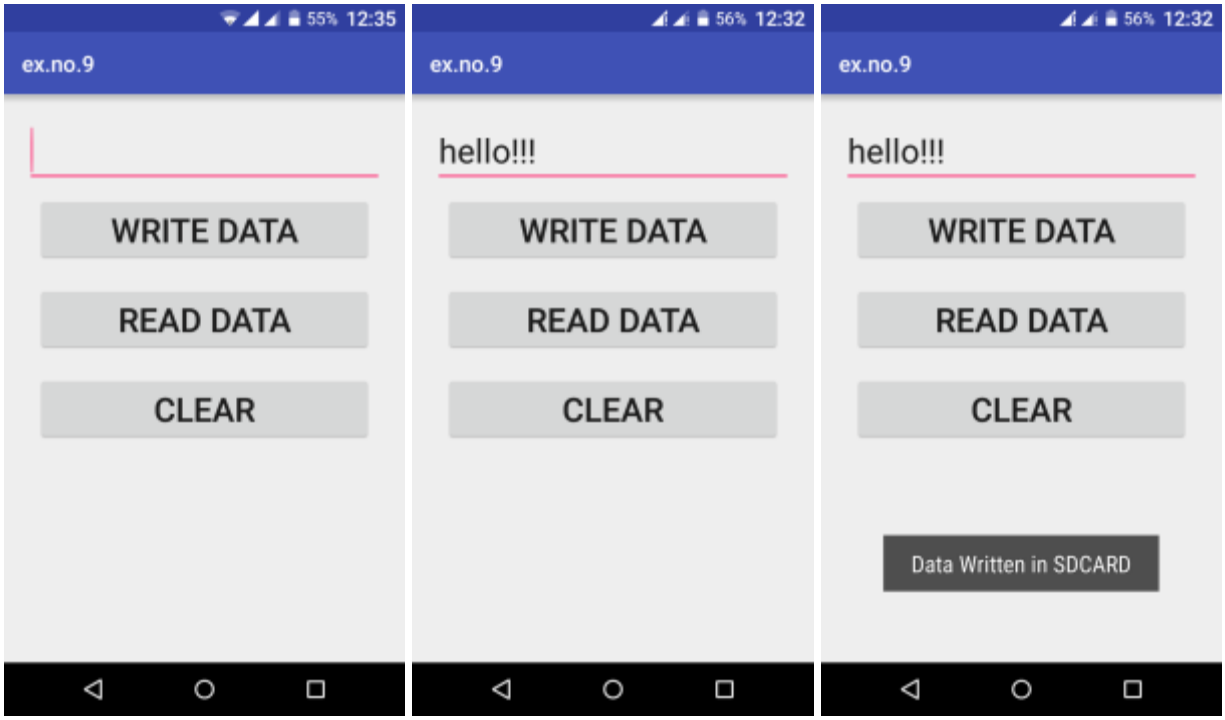
MainActivity.java:

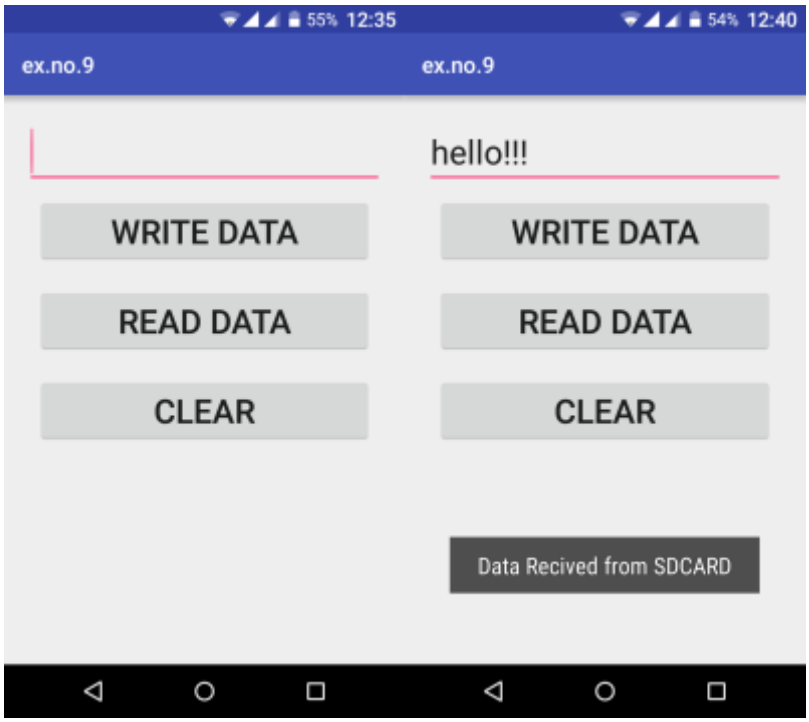
```
package com.example.exno9;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.BufferedReader;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.InputStreamReader;

public class MainActivity extends AppCompatActivity
{
    EditText e1;
    Button write,read,clear;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        e1= (EditText) findViewById(R.id.editText);
        write= (Button) findViewById(R.id.button);
        read= (Button) findViewById(R.id.button2);
        clear= (Button) findViewById(R.id.button3);
```

```
        write.setOnClickListener(new View.OnClickListener()
        {
           @Override
           public void onClick(View v)
           {
              String message=e1.getText().toString();
              try
              {
                 File f=new File("/sdcard/myfile.txt");
                 f.createNewFile();
                 FileOutputStream fout=new FileOutputStream(f);
                 fout.write(message.getBytes());
                 fout.close();
                 Toast.makeText(getBaseContext(),"Data Written in
SDCARD",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 v)
           {
              String message;
              String buf = "";
              try
              {
                 File f = new File("/sdcard/myfile.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("");
            }
        });
    }
}
```

Output:


55% 12:35
ex.no.9
WRITE DATA
READ DATA
CLEAR
56% 12:32
ex.no.9
hello!!!
WRITE DATA
READ DATA
CLEAR
56% 12:32
ex.no.9
hello!!!
WRITE DATA
READ DATA
CLEAR
Data Written in SDCARD


55% 12:35
ex.no.9
WRITE DATA
READ DATA
CLEAR
54% 12:40
ex.no.9
hello!!!
WRITE DATA
READ DATA
CLEAR
Data Recived from SDCARD

Implement an application that creates an alert upon receiving a message.

Activity_main.xml:

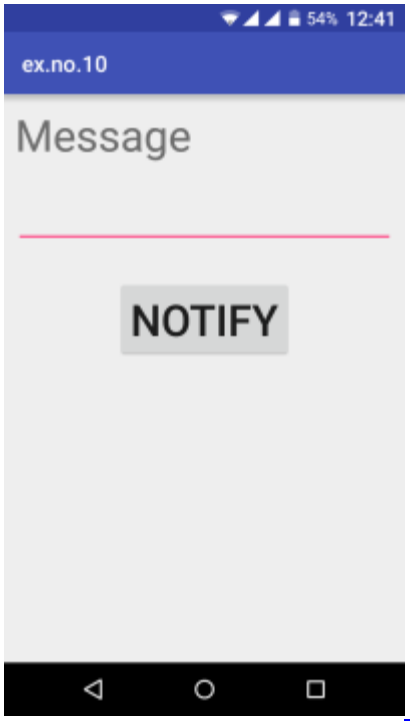
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_margin="10dp"
    android:orientation="vertical">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Message"
        android:textSize="30sp" />

    <EditText
        android:id="@+id/editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:singleLine="true"
        android:textSize="30sp" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="30dp"
        android:layout_gravity="center"
        android:text="Notify"
        android:textSize="30sp"/>

</LinearLayout>
```

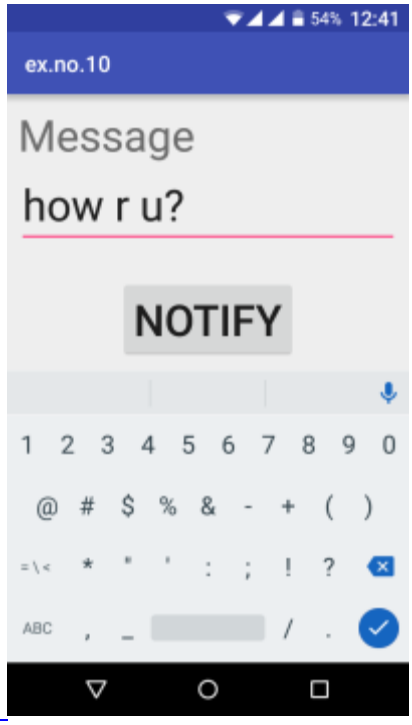
MainActivity.java:

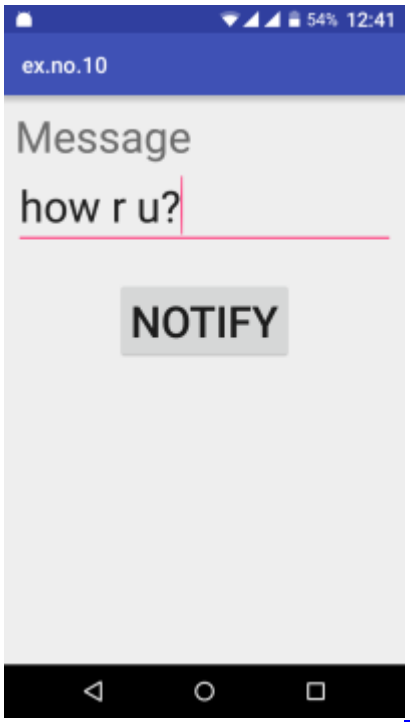
```
package com.example.exno10;

import android.app.Notification;
import android.app.NotificationManager;
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.Button;
import android.widget.EditText;
```

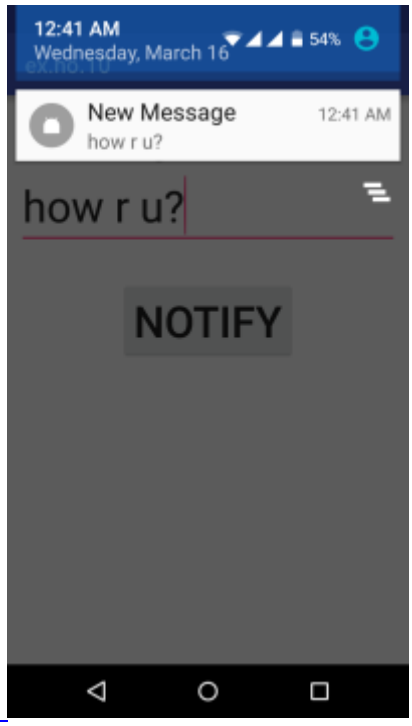
```
public class MainActivity extends AppCompatActivity
{
   Button notify;
   EditText e;
   @Override
   protected void onCreate(Bundle savedInstanceState)
   {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      notify= (Button) findViewById(R.id.button);
      e= (EditText) findViewById(R.id.editText);

      notify.setOnClickListener(new View.OnClickListener()
      {
         @Override
         public void onClick(View v)
         {
            Intent intent = new Intent(MainActivity.this, SecondActivity.class);
            PendingIntent pending = PendingIntent.getActivity(MainActivity.this, 0, intent, 0);
            Notification noti = new
Notification.Builder(MainActivity.this).setContentTitle("New
Message").setContentText(e.getText().toString()).setSmallIcon(R.mipmap.ic_launcher).setC
ontentIntent(pending).build();
            NotificationManager manager = (NotificationManager)
getSystemService(NOTIFICATION_SERVICE);
            noti.flags |= Notification.FLAG_AUTO_CANCEL;
            manager.notify(0, noti);
         }
      });
   }
}
```

Output:


54% 12:41
ex.no.10
Message
NOTIFY


54% 12:41
ex.no.10
Message
how r u?
NOTIFY


54% 12:41
ex.no.10
Message
how r u?
NOTIFY


12:41 AM
Wednesday, March 16
54%
New Message
12:41 AM
how r u?
how r u?
NOTIFY

Develop an application that makes use of database.

Main_activity.java

```
package com.example.ssbs.sqlite;
import android.app.AlertDialog.Builder;
import android.app.Activity;
import android.app.slice.Slice;
import android.content.Context;
import android.content.DialogInterface;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Build;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.view.textclassifier.TextClassification;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity implements OnClickListener {
    EditText Rollno, Name, Mark;
    Button Save, Delete, Update, View, ViewAll;
    SQLiteDatabase db;

    @Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
Rollno = (EditText) findViewById(R.id.editText);
Name = (EditText) findViewById(R.id.editText2);
Mark = (EditText) findViewById(R.id.editText3);
Save = (Button) findViewById(R.id.button);
Delete = (Button) findViewById(R.id.button2);
Update = (Button) findViewById(R.id.button3);
View = (Button) findViewById(R.id.button4);
ViewAll = (Button) findViewById(R.id.button5);
Save.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(View view) {
if (view == Save) {
if (Rollno.getText().toString().trim().length() == 0 ||
Name.getText().toString().trim().length() == 0 ||
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Mark.getText().toString().trim().length() == 0) {
            showMessage("Error", "please enter all values");
return;
        }
db.execSQL("Insert into student VALUES('" + Rollno.getText() + "','" + Name.getText() + "','" +
Mark.getText() + "');");
        showMessage("Success", "Record added");
return;
      }
if (view == Delete) {
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 sstudent where rollno='" + Rollno.getText() + "'");
            showMessage("Error", "Invalid Rollno");
        } else {
            showMessage("Error", "Record deleted");
        }
        clearText();
      }
if (view == Update) {
if (Rollno.getText().toString().trim().length() == 0) {
            showMessage("Error", "please enter rollno");
return;
        }
        Cursor c = db.rawQuery("Selete * from student where rollno='" + Rollno.getText() + "'", null);
if (c.moveToFirst()) {
db.execSQL("update student set name='" + Name.getText() + "',marks='" + Mark.getText() + "'where
rollno='" + Rollno.getText() + "'");
            showMessage("Success", "Record Modified");
        } else {
            showMessage("Error", "Invalid rollno");
        }
        clearText();
      }
if (view == View) {
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));
Mark.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) {
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            showMessage("Error", "No record founded");
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(" ");
Mark.setText(" ");
Rollno.requestFocus();
}
}
```
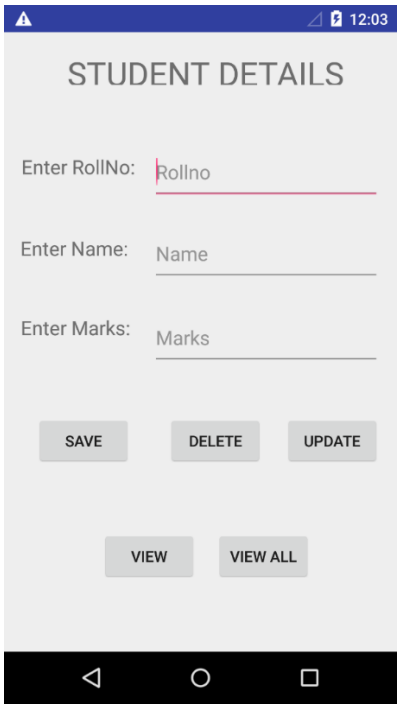
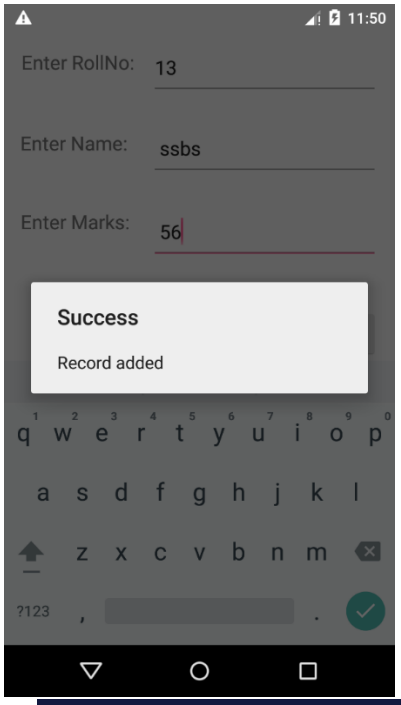
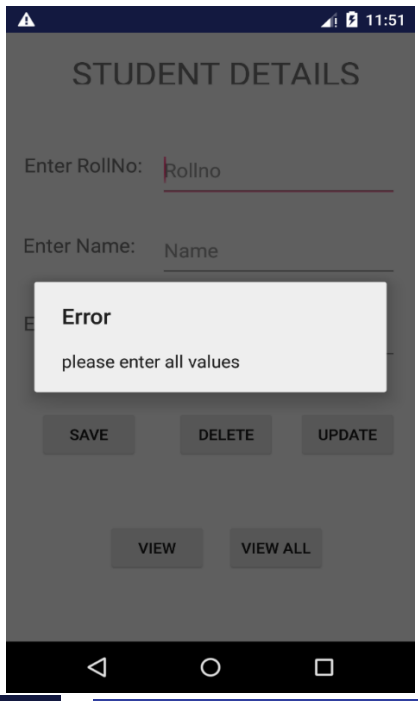
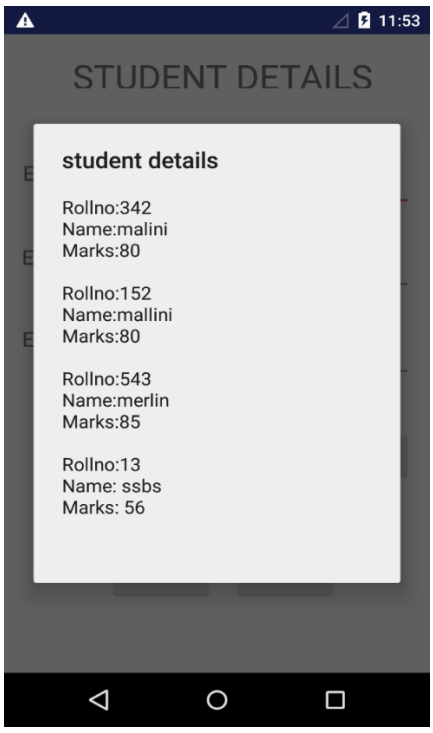
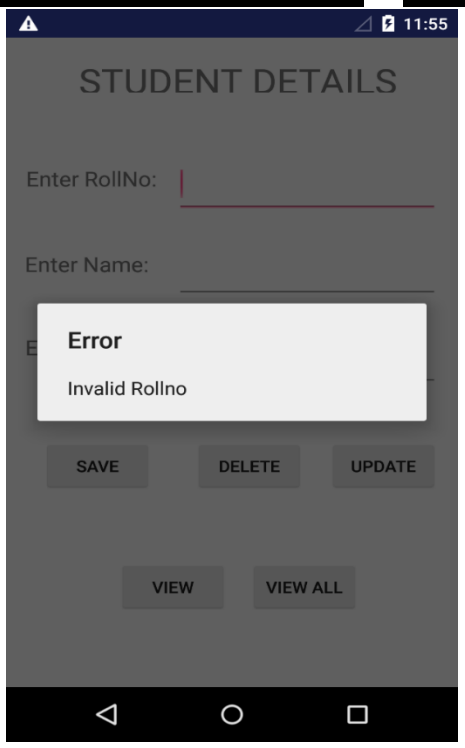

OUTPUT

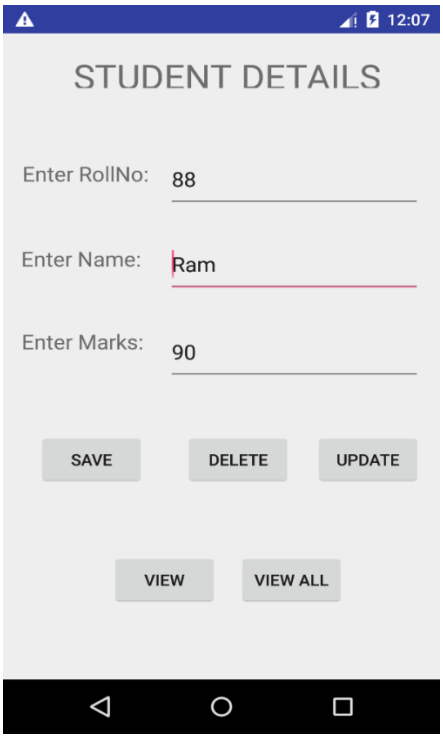

12:03
STUDENT DETAILS
Enter RollNo:
Rollno
Enter Name:
Name
Enter Marks:
Marks
SAVE
DELETE
UPDATE
VIEW
VIEW ALL


11:50
Enter RollNo:
13
Enter Name:
ssbs
Enter Marks:
56
Success
Record added


11:51
STUDENT DETAILS
Enter RollNo:
Rollno
Enter Name:
Name
Error
please enter all values
SAVE
DELETE
UPDATE
VIEW
VIEW ALL


11:53
STUDENT DETAILS
student details
Rollno:342
Name:malini
Marks:80
Rollno:152
Name:mallini
Marks:80
Rollno:543
Name:merlin
Marks:85
Rollno:13
Name: ssbs
Marks: 56


11:55
STUDENT DETAILS
Enter RollNo:
Enter Name:
Error
Invalid Rollno
SAVE
DELETE
UPDATE
VIEW
VIEW ALL


12:07
STUDENT DETAILS
Enter RollNo:
88
Enter Name:
Ram
Enter Marks:
90
SAVE
DELETE
UPDATE
VIEW
VIEW ALL