



NADAR SARASWATHI COLLEGE OF

ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

AND ENGINEERING

MOBILE APPLICATION DEVELOPMENT LABORATORY

COURSE CODE C608

LABORATORY CODE CS8662

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SYLLABUS

S. NO.	NAME OF THE EXPERIMENT
1	Develop an application that uses GUI components, Font and Colours
2	Develop an application that uses Layout Managers and event listeners.
3	Write an application that draws basic graphical primitives on the screen.
4	Develop an application that makes use of databases.
5	Develop an application that makes use of Notification Manager
6	Implement an application that uses Multi-threading
7	Develop a native application that uses GPS location information
8	Implement an application that writes data to the SD card.
9	Implement an application that creates an alert upon receiving a message
10	Write a mobile application that makes use of RSS feed
11	Develop a mobile application to send an email.
12	Develop a Mobile application for simple needs (Mini Project)

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NAC/TLP-08a.5

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3.		Working with GUI Components, Fonts and Colors.			
4.		Working with Layout Managers and Event Listeners			
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EX NO 1.a

Running the GUI Components, Fonts, Colors App

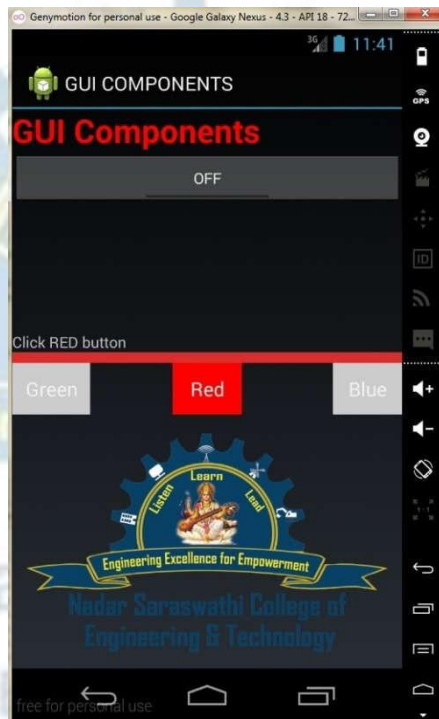
Aim:

To create a program to illustrates the GUI Components and Colors for Android App

Algorithm :

Step 1: Design

1. Open the actual Project folder(app) in Android Studio IDE
2. Click res directory -> layout -> activity_main.xml -> Design
3. Insert the GUI components to Design view in activity_main.xml
4. Enter the id for each component



Step 2: Open res directory -> layout -> activity_main.xml and add following code

```
<?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" android:paddingLeft="@dimen/
    activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">
<TextView
```

```
android:layout_width="+match_parent"
android:layout_height="wrap_content"
android:text="GUI Components"
android:id="@+id/t1"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="false"
android:layout_alignParentStart="false"
android:autoText="false"
android:minHeight="40dp"
android:textStyle="bold"
android:textSize="30dp"
android:textIsSelectable="false"
android:textAlignment="center"
android:textColor="@color/accent_material_dark" />
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Green"
android:id="@+id/b1"
android:layout_alignTop="@+id/b2"
android:layout_alignParentStart="true" />
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Red"
android:id="@+id/b2"
android:layout_centerVertical="true"
android:layout_centerHorizontal="true" />
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Blue"
android:id="@+id/b3"
android:layout_alignTop="@+id/b2"
android:layout_alignEnd="@+id/t1" />
<ImageView
android:layout_width="match_parent"
android:layout_height="match_parent"
android:id="@+id/img1"
android:maxHeight="70dp"
android:layout_alignParentBottom="true"
android:src="@mipmap/ic_launcher"
android:layout_alignParentEnd="true"
android:layout_below="@+id/b1" />
<ImageButton
```

```
android:layout_width="match_parent"

android:layout_height="wrap_content"
android:id="@+id/imgb1"
android:maxHeight="10dp"
android:maxLength="10dp"
android:longClickable="false"
android:visibility="visible"
android:minHeight="10dp"
android:contentDescription="CLICK BUTTON"
android:layout_gravity="left|top|bottom|center|right"
android:layout_above="@+id/b1"
android:layout_alignEnd="@+id/b3"
style="@style/AlertDialog.AppCompat.Light"
android:background="#dd2e2e"
android:layout_marginLeft="@dimen/
abc_action_bar_subtitle_bottom_margin_material"
android:layout_marginRight="@dimen/
abc_action_bar_subtitle_bottom_margin_material"
android:layout_marginBottom="@dimen/
abc_action_bar_subtitle_bottom_margin_material" />
<TextView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="Click RED button"
android:id="@+id/textView"
android:layout_above="@+id/imgb1"
android:layout_alignStart="@+id/imgb1" />
<ToggleButton
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="New ToggleButton"
android:id="@+id/toggleButton"
android:layout_below="@+id/t1"
android:layout_centerHorizontal="true" />
</RelativeLayout>
```

Step 3: Open your Android studio project folder

(e.g. Project name: GUI Components) —>Click app ->src -> main -> res ->drawable -> add *.png file.

Step 4: Open java -> MainActivity.java and add following code

```
package com.example.GUI_COMPONENTS;
import android.graphics.Color;
import android.graphics.drawable.BitmapDrawable;
```

```
import android.graphics.drawable.Drawable;
import android.media.Image;

import android.app.Activity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.ImageButton;
import android.widget.ImageView;
import android.widget.TextView;
import org.w3c.dom.Text;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.InputStream;
public class MainActivity extends Activity {
    TextView text;
    Button bu1,bu2,bu3;
    ImageView image1;
    ImageButton image2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main)
        bu1=(Button) findViewById(R.id.b1);
        bu2=(Button) findViewById(R.id.b2);
        bu3=(Button) findViewById(R.id.b3);
        text=(TextView) findViewById(R.id.t1);
        image1=(ImageView)findViewById(R.id.img1);
        image2=(ImageButton)findViewById(R.id.imgb1);

        image2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                image1.setImageResource(R.drawable.core1);
            }
        });
        bu1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                bu1.setBackgroundColor(Color.GREEN);
                text.setTextColor(Color.GREEN);
                bu2.setBackgroundColor(Color.LTGRAY);
                bu3.setBackgroundColor(Color.LTGRAY);
            }
        });
        bu2.setOnClickListener(new View.OnClickListener() {
```

@Override

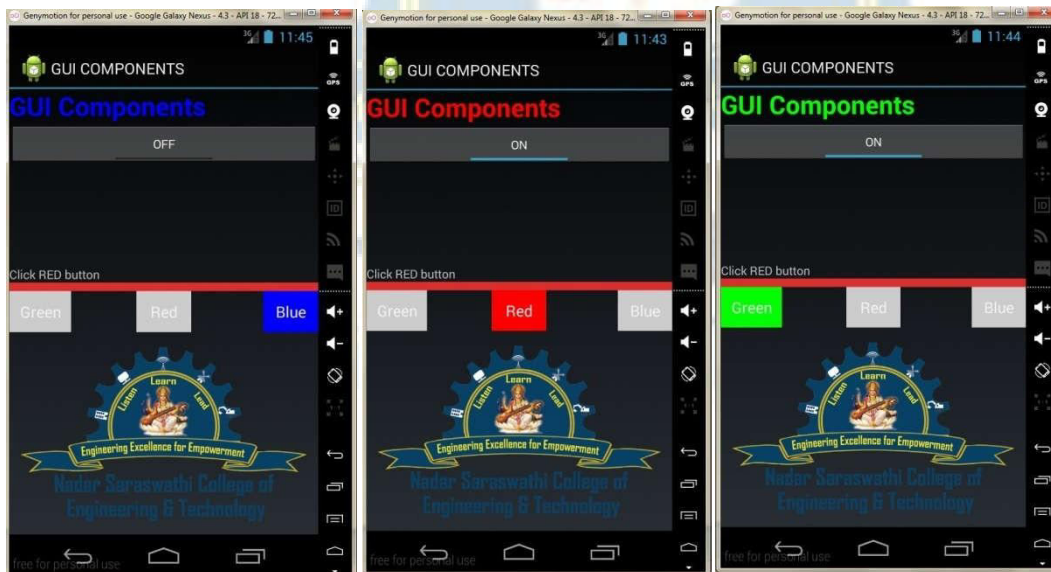
```
public void onClick(View v) {  
    bu2.setBackgroundColor(Color.RED);
```

```
    bu3.setBackgroundColor(Color.LTGRAY);  
    bu1.setBackgroundColor(Color.LTGRAY);  
    text.setTextColor(Color.RED);  
}});
```

```
bu3.setOnClickListener(new View.OnClickListener() {  
    @Override
```

```
    public void onClick(View v) {  
        bu3.setBackgroundColor(Color.BLUE);  
        text.setTextColor(Color.BLUE);  
        bu2.setBackgroundColor(Color.LTGRAY);  
        bu1.setBackgroundColor(Color.LTGRAY);  
    }});  
}}
```

Step 5: The output of the above code is as follows. As we have discussed, GUI Components and Colors App is easy.



Step 6: Thus program to illustrate the GUI Components and Colors for Android App was created.

EX NO 1B

Running the Fonts App

Aim:

To create a program to illustrates the Fonts App in Smart Phone.

Algorithm:

Step 1: Design

1. Open the actual Project folder (app) in Android Studio IDE
2. Click res directory -> layout -> activity_main.xml -> Design
3. Insert the GUI components to Design view in activity_main.xml
4. Enter the id for each component



Step 2: Create assets sub directory in res

Right click res -> New -> Folder -> New Assets Folder

Right click assets -> New -> Directory -> Enter the directory name (fonts)

Paste the font types in font's directory

Step 3: Open res directory -> layout -> activity_main.xml and add following code

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

```
        android:orientation="vertical"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent" >
<EditText
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:id="@+id/et1" android:layout_alignParentTop="true"
android:layout_centerHorizontal="true"
    android:gravity="center" android:editable="true" android:hint="please enter the text"/>
<ImageButton
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:id="@+id/imageButton" android:layout_below="@+id/et1"
android:layout_centerHorizontal="true"/>
<TextView
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceLarge"
    android:id="@+id/tv1" android:layout_below="@+id/imageButton"
android:layout_centerHorizontal="true"
    android:gravity="center"/>
<ListView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/lv1" android:layout_below="@+id/tv1"
android:layout_centerHorizontal="true"/>
</RelativeLayout>
```

Step 4: Create an activity file **MainActivity.java**

```
package com.example.fontlistview;
import android.app.Activity;
import android.graphics.Typeface;
import android.os.Bundle;
import android.view.View;
import android.widget.*;

public class MyActivity extends Activity {
    ListView listview;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

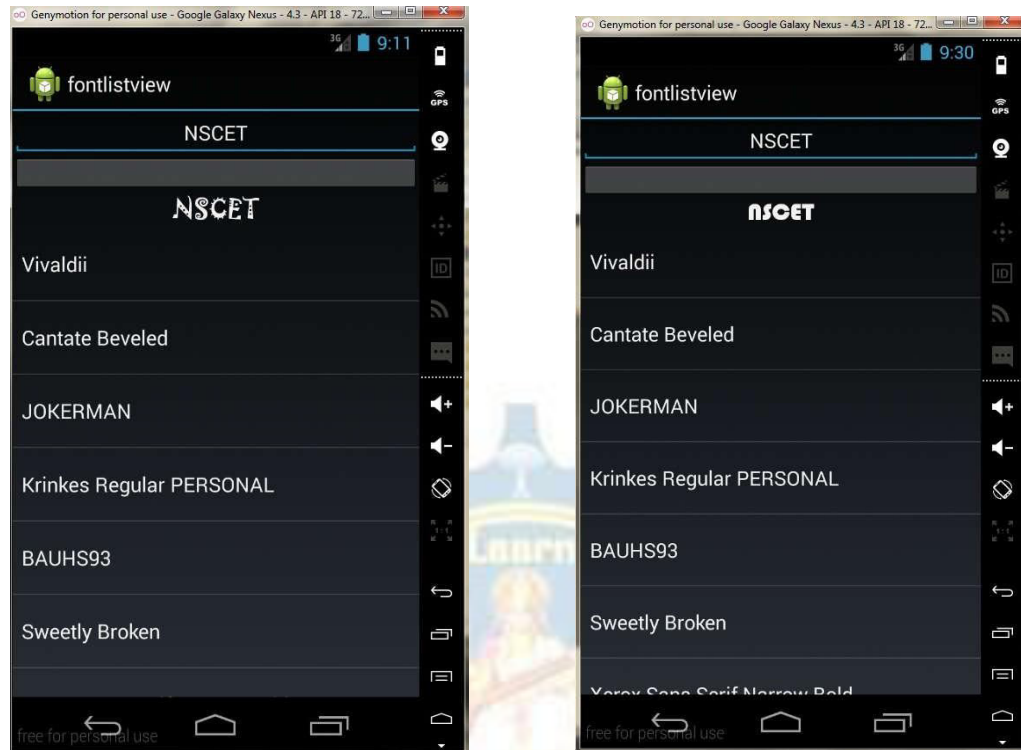


```
setContentView(R.layout.main);
final TextView txt=(TextView)findViewById(R.id.tv1);
final EditText e1=(EditText)findViewById(R.id.et1);
listview=(ListView)findViewById(R.id.lv1);
String[] values = new String[] { "Vivaldii", "Cantate Beveled", "JOKERMAN",
    "Krinkes Regular PERSONAL", "BAUHS93", "Sweetly Broken", "Xerox Sans Serif
Narrow Bold", "Xacto Blade" };
ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
    android.R.layout.simple_dropdown_item_1line,values);
listview.setAdapter(adapter);
listview.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> parent, View view, int position, long id)
    {
        String itemValue = (String) listview.getItemAtPosition(position);
        if(itemValue.equals("Vivaldii"))
        {
            txt.setText(e1.getText().toString());
            String fontPath="fonts/VIVALDII.ttf";
            Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);
            txt.setTypeface(tf);
        }
        if(itemValue.equals("Cantate Beveled"))
        {
            txt.setText(e1.getText());
            String fontPath="fonts/Cantate Beveled.ttf";
            Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);
            txt.setTypeface(tf);
        }
        if(itemValue.equals("JOKERMAN"))
        {
            txt.setText(e1.getText());
            String fontPath="fonts/JOKERMAN.ttf";
            Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);
            txt.setTypeface(tf);
        }
        if(itemValue.equals("Krinkes Regular PERSONAL"))
        {
            txt.setText(e1.getText());
            String fontPath="fonts/KrinkesRegularPERSONAL.ttf";
            Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);
            txt.setTypeface(tf);
        }
        if(itemValue.equals("BAUHS93"))
```



```
{  
  
    txt.setText(e1.getText());  
    String fontPath="fonts/BAUHS93.ttf";  
    Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);  
    txt.setTypeface(tf);  
}  
if(itemValue.equals("Sweetly Broken"))  
{  
    txt.setText(e1.getText());  
    String fontPath="fonts/Sweetly Broken.ttf";  
    Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);  
    txt.setTypeface(tf);  
}  
if(itemValue.equals("Xerox Sans Serif Narrow Bold"))  
{  
    txt.setText(e1.getText());  
    String fontPath="fonts/Xerox Sans Serif Narrow Bold.ttf";  
    Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);  
    txt.setTypeface(tf);  
}  
if(itemValue.equals("Xacto Blade"))  
{  
    txt.setText(e1.getText());  
    String fontPath="fonts/Xacto Blade.ttf";  
    Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);  
    txt.setTypeface(tf);  
}  
}}  
});  
}
```

Step 5: Output



Step 6: Thus program to illustrate the font for Android App was created.

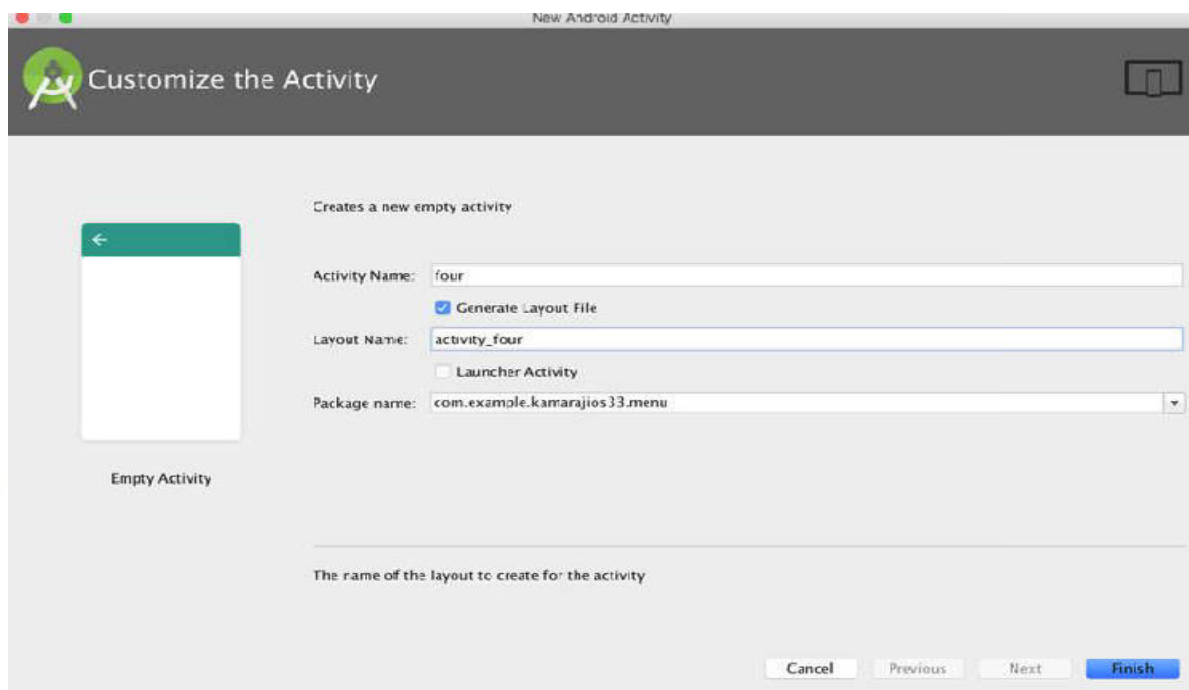
EX NO 2 Running the Layout Managers and Event Click Listener

Step 1: Create an android project using android studio

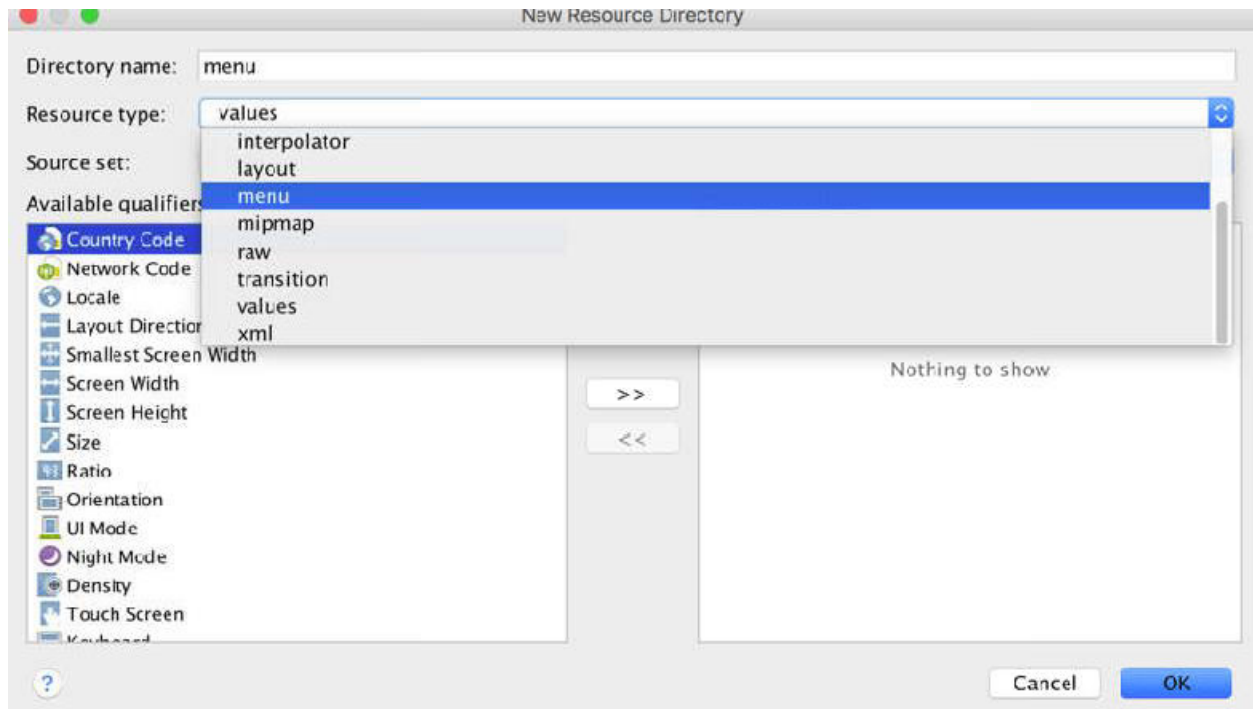
Step 2: After creating the project, open the res directory -> layout -> resource file named activity_main.xml

Step 3: Create two resource (*.xml) file named activity_second.xml, activity_third.xml & two activity (*.java) file named second.java and third.java file.

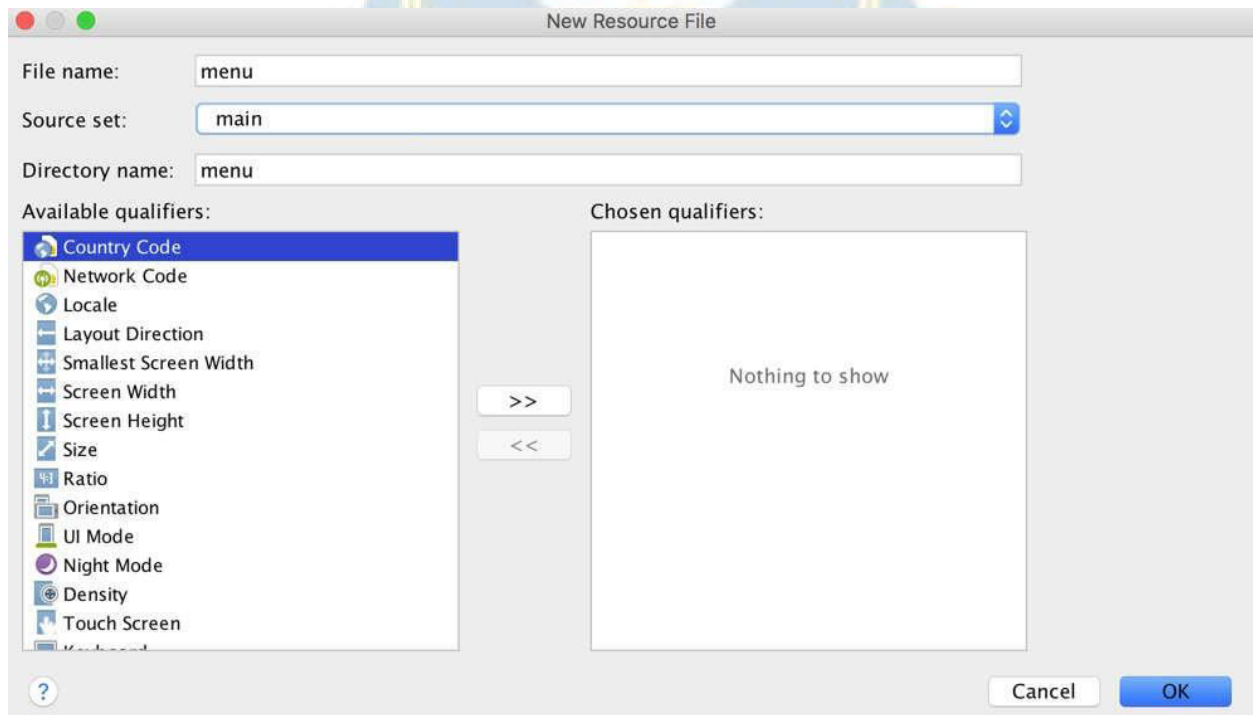
Right click res directory -> New -> Activity -> Empty Activity



Step 4: Create new Resource directory named menu and new resource file named menu
Right click res directory -> New -> Android Resource Directory -> resource type ->
select menu -> finish



Right click menu directory -> New -> new menu resource file -> enter file name -> Ok

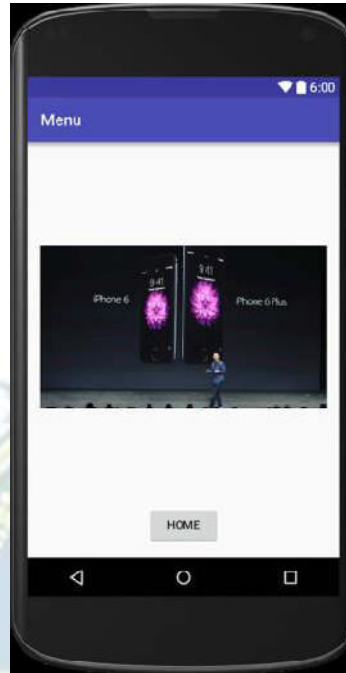


Step 5: Design (After the design, the xml code will be generated automatically in the layout file)

activity_main.xml



activity_second.xml



activity_third.xml



Step 6: Open **menu.xml** and add the following code

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
tools:context="com.example.kamarajios33.menu.MainActivity">
<item
android:id="@+id/one"
android:title="One"/>
<item
android:id="@+id/two"
android:title="Two"/>
</menu>
```

Step 7: Open **MainActivity.java**, **second.java** & **third.java** and add the following code

MainActivity.java

```
public class MainActivity extends AppCompatActivity {
    Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```



```
setContentview(R.layout.activity_main);
b1=(Button)findViewById(R.id.b1);
b1.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
PopupMenu pm = new PopupMenu(MainActivity.this,b1);
pm.getMenuInflater().inflate(R.menu.menu,pm.getMenu());
pm.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {
@Override
public boolean onOptionsItemSelected(MenuItem item) {
switch (item.getItemId()) {
case R.id.one:
Intent o = new Intent(getApplicationContext(), second.class);
startActivity(o);
System.exit(0);
break;
case R.id.two:
Intent in = new Intent(getApplicationContext(),third.class);
startActivity(in);
System.exit(0);
break;
}
return false;
}
});
pm.show();
}
});
}
```

second.java

```
public class second extends AppCompatActivity {
Button b2;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentview(R.layout.activity_second);
b2=(Button)findViewById(R.id.b2);
ImageView iv = (ImageView)findViewById(R.id.iw);
b2.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
Intent i = new Intent(getApplicationContext(),MainActivity.class);
startActivity(i);
System.exit(0);
}
```

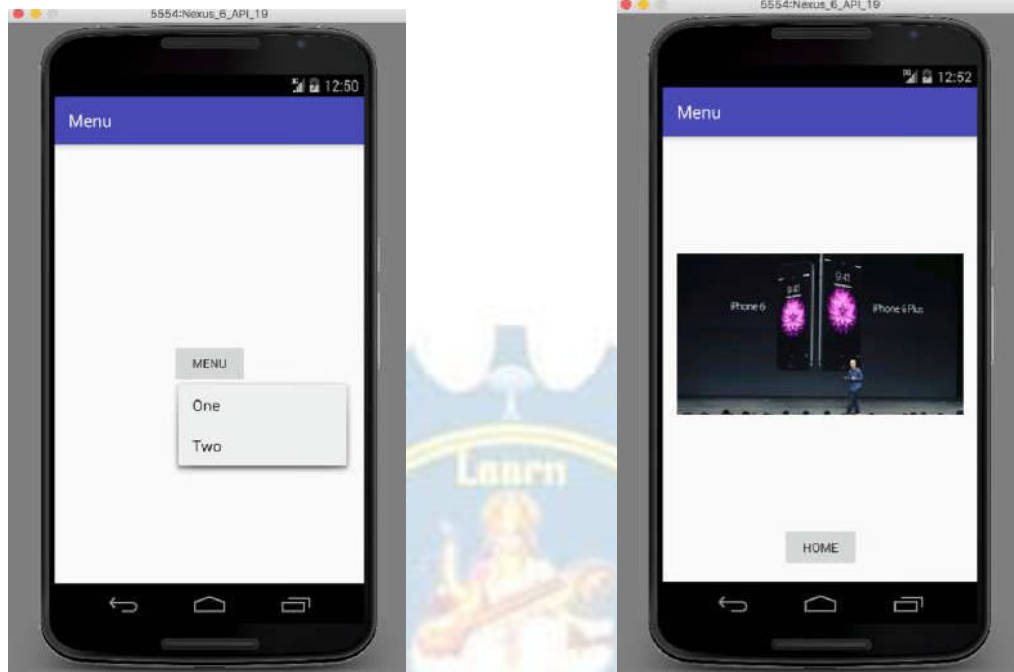
```
}  
  
});  
}  
}
```

Third.java

```
public class third extends AppCompatActivity {  
    Button back;  
    ImageView img;  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_third);  
        back=(Button)findViewById(R.id.back);  
        img=(ImageView)findViewById(R.id.imageView);  
        back.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View v) {  
                Intent i = new Intent(getApplicationContext(),MainActivity.class);  
                startActivity(i);  
                System.exit(0);  
            }  
        });  
    }  
}
```

Step 8: The output of the above code is as follows.

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EX NO 3

Native Calculator Application

AIM:

To create an Application to illustrates Native calculator application in Android.

Algorithm:

Step 1: Design for UI in layout file (activity_main.xml)



activity_main.xml

```
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context=".Home" android:background="#fff"
android:weightSum="1">
<LinearLayout
android:orientation="horizontal"
android:layout_width="match_parent"
android:layout_height="72dp"
android:id="@+id/onoff">
<Switch
```

```
android:layout_width="match_parent"
android:layout_height="match_parent"
android:id="@+id/switch1"
android:checked="false" />
</LinearLayout>
<LinearLayout
android:orientation="horizontal"
android:layout_width="match_parent"
android:layout_height="55dp"
android:layout_gravity="center_horizontal"
android:id="@+id/l1">
<EditText
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/display"
android:hint="Enter the Values"
android:layout_weight="1" />
</LinearLayout>
<LinearLayout
android:orientation="horizontal"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:gravity="center"
android:paddingTop="20dp"
android:id="@+id/l5">
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/one"
android:text="1" />
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/two"
android:text="2" />
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/three"
android:text="3" />
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/div"
android:text="/" />
</LinearLayout>
<LinearLayout
android:orientation="horizontal"
android:layout_width="fill_parent"
```

```
android:layout_height="wrap_content"
android:layout_gravity="center"
android:gravity="center"
android:paddingTop="20dp"
android:id="@+id/12">
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/four"
android:text="4" />
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/five"
android:text="5" />
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/six"
android:text="6" />
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/mul"
android:text="*" />
</LinearLayout>
<LinearLayout
android:orientation="horizontal"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:gravity="center"
android:paddingTop="20dp"
android:id="@+id/13">
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/seven"
android:text="7" />
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/eight"
android:text="8" />
<Button android:layout_width="55dp"
android:layout_height="wrap_content"
android:id="@+id/nine"
android:text="9" />
<Button android:layout_width="55dp"
```

```
android:layout_height="wrap_content"
android:id = "@+id/sub"
android:text="-" />
</LinearLayout>
<LinearLayout
android:orientation="horizontal"
android:layout_width="fill_parent"
android:layout_height="wrap_content"
android:gravity="center"
android:paddingTop="20dp"
android:id="@+id/l4">
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id = "@+id/cancel"
android:text="C" />
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id = "@+id/zero"
android:text="0" />
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id = "@+id/equal"
android:text="=" />
<Button
android:layout_width="55dp"
android:layout_height="wrap_content"
android:id = "@+id/add"
android:text="+" />
</LinearLayout>
</LinearLayout>
```

Step 2: Open MainActivity.java and add following code

```
package com.example.kamarajios33.calc;
import android.os.Bundle;
import android.app.Activity;
import android.support.annotation.RequiresPermission;
import android.text.Editable;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.CompoundButton;
import android.widget.EditText;
import android.widget.Switch;
```

```
public class MainActivity extends Activity implements View.OnClickListener
{
    Button one, two, three, four, five, six, seven, eight, nine, zero, add, sub, mul,
    div, cancel, equal;
    EditText disp;
    int op1;
    int op2;
    String opr;
    Switch onoff;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        onoff = (Switch)findViewById(R.id.switch1);
        onoff.setChecked(true);
        one = (Button) findViewById(R.id.one);
        two = (Button) findViewById(R.id.two);
        three = (Button) findViewById(R.id.three);
        four = (Button) findViewById(R.id.four);
        five = (Button) findViewById(R.id.five);
        six = (Button) findViewById(R.id.six);
        seven = (Button) findViewById(R.id.seven);
        eight = (Button) findViewById(R.id.eight);
        nine = (Button) findViewById(R.id.nine);
        zero = (Button) findViewById(R.id.zero);
        add = (Button) findViewById(R.id.add);
        sub = (Button) findViewById(R.id.sub);
        mul = (Button) findViewById(R.id.mul);
        div = (Button) findViewById(R.id.div);
        cancel = (Button) findViewById(R.id.cancel);
        equal = (Button) findViewById(R.id.equal);
        disp = (EditText) findViewById(R.id.display);
        onoff.setOnCheckedChangeListener(new
        CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton buttonView, boolean
            isChecked) {
                if(isChecked)
                {
                    one.setEnabled(true);
                    two.setEnabled(true);
                    three.setEnabled(true);
                    four.setEnabled(true);
                    five.setEnabled(true);
                    six.setEnabled(true);
                    seven.setEnabled(true);
```



```
eight.setEnabled(true);
nine.setEnabled(true);
zero.setEnabled(true);
add.setEnabled(true);
sub.setEnabled(true);
mul.setEnabled(true);
sub.setEnabled(true);
mul.setEnabled(true);
div.setEnabled(true);
cancel.setEnabled(true);
equal.setEnabled(true);
disp.setEnabled(true);
}
else
{
one.setEnabled(false);
two.setEnabled(false);
three.setEnabled(false);
four.setEnabled(false);
five.setEnabled(false);
six.setEnabled(false);
seven.setEnabled(false);
eight.setEnabled(false);
nine.setEnabled(false);
zero.setEnabled(false);
add.setEnabled(false);
sub.setEnabled(false);
mul.setEnabled(false);
sub.setEnabled(false);
mul.setEnabled(false);
div.setEnabled(false);
cancel.setEnabled(false);
equal.setEnabled(false);
disp.setEnabled(false);
}
});
try {
one.setOnClickListener(this);
two.setOnClickListener(this);
three.setOnClickListener(this);
four.setOnClickListener(this);
five.setOnClickListener(this);
six.setOnClickListener(this);
seven.setOnClickListener(this);
eight.setOnClickListener(this);
```



```
nine.setOnClickListener(this);
zero.setOnClickListener(this);
cancel.setOnClickListener(this);
add.setOnClickListener(this);
sub.setOnClickListener(this);
mul.setOnClickListener(this);
div.setOnClickListener(this);
equal.setOnClickListener(this);
} catch (Exception e) {
}
}
public void operation() {
if (optr.equals("+")) {
op2 = Integer.parseInt(dispatch.getText().toString());
dispatch.setText("");
op1 = op1 + op2;
dispatch.setText(Integer.toString(op1));
} else if (optr.equals("-")) {
op2 = Integer.parseInt(dispatch.getText().toString());
dispatch.setText("");
op1 = op1 - op2;
dispatch.setText(Integer.toString(op1));
} else if (optr.equals("*")) {
op2 = Integer.parseInt(dispatch.getText().toString());
dispatch.setText("");
op1 = op1 * op2;
dispatch.setText(Integer.toString(op1));
} else if (optr.equals("/")) {
op2 = Integer.parseInt(dispatch.getText().toString());
dispatch.setText("");
op1 = op1 / op2;
dispatch.setText(Integer.toString(op1));
}
}
@Override
public void onClick(View arg0)
{
Editable str = dispatch.getText();
switch (arg0.getId()) {
case R.id.one:
if (op2 != 0) {
op2 = 0;
dispatch.setText("");
}
str = str.append(two.getText());
dispatch.setText(str);
```

```
break;
case R.id.two:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(two.getText());
disp.setText(str);
break;
case R.id.three:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(three.getText());
disp.setText(str);
break;
case R.id.four:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(four.getText());
disp.setText(str);
break;
case R.id.five:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(five.getText());
disp.setText(str);
break;
case R.id.six:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(six.getText());
disp.setText(str);
break;
case R.id.seven:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
}
```



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```
str = str.append(seven.getText());
disp.setText(str);
break;
case R.id.eight:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(eight.getText());
disp.setText(str);
break;
case R.id.nine:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(nine.getText());
disp.setText(str);
break;
case R.id.zero:
if (op2 != 0) {
op2 = 0;
disp.setText("");
}
str = str.append(zero.getText());
disp.setText(str);
case R.id.cancel:
op1 = 0;
op2 = 0;
disp.setText("");
disp.setHint("Perform Operation");
break;
case R.id.add:
optr = "+";
if (op1 == 0) {
op1 = Integer.parseInt(disp.getText().toString());
disp.setText("");
}
else if (op2 != 0) {
op2 = 0;
disp.setText("");
}
else
{
op2 = Integer.parseInt(disp.getText().toString());
disp.setText("");
}
```



```
op1 = op1 + op2;
disp.setText(Integer.toString(op1));
}
break;
case R.id.sub:
optr = "-";
if (op1 == 0)
{
op1 = Integer.parseInt(disp.getText().toString());
disp.setText("");
}
else if (op2 != 0) {
op2 = 0;
disp.setText("");
}
else
{
op2 = Integer.parseInt(disp.getText().toString());
disp.setText("");
op1 = op1 - op2;
disp.setText(Integer.toString(op1));
}
break;
case R.id.mul:
optr = "*";
if (op1 == 0)
{
op1 = Integer.parseInt(disp.getText().toString());
disp.setText("");
}
else if (op2 != 0) {
op2 = 0;
disp.setText("");
}
else
{
op2 = Integer.parseInt(disp.getText().toString());
disp.setText("");
op1 = op1 * op2;
disp.setText(Integer.toString(op1));
}
break;
case R.id.div:
optr = "/";
if (op1 == 0)
{
```



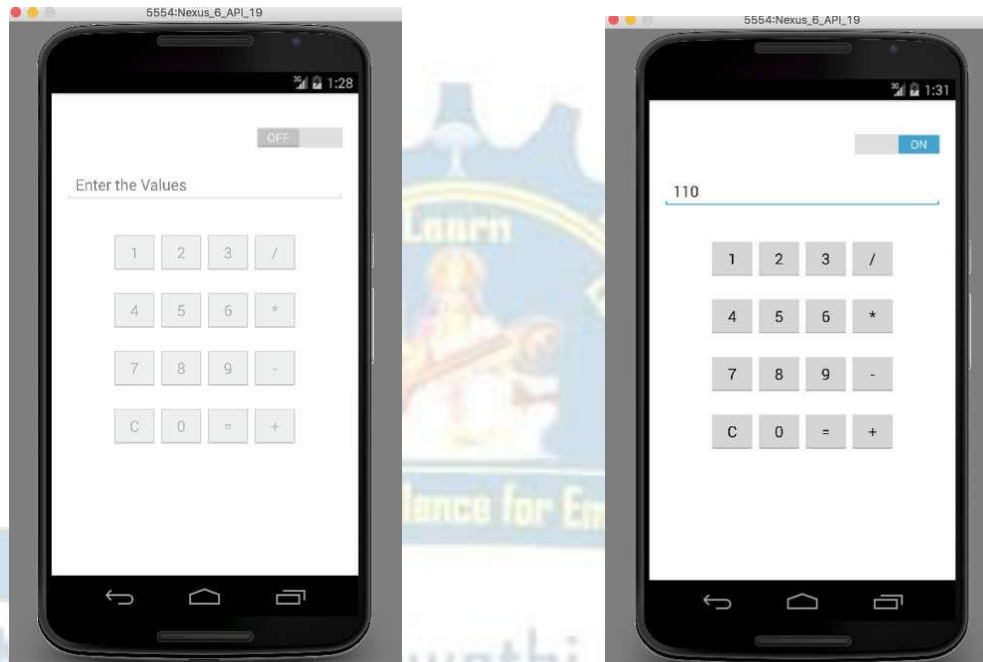
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```
op1 = Integer.parseInt(dispatch.getText().toString());
dispatch.setText("");
}
else if (op2 != 0) {
op2 = 0;
dispatch.setText("");
}
else
{
op2 = Integer.parseInt(dispatch.getText().toString());
dispatch.setText("");
op1 = op1 / op2;
dispatch.setText(Integer.toString(op1));
}
break;
case R.id.equal:
if (!optr.equals(null))
{
if (op2 != 0)
{
if (optr.equals("+"))
{
dispatch.setText("");
op1 = op1 + op2;
dispatch.setText(Integer.toString(op1));
}
else if (optr.equals("-"))
{
dispatch.setText("");
op1 = op1 - op2;
dispatch.setText(Integer.toString(op1));
}
else if (optr.equals("*"))
{
dispatch.setText("");
op1 = op1 * op2;
dispatch.setText(Integer.toString(op1));
}
else if (optr.equals("/"))
{
dispatch.setText("");
op1 = op1 / op2;
dispatch.setText(Integer.toString(op1));
}
}
else

```

```
{  
operation();  
}  
}  
break; }}}
```

Step 3: The output of the above code is as follows.



Step 4: Thus program to illustrate the Native calculator application for Android App was created.



EX NO 4

Graphical Primitives

Aim:

To create a program to illustrates the Graphical Primitives for Android App

Algorithm:

Step1: Create an android project using android IntelliJ Idea 15.

Step 2: After creating the project, open the java file named MainActivity.xml.

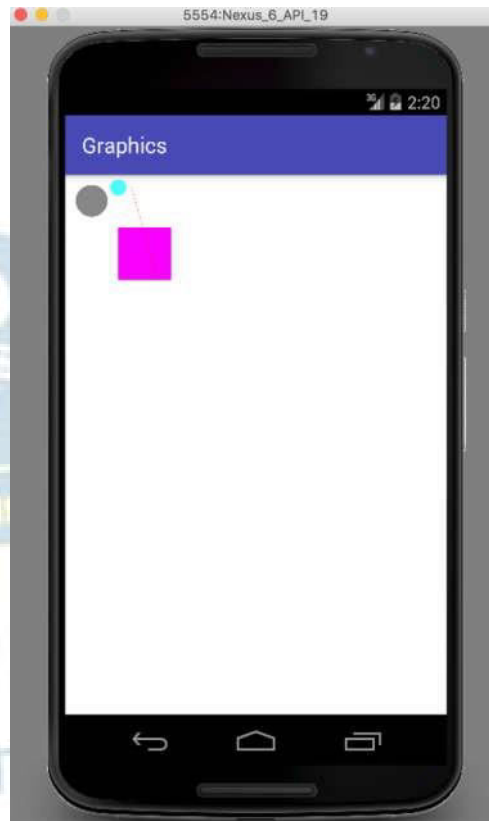
MainActivity.java

```
package com.example.kamarajios33.graphics;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.RectF;
import android.view.View;
public class MainActivity extends AppCompatActivity {
    DemoView dv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        dv = new DemoView(this);
        setContentView(dv);
    }
    private class DemoView extends View
    {
        public DemoView(Context context)
        {
            super(context);
        }
        @Override
        protected void onDraw(Canvas canvas)
        {
            super.onDraw(canvas);
            Paint ob=new Paint();
            ob.setStyle(Paint.Style.FILL);
            ob.setColor(Color.WHITE);
            canvas.drawPaint(ob);
            ob.setColor(Color.GRAY);
```



```
canvas.drawCircle(100, 100, 60, ob);  
ob.setColor(Color.CYAN);  
canvas.drawCircle(200, 50, 30, ob);  
ob.setColor(Color.MAGENTA);  
canvas.drawRect(200, 200, 400, 400, ob);  
ob.setColor(Color.RED);  
canvas.drawLine(250,50,350,400,ob);  
canvas.rotate(-45); }}}
```

Step 3: The output of the above code is as follows.



Step 4: Thus program to illustrate the Graphics Primitives for Android App was created.

EX NO 5

Running the SQLite App

Aim:

To create a program to illustrates the Running the SQLite for Android App

Algorithm:

Step 1: Create an android project using android studio

Step 2: Create two resource files (*.xml) and two activity files (*.java) named activity_main.xml and MainActivity.java

Step 3: Open res directory -> layout -> activity_main.xml -> Click -> Design button at bottom of the Android Studio. Put the necessary components for both resource file (activity_main.xml)

Step 4: Design (After the design part, the xml code will be generated automatically in the layout file)



activity_main.xml



Step 5: Create an activity file

MainActivity.java

```
package com.example.DBconc;
import android.app.Activity;
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;
import android.widget.Button;
import android.widget.EditText;

public class MyActivity extends Activity implements View.OnClickListener {
    EditText editEmpid,editName,editsalary;
    Button btnAdd,btnDelete,btnModify,btnView,btnViewAll;
    SQLiteDatabase db;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        editEmpid=(EditText)findViewById(R.id.editEmpid);
        editName=(EditText)findViewById(R.id.editName);
        editsalary=(EditText)findViewById(R.id.editsalary);
        btnAdd=(Button)findViewById(R.id.btnAdd);
        btnDelete=(Button)findViewById(R.id.btnDelete);
        btnModify=(Button)findViewById(R.id.btnModify);
        btnView=(Button)findViewById(R.id.btnView);
        btnViewAll=(Button)findViewById(R.id.btnViewAll);
        btnAdd.setOnClickListener(this);
        btnDelete.setOnClickListener(this);
        btnModify.setOnClickListener(this);
        btnView.setOnClickListener(this);
        btnViewAll.setOnClickListener(this);
        db=openOrCreateDatabase("EmployeeDB", Context.MODE_PRIVATE, null);
        db.execSQL("CREATE TABLE IF NOT EXISTS employee(empid VARCHAR,name
VARCHAR,salary VARCHAR);");
    }
    public void onClick(View view)
    {
        if(view==btnAdd)
        {
```



```
if(editEmpid.getText().toString().trim().length()==0||
    editName.getText().toString().trim().length()==0||
    editsalary.getText().toString().trim().length()==0)
{
    showMessage("Error", "Please enter all values");
    return;
}
db.execSQL("INSERT INTO employee
VALUES("+editEmpid.getText()+","+editName.getText()+","+editsalary.getText()+");");
showMessage("Success", "Record added");
clearText();
}
if(view==btnDelete)
{
    if(editEmpid.getText().toString().trim().length()==0)
    {
        showMessage("Error", "Please enter Employee id");
        return;
    }
    Cursor c=db.rawQuery("SELECT * FROM employee WHERE
empid="+editEmpid.getText()+"" , null);
    if(c.moveToFirst())
    {
        db.execSQL("DELETE FROM employee WHERE
empid="+editEmpid.getText()+""");
        showMessage("Success", "Record Deleted");
    }
    else
    {
        showMessage("Error", "Invalid Employee id");
    }
    clearText();
}
if(view==btnModify)
{
    if(editEmpid.getText().toString().trim().length()==0)
    {
        showMessage("Error", "Please enter Employee id");
        return;
    }
    Cursor c=db.rawQuery("SELECT * FROM employee WHERE
empid="+editEmpid.getText()+"" , null);
    if(c.moveToFirst())
    {
        db.execSQL("UPDATE employee SET
name="+editName.getText()+",salary="+editsalary.getText()+"" WHERE
```

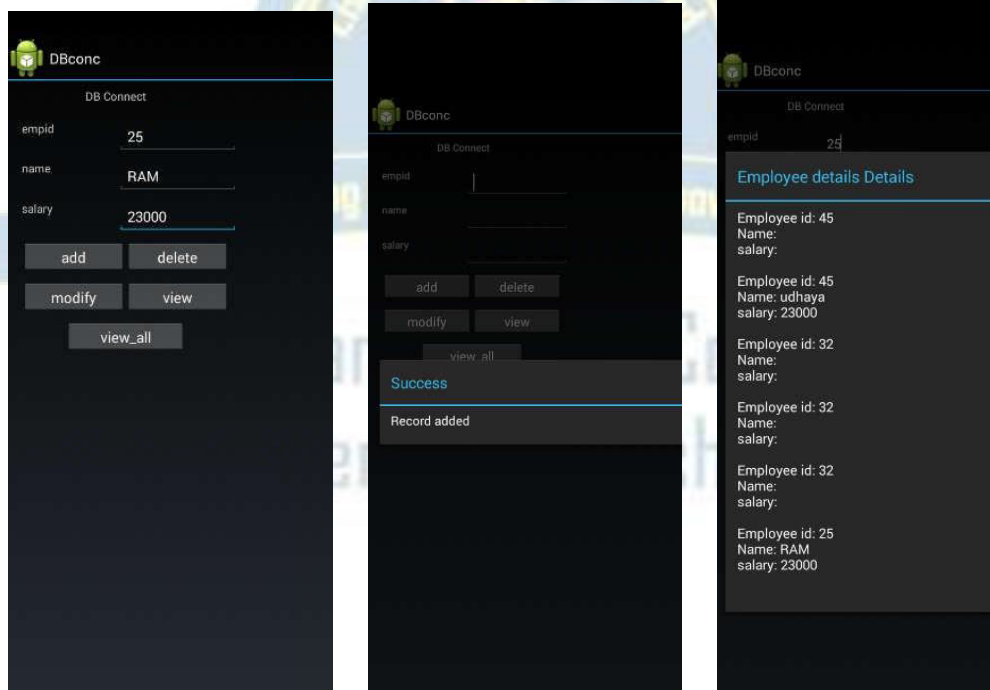
```
empid="" + editEmpid.getText() + """);
    showMessage("Success", "Record Modified");
}
else
{
    showMessage("Error", "Invalid Rollno");
}
clearText();
}
if(view == btnView)
{
    if(editEmpid.getText().toString().trim().length() == 0)
    {
        showMessage("Error", "Please enter Employee id");
        return;
    }
    Cursor c = db.rawQuery("SELECT * FROM employee WHERE
empid="" + editEmpid.getText() + """, null);
    if(c.moveToFirst())
    {
        editName.setText(c.getString(1));
        editSalary.setText(c.getString(2));
    }
    else
    {
        showMessage("Error", "Invalid Employee id");
        clearText();
    }
}
if(view == btnViewAll)
{
    Cursor c = db.rawQuery("SELECT * FROM employee", null);
    if(c.getCount() == 0)
    {
        showMessage("Error", "No records found");
        return;
    }
    StringBuffer buffer = new StringBuffer();
    while(c.moveToNext())
    {
        buffer.append("Employee id: " + c.getString(0) + "\n");
        buffer.append("Name: " + c.getString(1) + "\n");
        buffer.append("salary: " + c.getString(2) + "\n\n");
    }
    showMessage("Employee details 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()
{
    editEmpid.setText("");
    editName.setText("");
    editsalary.setText("");
    editEmpid.requestFocus();
}
}
}

```

Step 6: Run the project. While running, the following output will be shown in the emulator



Step 7: Thus program to illustrate the Running the SQLite for Android App was created.

EX NO 6

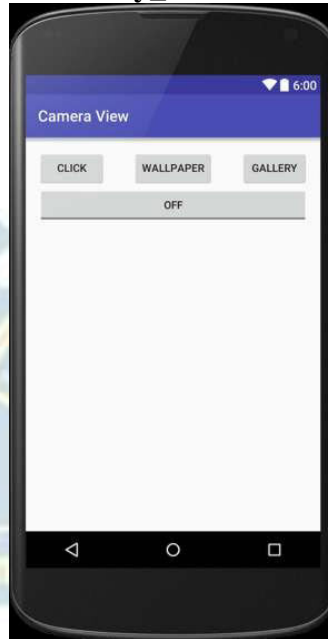
Running the Multithreading App

Step 1: Select File -> New -> Project -> Android Application Project (or) Android Project. Fill the forms and click “Finish” button.

Step 2: Open res -> layout -> activity_main.xml -> click Design -> Put the necessary components in the layout.

Step 3: Create a layout file for UI (Design for UI after that the code will be generated automatically in activity_main.xml)

activity_main.xml



(Image View Component also inserted)

Step 4: Right Click res -> New -> Android Resource directory -> select “raw”
Resource type -> Ok

Step 5: Open res -> raw and add *.mp3 file

Step 6: Open java -> Main Activity.java and add following code

MainActivity.java

```
package com.example.kamarajios33.cameraview;
import android.content.Intent;
import android.database.Cursor;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.media.MediaPlayer;
import android.net.Uri;
import android.provider.MediaStore;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
import android.widget.ImageView;
import android.widget.Toast;
import android.widget.ToggleButton;
public class MainActivity extends AppCompatActivity {
private static final int CAMERA_REQUEST= 1888;
String p;
ImageView i;
Button bu,wall,b3;
Bitmap photo;
ToggleButton t;
MediaPlayer m;
int flag = 0;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
i=(ImageView)findViewById(R.id.img);
bu=(Button)findViewById(R.id.b1);
wall=(Button)findViewById(R.id.wall);
b3=(Button)findViewById(R.id.b3);
t=(ToggleButton)findViewById(R.id.tb);
bu.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
Intent in = new Intent(MediaStore.ACTION_IMAGE_CAPTURE);
startActivityForResult(in,CAMERA_REQUEST);
}
});
m = MediaPlayer.create(MainActivity.this,R.raw.sam);
wall.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
try {
if (flag == 1) {
getApplicationContext().setWallpaper(BitmapFactory.decodeFile(p));
Toast.makeText(getApplicationContext(), "Wallpaper Changed from
Gallery", Toast.LENGTH_SHORT).show();
} else if (flag == 2) {
getApplicationContext().setWallpaper(photo);
Toast.makeText(getApplicationContext(), "Wallpaper Changed from
Camera", Toast.LENGTH_SHORT).show();
}
}
else {
Toast.makeText(getApplicationContext(), "Wallpaper Not Set",
Toast.LENGTH_SHORT).show();
}
}
}
```



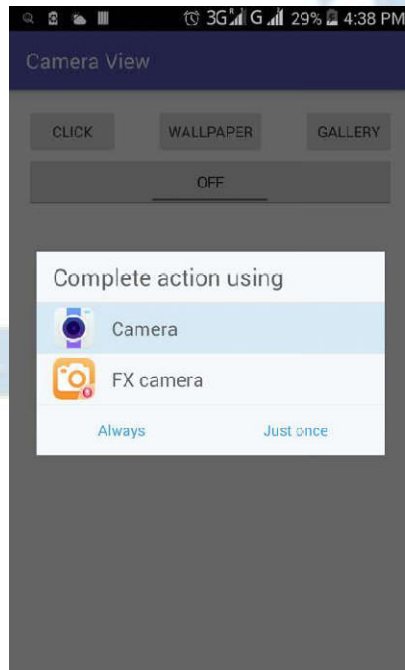
```
}  
catch (Exception e)  
{  
e.printStackTrace();  
}  
});  
b3.setOnClickListener(new View.OnClickListener() {  
@Override  
public void onClick(View v) {  
Intent in1 = new  
Intent(Intent.ACTION_PICK,MediaStore.Images.Media.EXTERNAL_CONTENT_U  
RI);  
startActivityForResult(in1,2);  
}  
});  
t.setOnClickListener(new View.OnClickListener() {  
@Override  
public void onClick(View v) {  
boolean checked = ((ToggleButton) v).isChecked();  
if(checked)  
{  
m.start();  
t.setText("Media Player On");  
}  
else {  
m.pause();  
t.setText("Media Player Pause");  
}  
}  
});  
protected void onActivityResult(int requestCode,int resultCode,Intent data)  
{  
if(requestCode==CAMERA_REQUEST)  
{  
photo = (Bitmap)data.getExtras().get("data");  
i.setImageBitmap(photo);  
flag =2;  
}  
if(requestCode==2 && resultCode == RESULT_OK)  
{  
Uri sel = data.getData();  
String[] file = {MediaStore.Images.Media.DATA};  
Cursor c = getContentResolver().query(sel, file, null, null, null);  
c.moveToFirst();
```

```
int co = c.getColumnIndex(file[0]);  
p = c.getString(co);  
c.close();  
i.setImageBitmap(BitmapFactory.decodeFile(p));  
flag = 1;  
}}}
```

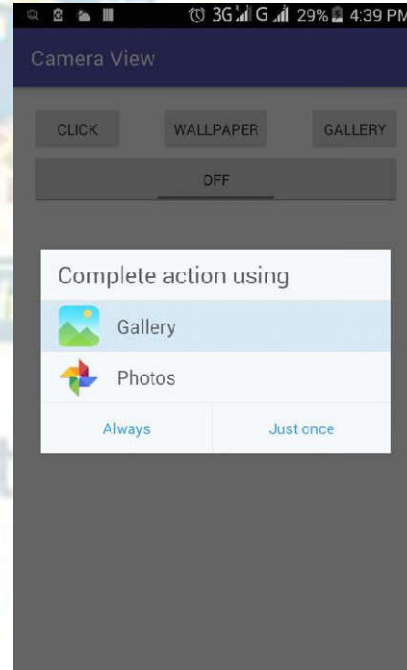
Step 7: Open AndroidManifest.xml and add following code

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

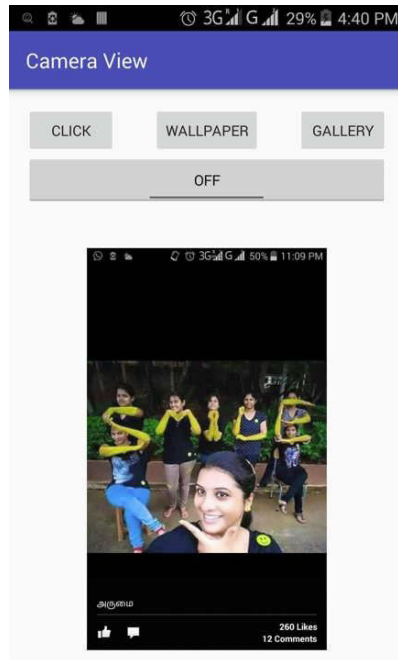
Step 8: The Output of the above code is as follows. As we have discussed,
Multithreading App is easy.



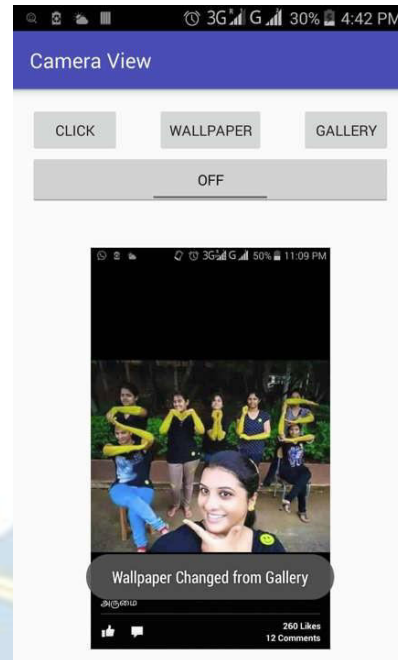
Click **CLICK** button



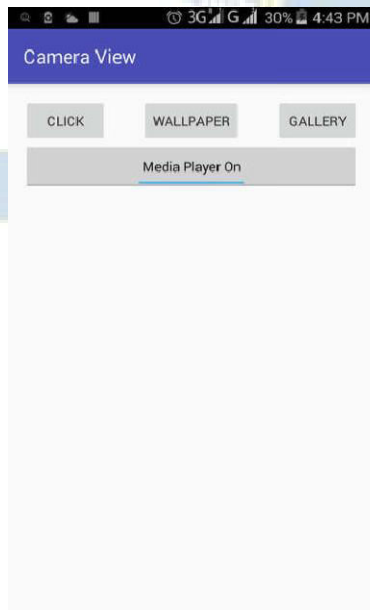
Click **GALLERY** button



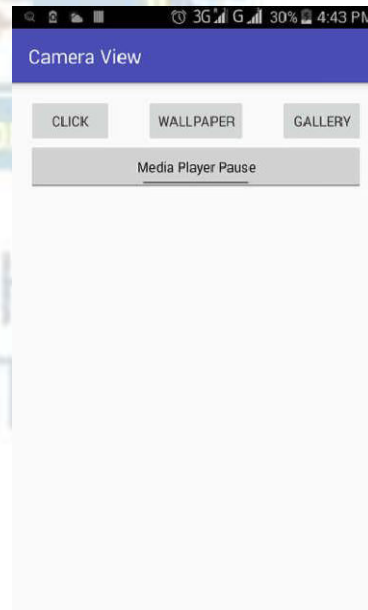
After click the **GALLERY** button



Click **WALLPAPER** button



Click Toggle (OFF) button



EX NO 7

External data Storage

Aim :

This program describe implement an application that writes data to the SD card

Algorithm:

Step 1: Select File -> New -> Project -> Android Application Project (or) Android Project. Fill the forms and click “Finish” button.

Step 2: Open res -> layout -> activity_main.xml -> click Design -> Put the necessary components in the layout.

Step 3: Create a layout file for UI (Design for UI after that the code will be generated automatically in activity_main.xml)



Design - activity_main.xml

Step 4: Create an activity file

MainActivity.java

```
package com.example.kamarajioslab01.sdcard;
import android.os.Environment;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import java.io.BufferedReader;
import java.io.File;
```



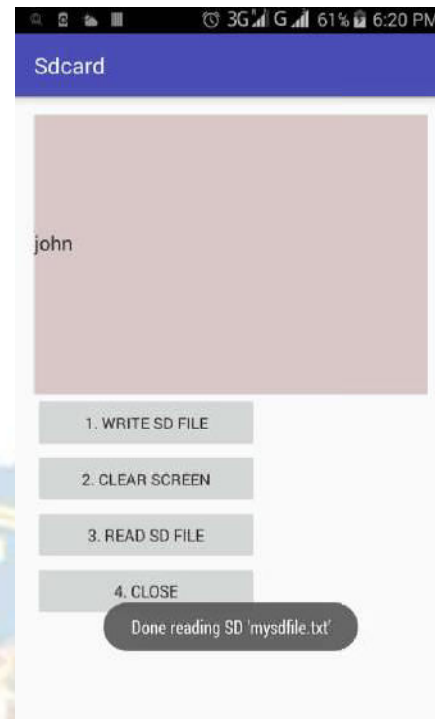
```
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.InputStreamReader;
import java.io.OutputStreamWriter;
public class MainActivity extends AppCompatActivity {
    EditText txtData;
    Button btnWriteSDFFile;
    Button btnReadSDFFile;
    Button btnClearScreen;
    Button btnClose;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        txtData = (EditText) findViewById(R.id.txtData);
        txtData.setHint("Enter some lines of data here...");
        btnWriteSDFFile = (Button) findViewById(R.id.btnWriteSDFFile);
        btnWriteSDFFile.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // write on SD card file data in the text box
                try {
                    //File file= Environment.getExternalStorageDirectory();
                    File myFile = new File("/sdcard/mysdfile.txt");
                    myFile.createNewFile();
                    FileOutputStream fOut = new FileOutputStream(myFile);
                    OutputStreamWriter myOutWriter =
                    new OutputStreamWriter(fOut);
                    myOutWriter.append(txtData.getText());
                    myOutWriter.close();
                    fOut.close();
                    Toast.makeText(getApplicationContext(),
                    "Done writing SD 'mysdfile.txt'",
                    Toast.LENGTH_SHORT).show();
                } catch (Exception e) {
                    Toast.makeText(getApplicationContext(), e.getMessage(),
                    Toast.LENGTH_SHORT).show();
                }
            }
        }); // btnWriteSDFFile
        btnReadSDFFile = (Button) findViewById(R.id.btnReadSDFFile);
        btnReadSDFFile.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // write on SD card file data in the text box
                try {
```

```
File myFile = new File("/sdcard/mysdfile.txt");
FileInputStream fIn = new FileInputStream(myFile);
BufferedReader myReader = new BufferedReader(
new InputStreamReader(fIn));
String aDataRow = "";
String aBuffer = "";
while ((aDataRow = myReader.readLine()) != null) {
aBuffer += aDataRow + "\n";
}
txtData.setText(aBuffer);
myReader.close();
Toast.makeText(getApplicationContext(),
"Done reading SD 'mysdfile.txt'",
Toast.LENGTH_SHORT).show();
} catch (Exception e) {
Toast.makeText(getApplicationContext(), e.getMessage(),
Toast.LENGTH_SHORT).show();
}
} // onClick
}); // btnReadSDFile
btnClearScreen = (Button) findViewById(R.id.btnClearScreen);
btnClearScreen.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
txtData.setText("");
}
}); // btnClearScreen
btnClose = (Button) findViewById(R.id.btnClose);
btnClose.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
// clear text box
finish();
}
}); // btnClose
} // onCreate
} // AndSDcard
```

Step 5: Open **AndroidManifest.xml** and add following code

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

Step 6: Run the Project. While running, the following output will be shown in the emulator.





EX NO 8

Running the Alert App

Step 1: Select File -> New -> Project -> Android Application Project (or) Android Project. Fill the forms and click “Finish” button.

Step 2: Create an activity file

MainActivity.java

```
package com.example.notimsg;
import android.app.Activity;
import android.app.AlertDialog;
import android.content.Context;
import android.content.DialogInterface;
import android.os.Bundle;
import android.view.View;
import android.view.Window;
import android.widget.Button;
import android.widget.Toast;

public class MyActivity extends Activity {
    Button b;
    protected void onCreate(Bundle savedInstanceState) {

        requestWindowFeature(Window.FEATURE_NO_TITLE);
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        b=(Button)findViewById(R.id.button);
        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                dispose();
            }
        });
    }

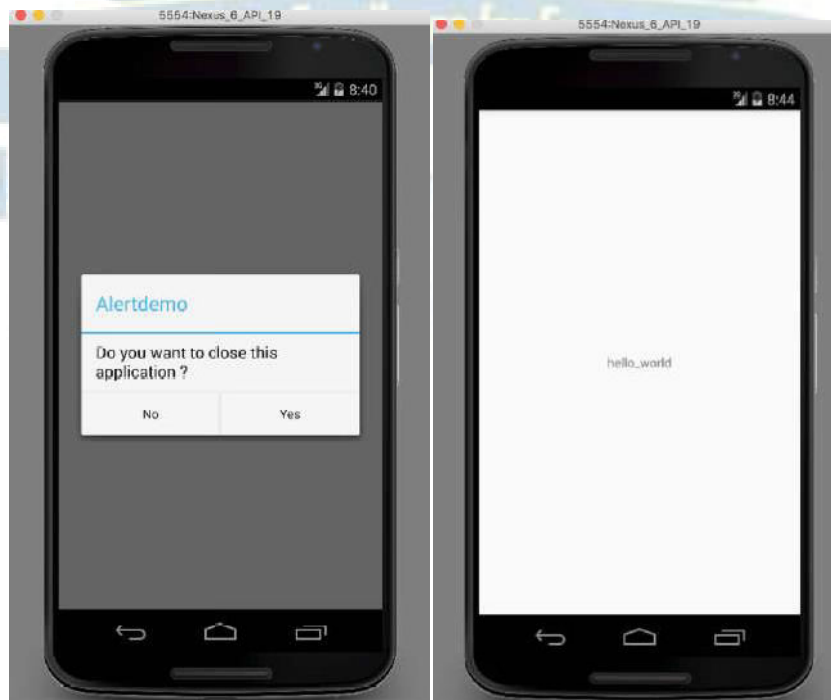
    public void dispose() {
        AlertDialog.Builder builder = new AlertDialog.Builder(this);
        Context context = getApplicationContext();

        String text = "Hello toast!";
        int duration = Toast.LENGTH_SHORT;
        Toast toast = Toast.makeText(context, text, duration); toast.show();
        Toast.makeText(this, "Heelo Toast ", Toast.LENGTH_SHORT).show();
        builder.setMessage("Do you want to close this application ?")
            .setCancelable(false)
            .setPositiveButton("Yes", new DialogInterface.OnClickListener() {
```



```
public void onClick(DialogInterface dialog, intid) {  
    finish();  
}  
}  
    .setNegativeButton("No", new DialogInterface.OnClickListener() {  
public void onClick(DialogInterface dialog, intid) {  
  
    dialog.cancel();  
    }  
    });  
  
    AlertDialog alert = builder.create();  
    alert.setTitle("Alertdemo");  
    alert.show();  
  
    }  
  
}
```

Step 3: Run the Project. While running, the following output will be shown in the emulator.



EX NO 9

GPS LOCATOR

Step 1:

To use GPS in your application first of all you must specify the uses-permission in Android manifest file:AndroidManifest.xml

```
<manifest>  
<uses-permission  
android:name="android.permission.ACCESS_FINE_LOCATION"></usespermission>
```

Step 2: Create a Activity Layout

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayoutxmlns:android="http://schemas.android.com/apk/res/andro id"  
android:layout_width="fill_parent"  
android:layout_height="fill_parent"  
android:orientation="vertical" >  
<TextViewandroid:id="@+id/gps_text"  
android:layout_width="fill_parent"  
android:layout_height="wrap_content"  
android:text="@string/hello" />  
</LinearLayout>
```

Step 3: Create a Java Class file

```
import java.io.IOException;  
import java.util.List;  
import java.util.Locale;  
import android.app.Activity;  
import android.content.Context;  
import android.location.Address;  
import android.location.Geocoder;  
import android.location.Location;  
import android.location.LocationListener;  
import android.location.LocationManager;  
import android.os.Bundle;  
import android.widget.TextView;  
import android.widget.Toast;  
public class CurrentLocationActivity extends Activity {  
/** Called when the activity is first created. */  
Private TextView;  
super.onCreate(savedInstanceState);  
setContentView(R.layout.main);  
gpsLocationView=(TextView) findViewById(R.id.gps_text);  
/* Use the LocationManager class to obtain GPS locations */
```

```
LocationManager
mlocManager=(LocationManager)getService(Context.LOCATION_SERVICE);
LocationListenrmlocListener = new MyLocationListener();
mlocManager.requestLocationUpdates(LocationManager.GPS_PROVIDER, 0,
0, mlocListener);
}
/* Class My Location Listener */
public class MyLocationListener implements LocationListener
{
@Override
public void onLocationChanged(Location loc)
{
loc.getLatitude();
loc.getLongitude();
Geocoder gcd = new Geocoder(getApplicationContext(),
Locale.getDefault());
Try
{
addresses = gcd.getFromLocation(loc.getLatitude(),loc.getLongitude(), 1);
}
catch (IOException e)
{
// TODO Auto-generated catch block
e.printStackTrace();
}
String text=(addresses!=null?"City : "+addresses.get(0).getSubLocality()+"\n Country
: "+addresses.get(0).getCountryName():"Unknown Location";
String locationValue = "My current location is: "+ text;
gpsLocationView.setText(locationValue);
}
@Override
public void onProviderDisabled(String provider)
{
Toast.makeText(getApplicationContext(),"Gps
Disabled",Toast.LENGTH_SHORT ).show();
}
@Override
public void onProviderEnabled(String provider)
{
Toast.makeText(getApplicationContext(),"Gps
Enabled",Toast.LENGTH_SHORT).show();
}
@Override
public void onStatusChanged(String provider, int status, Bundle extras)
{
}
}
```

}

}

Output :



EX NO 10

Running the alarm Clock App

Step 1: Create an android project using android studio

Step 2: Create a layout file for UI.



activity_main.xml

(After design, the code will be generated automatically in activity_main.xml file)

Step 3: Right Click res -> New -> Android Resource directory -> select “raw” Resource type -> Ok

Step 4: Open res -> raw and add *.mp3 file

Step 5: After creating the layout, open the manifest file named AndroidManifest.xml. Define the receiver using the <receiver> tag.

The code for **AndroidManifest.xml** is given below.

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.kamarajios33.alaran" >
<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="alarm"/>
</application>
</manifest>
```

Step 6: Create a alarm class by receiving the broadcast service.

alarm.java

```
package com.example.kamarajios33.alarm;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.media.MediaPlayer;
import android.widget.*;
/**
 * Created by kamarajios33 on 13/11/15.
 */
public class alarm extends BroadcastReceiver {
    MediaPlayer m;
    public void onReceive(Context context,Intent intent)
    {
        m = MediaPlayer.create(context,R.raw.cine1);
        m.start();
        Toast.makeText(context, "Alarm... Get up", Toast.LENGTH_LONG).show();
    }
}
```

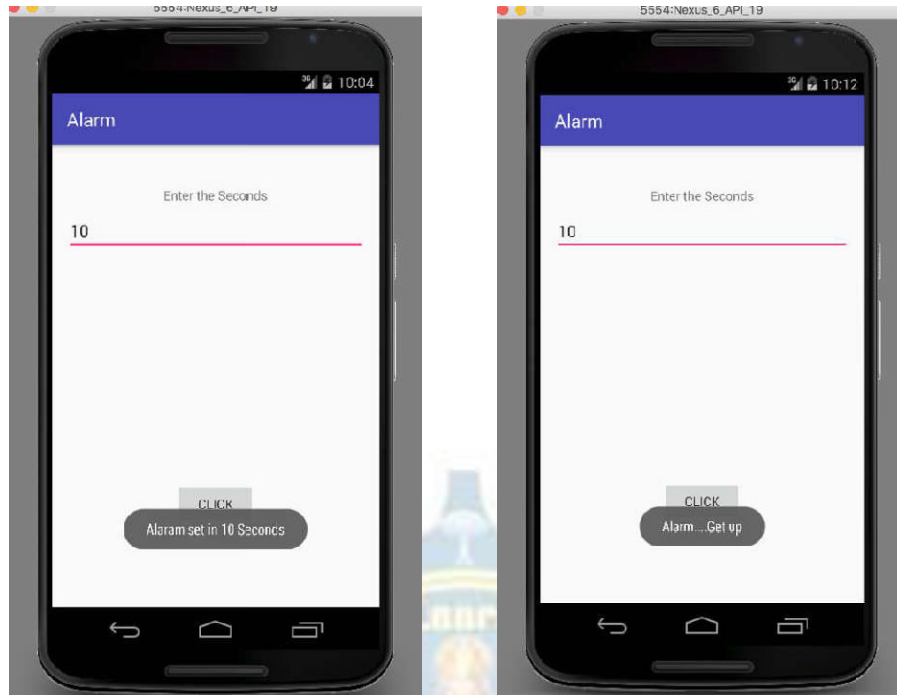
Step 7: Create an activity file.

MainActivity.java

```
package com.example.kamarajios33.alarm;
import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    Button b1;
    TextView t1;
```

```
EditText e1;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    b1=(Button)findViewById(R.id.b1);
    t1=(TextView)findViewById(R.id.t1);
    e1=(EditText)findViewById(R.id.e1);
    b1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            startalert();}
        });}
    public void startalert()
    {
        int i = Integer.parseInt(e1.getText().toString());
        Intent in = new Intent(this,alarm.class);
        PendingIntent pendingIntent = PendingIntent.getBroadcast(getApplicationContext(),
        900000,in,0);
        AlarmManager
        alarmManager=(AlarmManager) getSystemService(ALARM_SERVICE);
        alarmManager.set(AlarmManager.RTC_WAKEUP,System.currentTimeMillis()+
        (i*1000),pendingIntent);
        Toast.makeText(getApplicationContext(),"Alaram set in " + i + "
        Seconds",Toast.LENGTH_LONG).show();
    }
}
```

Step 8: Run the Project, While running, the following output will be shown in emulator.

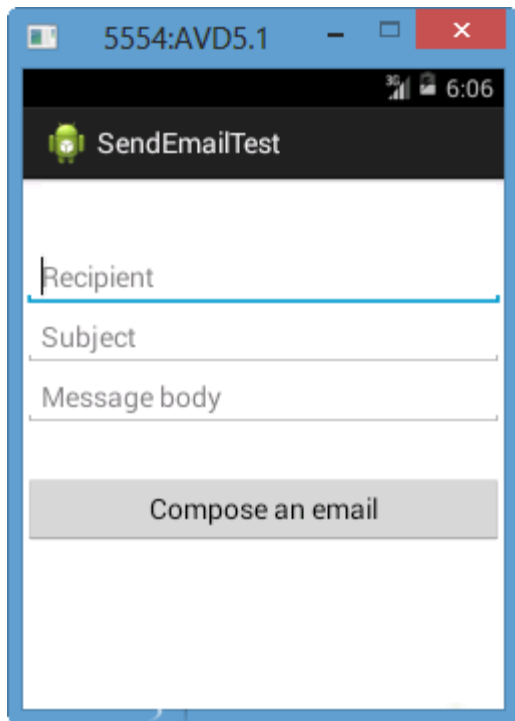


EX NO 10

Ex.No.14 Sending an Email

Step 1: Create an android project using android studio

Step 2: Create a layout file for UI.



Step 3: create Activity file

```
package com.example.tutorialspoint;

import android.net.Uri;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.util.Log;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;

public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Button startBtn = (Button) findViewById(R.id.sendEmail);
        startBtn.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                sendEmail();
            }
        });
    }
};
```

```

}

protected void sendEmail() {
    Log.i("Send email", "");
    String[] TO = {""};
    String[] CC = {""};
    Intent emailIntent = new Intent(Intent.ACTION_SEND);

    emailIntent.setData(Uri.parse("mailto:"));
    emailIntent.setType("text/plain");
    emailIntent.putExtra(Intent.EXTRA_EMAIL, TO);
    emailIntent.putExtra(Intent.EXTRA_CC, CC);
    emailIntent.putExtra(Intent.EXTRA_SUBJECT, "Your subject");
    emailIntent.putExtra(Intent.EXTRA_TEXT, "Email message goes
here");

    try {
        startActivity(Intent.createChooser(emailIntent, "Send
mail..."));
        finish();
        Log.i("Finished sending email...", "");
    } catch (android.content.ActivityNotFoundException ex) {
        Toast.makeText(MainActivity.this, "There is no email client
installed.", Toast.LENGTH_SHORT).show();
    }
}
}

```

Step 4: Create an XML file

```

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

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Sending Mail Example"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:textSize="30dp" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Tutorials point "
        android:textColor="#ff87ff09"
        android:textSize="30dp"
        android:layout_above="@+id/imageButton"
        android:layout_alignRight="@+id/imageButton"
        android:layout_alignEnd="@+id/imageButton" />

    <ImageButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

```

```

        android:id="@+id/imageButton"
        android:src="@drawable/abc"
        android:layout_centerVertical="true"
        android:layout_centerHorizontal="true" />

<Button
    android:id="@+id/sendEmail"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:text="@string/compose_email"/>

</LinearLayout>

```

Following will be the content of **res/values/strings.xml** to define two new constants –

```

<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="app_name">Tutorialspoint</string>
    <string name="compose_email">Compose Email</string>
</resources>

```

Following is the default content of **AndroidManifest.xml** –

```

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

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >

        <activity
            android:name="com.example.tutorialspoint.MainActivity"
            android:label="@string/app_name" >

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

        </activity>

    </application>
</manifest>

```

Step 5: Run the Project. The output of the project will be

To

Your subject

Email message goes here

