MOBILE TECHNOLOGIES
PRACTICAL ASSIGNMENTS

android

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ASSIGNMENT – 1

- **Android Program to Demonstrate Usage of String.xml File**

strings.xml

```xml
<resources>
    <string name="app_name">Sample</string>
    <string name="NameOfTheString">Test string</string>
</resources>
```

activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout

xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        android:text="@string/NameOfTheString"
        app:layout_constraintTop_toTopOf="parent" />
</android.support.constraint.ConstraintLayout>
```
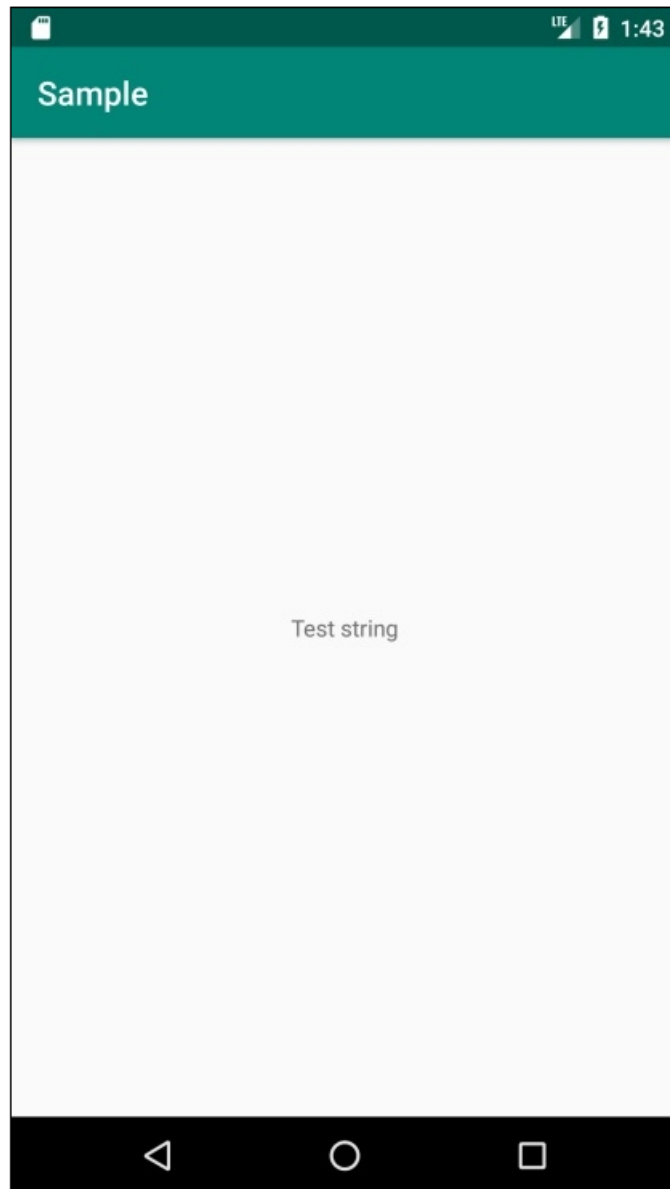
MainActivity.java

```java
package com.example.sample;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
public class MainActivity extends AppCompatActivity
{
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

AndroidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/an
droid" package="com.example.sample">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action
android:name="android.intent.action.MAIN" />
                <category
android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
```

```
</application>
</manifest>
```

Output :

ASSIGNMENT – 2

- **Android Program to Demonstrate Activity Life Cycle**

activity_main.xml

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

tools:context="example.javatpoint.com.activitylifecycle.MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"

app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"

app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</android.support.constraint.ConstraintLayout>
```

MainActivity.java

```java
package example.javatpoint.com.activitylifecycle;

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

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d("lifecycle","onCreate invoked");
    }
    @Override
    protected void onStart() {
        super.onStart();
        Log.d("lifecycle","onStart invoked");
    }
    @Override
    protected void onResume() {
        super.onResume();
        Log.d("lifecycle","onResume invoked");
    }
    @Override
    protected void onPause() {
        super.onPause();
        Log.d("lifecycle","onPause invoked");
    }
    @Override
    protected void onStop() {
        super.onStop();
        Log.d("lifecycle","onStop invoked");
```
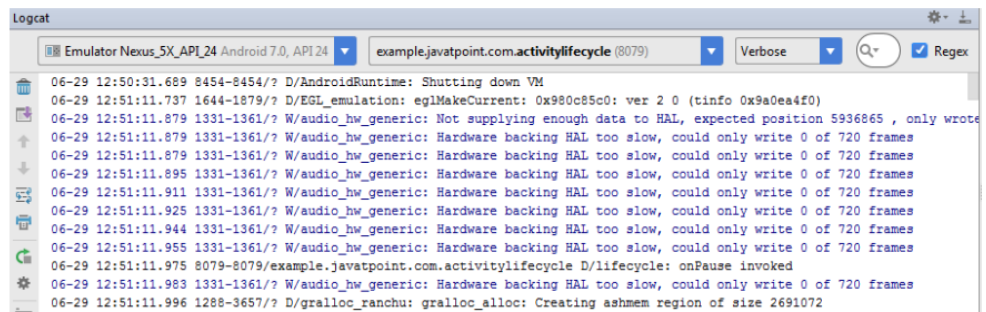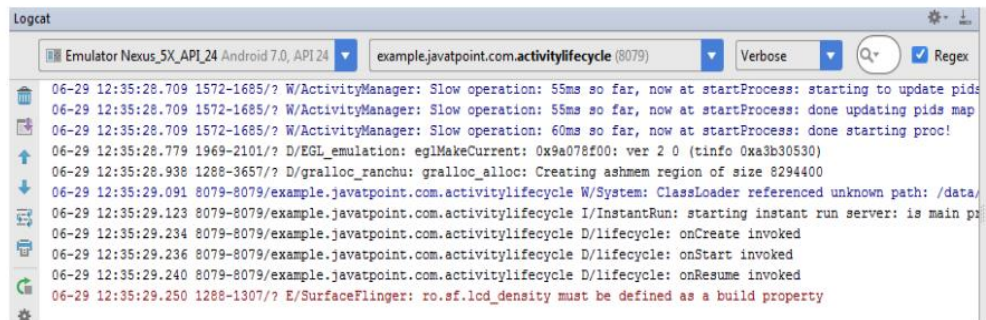
```
        }
        @Override
        protected void onRestart() {
            super.onRestart();
            Log.d("lifecycle","onRestart invoked");
        }
        @Override
        protected void onDestroy() {
            super.onDestroy();
            Log.d("lifecycle","onDestroy invoked");
        }
    }
```

Output :

ASSIGNMENT – 3

- **Android Program to Change the Background of your Activity**

activity_main.xml

```xml
<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:id="@+id/relativeLayout"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:textStyle="bold"
        android:textSize="24sp"
        android:text="The color of the Activity is
Yellow"/>
</RelativeLayout>
```

MainActivity.java

```java
import android.graphics.Color;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.RelativeLayout;
public class MainActivity extends AppCompatActivity
{
    RelativeLayout relativeLayout;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        relativeLayout =
findViewById(R.id.relativeLayout);

relativeLayout.setBackgroundColor(Color.YELLOW);
    }
}
```

androidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/android"
    package="app.com.sample">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
```

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

Output :

ASSIGNMENT – 4

- **Android Program to Perform all operations using Calculator**

MainActivity.java

```java
package com.example.calculator;
import android.R.color;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends Activity
implements OnClickListener {
    TextView disp, res;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        disp = (TextView)
findViewById(R.id.textView1);
        res = (TextView)
findViewById(R.id.textView2);
        Button add = (Button)
findViewById(R.id.add);
        Button mul = (Button)
findViewById(R.id.mul);
        Button divide = (Button)
findViewById(R.id.divide);
        Button sub = (Button)
findViewById(R.id.sub);
```

```java
        Button log = (Button)
findViewById(R.id.log);
        Button clear = (Button)
findViewById(R.id.clear);
        Button calc = (Button)
findViewById(R.id.calculate);
        Button change = (Button)
findViewById(R.id.color);
        add.setOnClickListener(this);
        mul.setOnClickListener(this);
        divide.setOnClickListener(this);
        sub.setOnClickListener(this);
        log.setOnClickListener(this);
        clear.setOnClickListener(this);
        calc.setOnClickListener(this);
        change.setOnClickListener(this);
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action bar if it is present.
        getMenuInflater().inflate(R.menu.main,
menu);
        return true;
    }
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        float result = 0, num1, num2;
        Toast var;
        switch (v.getId()) {
        case R.id.add:
            String str =(String) disp.getText();
            num1 = Integer.parseInt(str);
            disp.setText("");
```

```java
                var = Toast.makeText(MainActivity.this,
"Enter other number",
                        Toast.LENGTH_SHORT);
            var.show();
            str=(String) disp.getText();
            num2 = Integer.parseInt(str);
            result = num1 + num2;
            break;

        case R.id.sub:
            num1 = Integer.parseInt((String)
disp.getText());
            disp.setText("");
            var = Toast.makeText(MainActivity.this,
"Enter other number",
                        Toast.LENGTH_SHORT);
            var.show();
            num2 = Integer.parseInt((String)
disp.getText());
            result = num1 - num2;
            break;
        case R.id.mul:
            num1 = Integer.parseInt((String)
disp.getText());
            disp.setText("");
            var = Toast.makeText(MainActivity.this,
"Enter other number",
                        Toast.LENGTH_SHORT);
            var.show();
            num2 = Integer.parseInt((String)
disp.getText());
            result = num1 * num2;
            break;
        case R.id.divide:
            num1 = Integer.parseInt((String)
disp.getText());
```

```java
                disp.setText("");
                var = Toast.makeText(MainActivity.this,
"Enter other number",
                    Toast.LENGTH_SHORT);var.show();
                num2 = Integer.parseInt((String)
disp.getText());
                result = num1 / num2;
                break;
            case R.id.log:
                num1 = Integer.parseInt((String)
disp.getText());
                result = (float) Math.log(num1);
                break;
            case R.id.clear:
                disp.setText("");
                res.setText("");
                break;
            case R.id.color:
                int rand = (int)((Math.random()*10)% 3);
                Button b1 = (Button)
findViewById(R.id.add);
                Button b2 = (Button)
findViewById(R.id.mul);
                Button b3 = (Button)
findViewById(R.id.divide);
                Button b4 = (Button)
findViewById(R.id.sub);
                Button b5 = (Button)
findViewById(R.id.log);
                Button b6 = (Button)
findViewById(R.id.clear);
                Button b7 = (Button)
findViewById(R.id.calculate);
                Button b8 = (Button)
findViewById(R.id.color);
                rand =2;
```

```
            switch (rand) {
            case 0:
b1.setTextColor(color.holo_blue_bright);

b2.setTextColor(color.holo_blue_bright);

b3.setTextColor(color.holo_blue_bright);

b4.setTextColor(color.holo_blue_bright);

b5.setTextColor(color.holo_blue_bright);

b6.setTextColor(color.holo_blue_bright);

b7.setTextColor(color.holo_blue_bright);

b8.setTextColor(color.holo_blue_bright);
                break;
            case 1:
b1.setTextColor(color.holo_green_dark);

b2.setTextColor(color.holo_green_dark);

b3.setTextColor(color.holo_green_dark);

b4.setTextColor(color.holo_green_dark);

b5.setTextColor(color.holo_green_dark);

b6.setTextColor(color.holo_green_dark);

b7.setTextColor(color.holo_green_dark);

b8.setTextColor(color.holo_green_dark);
                break;
```

```
            case 2:
b1.setTextColor(color.holo_red_dark);

b2.setTextColor(color.holo_red_dark);

b3.setTextColor(color.holo_red_dark);

b4.setTextColor(color.holo_red_dark);

b5.setTextColor(color.holo_red_dark);

b6.setTextColor(color.holo_red_dark);

b7.setTextColor(color.holo_red_dark);

b8.setTextColor(color.holo_red_dark);
                    break;
                default:
                    b1.setTextColor(color.black);
                    b2.setTextColor(color.black);
                    b3.setTextColor(color.black);
                    b4.setTextColor(color.black);
                    b5.setTextColor(color.black);
                    b6.setTextColor(color.black);
                    b7.setTextColor(color.black);
                    b8.setTextColor(color.black);
                    break;
                }
                break;
            case R.id.calculate:
                res.setText(Float.toString(result));
 break;
            }
        }
}
```

```
activity_main.xml
```

```xml
<TableLayout
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:columnCount="2"

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=".MainActivity" >

    <EditText
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="0"
        android:textSize="30sp" />

    <TextView
        android:id="@+id/textView2"
```

```xml
        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:text="TextView"

        android:textSize="30sp" />


<RelativeLayout

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_marginTop="40dp"

        android:layout_weight="0.29" >


        <Button

            android:id="@+id/add"

            android:layout_width="80dp"

            android:layout_height="wrap_content"

            android:text="+"

            android:textSize="20dp" >

        </Button>


        <Button

            android:id="@+id/sub"

            android:layout_width="80dp"

            android:layout_height="wrap_content"

            android:layout_alignBaseline="@+id/button1"

            android:layout_alignBottom="@+id/button1"

            android:layout_centerHorizontal="true"
```

```xml
        android:text="-" />

    <Button
        android:id="@+id/mul"
        android:layout_width="80dp"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/button2"
        android:layout_alignBottom="@+id/button2"
        android:layout_alignParentRight="true"
        android:text="X" />

    <Button
        android:id="@+id/calculate"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentRight="true"
        android:layout_marginBottom="64dp"
        android:textAlignment="center"
        android:text="Calculate" />

    <Button
        android:id="@+id/color"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
```

```xml
        android:layout_alignParentRight="true"
        android:text="ChangeColor"
        android:textAlignment="center"/>


    <Button
        android:id="@+id/divide"
        android:layout_width="80dp"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/add"
        android:layout_marginTop="47dp"
        android:text="/" />


    <Button
        android:id="@+id/log"
        android:layout_width="80dp"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/divide"
        android:layout_alignBottom="@+id/divide"
        android:layout_alignLeft="@+id/sub"
        android:text="log" />


    <Button
        android:id="@+id/clear"
        android:layout_width="80dp"
        android:layout_height="wrap_content"
```

```
                    android:layout_alignBaseline="@+id/log"

                    android:layout_alignBottom="@+id/log"

                    android:layout_alignParentRight="true"

                    android:text="C" />


        </RelativeLayout>
</TableLayout>
```

ASSIGNMENT – 5

- **Android Program to Demonstrate the use of Scroll View**

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"

android:paddingBottom="@dimen/activity_vertical_margin"

android:paddingLeft="@dimen/activity_horizontal_margin"

android:paddingRight="@dimen/activity_horizontal_margin"

android:paddingTop="@dimen/activity_vertical_margin"

tools:context="com.example.test.scrollviews.MainActivity">

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

android:textAppearance="?android:attr/textAppearanceMedium"
        android:text="Vertical ScrollView example"
```

```xml
    android:id="@+id/textView"
    android:layout_gravity="center_horizontal"
    android:layout_centerHorizontal="true"
    android:layout_alignParentTop="true" />


<ScrollView android:layout_marginTop="30dp"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:id="@+id/scrollView">


    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:orientation="vertical" >

        <Button
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:text="Button 1" />
        <Button
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:text="Button 2" />
        <Button
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:text="Button 3" />
        <Button
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:text="Button 4" />
        <Button
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
```

```
        android:text="Button 5" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 6" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 7" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 8" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 9" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 10" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 11" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 12" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Button 13" />
    <Button
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
```

```xml
                android:text="Button 14" />
            <Button
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:text="Button 15" />
            <Button
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:text="Button 16" />
            <Button
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:text="Button 17" />
            <Button
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:text="Button 18" />

            <Button
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:text="Button 19" />
            <Button
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:text="Button 20" />

        </LinearLayout>

    </ScrollView>

</RelativeLayout>
```
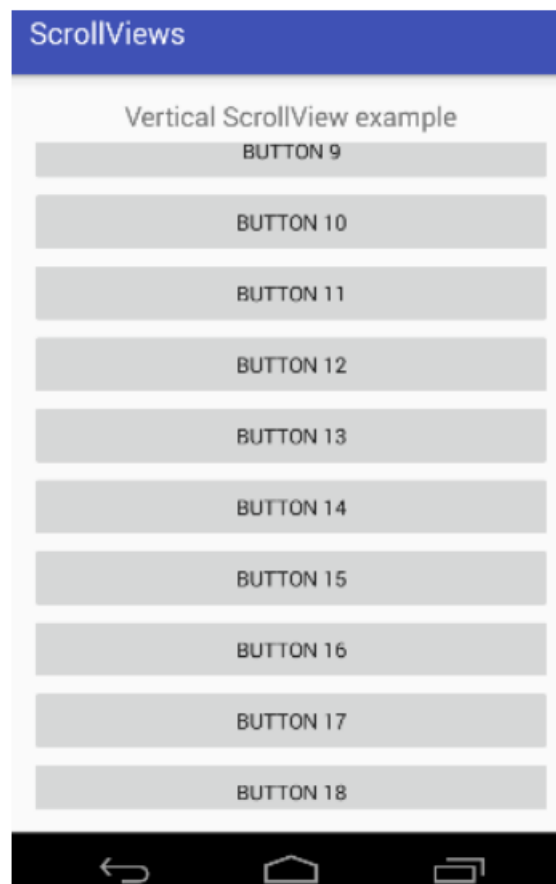
MainActivity.java

```java
package com.example.test.scrollviews;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity
{

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

Output :

ASSIGNMENT – 6

- **Android Program to Demonstrate Radio Group Application**

activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/an
droid"
    android:layout_width="match_parent"
android:layout_height="match_parent">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="150dp"
        android:layout_marginLeft="100dp"
        android:textSize="18dp"
        android:text="Select Your Course"
        android:textStyle="bold"
        android:id="@+id/txtView"/>
<RadioGroup
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:id="@+id/rdGroup"
    android:layout_below="@+id/txtView">
    <RadioButton
        android:id="@+id/rdbJava"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:padding="10dp"
        android:layout_marginLeft="100dp"
        android:text="Java"
        android:onClick="onRadioButtonClicked"/>
    <RadioButton
```

```xml
            android:id="@+id/rdbPython"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:layout_marginLeft="100dp"
            android:text="Python"
            android:onClick="onRadioButtonClicked"/>
    <RadioButton
            android:id="@+id/rdbAndroid"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:layout_marginLeft="100dp"
            android:text="Android"
            android:onClick="onRadioButtonClicked"/>
    <RadioButton
            android:id="@+id/rdbAngular"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:layout_marginLeft="100dp"
            android:text="AngularJS"
            android:onClick="onRadioButtonClicked"/>
</RadioGroup>
    <Button
            android:id="@+id/getBtn"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginLeft="100dp"
            android:layout_below="@+id/rdGroup"
            android:text="Get Course" />
</RelativeLayout>
```

MainActivity.java

```java
package com.tutlane.radiobuttonexample;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity
{
    RadioButton android, java, angular, python;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        android =
(RadioButton)findViewById(R.id.rdbAndroid);
        angular =
(RadioButton)findViewById(R.id.rdbAngular);
        java =
(RadioButton)findViewById(R.id.rdbJava);
        python =
(RadioButton)findViewById(R.id.rdbPython);
        Button btn =
(Button)findViewById(R.id.getBtn);
        btn.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String result = "Selected Course: ";
                result+=
(android.isChecked())?"Android":(angular.isChecked()
```
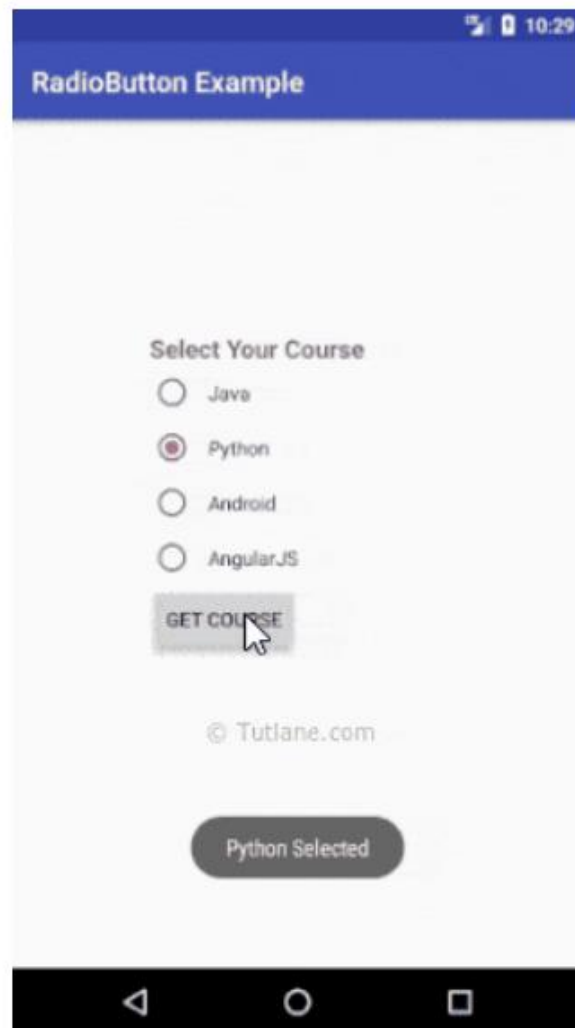
```java
            )?"AngularJS":(java.isChecked())?"Java":(python.isCh
ecked())?"Python":"";

Toast.makeText(getApplicationContext(), result,
Toast.LENGTH_SHORT).show();
            }
        });
    }
    public void onRadioButtonClicked(View view) {
        boolean checked = ((RadioButton)
view).isChecked();
        String str="";
        // Check which radio button was clicked
        switch(view.getId()) {
            case R.id.rdbAndroid:
                if(checked)
                str = "Android Selected";
                break;
            case R.id.rdbAngular:
                if(checked)
                str = "AngularJS Selected";
                break;
            case R.id.rdbJava:
                if(checked)
                str = "Java Selected";
                break;
            case R.id.rdbPython:
                if(checked)
                str = "Python Selected";
                break;
        }
        Toast.makeText(getApplicationContext(), str,
Toast.LENGTH_SHORT).show();
    }
}
```

Output :

ASSIGNMENT – 7

- **Android Program to Demonstrate Alert Dialog Box**

MainActivity.java

```java
package com.example.alertdialog;

import android.os.Bundle;
import android.app.Activity;
import android.app.AlertDialog;
import android.view.Menu;
import android.view.View;
import android.widget.Button;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button but = (Button)
findViewById(R.id.button);
        but.setOnClickListener(new
View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                // Create an alert dialog box
                AlertDialog.Builder builder = new
AlertDialog.Builder(
                        MainActivity.this);

                // Set alert title
```

```java
        builder.setTitle(R.string.alerttitle);

                // Set the value for the positive
reaction from the user
                // You can also set a listener to
call when it is pressed

        builder.setPositiveButton(R.string.ok, null);

                // The message

        builder.setMessage(R.string.message);

                // Create the alert dialog and
display it
                AlertDialog theAlertDialog =
builder.create();
                theAlertDialog.show();

            }
        });
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action bar if it is present.
        getMenuInflater().inflate(R.menu.main,
menu);
        return true;
    }

}
```

ActivityMain.xml

```xml
<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: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=".MainActivity" >

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentRight="true"
        android:layout_centerVertical="true"
        android:text="SHOW DIALOG" />

</RelativeLayout>
```

ASSIGNMENT – 8

- **Android Program to Change the Image displayed on the screen**

MainActivity.java

```java
package com.example.changeiamge;

import android.app.Activity;
import android.graphics.Typeface;
import android.os.Bundle;
import android.renderscript.Type;
import android.view.Gravity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.RadioGroup;
import android.widget.RadioGroup.OnCheckedChangeListener;
import android.widget.TextView;

public class MainActivity extends Activity
implements OnCheckedChangeListener {

    RadioGroup group1, group2;
    Button gen;
    ImageView img;

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```java
        group1 = (RadioGroup)
findViewById(R.id.rg1);

group1.setOnCheckedChangeListener((OnCheckedChangeLi
stener) this);

        group2 = (RadioGroup)
findViewById(R.id.rg2);

group2.setOnCheckedChangeListener((OnCheckedChangeLi
stener) this);

        img = (ImageView)
findViewById(R.id.imageView1);
        // oncheckedChanged function
        gen = (Button) findViewById(R.id.button1);
        gen.setOnClickListener(new
View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub

            }
        });

    }

    @Override
    public void onCheckedChanged(RadioGroup group,
int checkedId) {
        // TODO Auto-generated method stub
        switch (checkedId) {
        case R.id.radioButton1:
            img.setImageResource(R.drawable.image4);
            break;
```

```java
            case R.id.radioButton2:
                img.setImageResource(R.drawable.image5);
                break;

            case R.id.radioButton3:
                img.setImageResource(R.drawable.image6);
                break;

            case R.id.radioButton4:
                img.setImageResource(R.drawable.image7);
                break;

            default:
                break;
            }
        }
    }
```

ActivityMain.xml

```xml
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/an
droid"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"

android:paddingBottom="@dimen/activity_vertical_marg
in"

android:paddingLeft="@dimen/activity_horizontal_marg
in"

android:paddingRight="@dimen/activity_horizontal_mar
gin"

android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:paddingBottom="40px"
        android:weightSum="2" >

        <RadioGroup
            android:id="@+id/rg1"
            android:layout_width="wrap_content"
            android:layout_height="match_parent"
            android:layout_weight="1"
            android:orientation="vertical" >

            <RadioButton
```

```xml
        android:id="@+id/radioButton1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

android:layout_alignParentRight="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="20dp"
        android:text="Image2" />

    <RadioButton
        android:id="@+id/radioButton2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

android:layout_alignBaseline="@+id/radioButton1"

android:layout_alignBottom="@+id/radioButton1"

android:layout_alignParentLeft="true"
        android:text="Image1" />
    </RadioGroup>

    <RadioGroup
        android:id="@+id/rg2"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_weight="1"
        android:orientation="vertical" >

        <RadioButton
            android:id="@+id/radioButton3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="30dp"
            android:text="Image3" />
```

```xml
            <RadioButton
                android:id="@+id/radioButton4"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"

android:layout_alignBaseline="@+id/radioButton3"

android:layout_alignBottom="@+id/radioButton3"

android:layout_alignParentRight="true"
                android:text="Image4" />
        </RadioGroup>
    </LinearLayout>

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentRight="true"
        android:layout_centerVertical="true"
        android:text="Change Image" />

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button1"
        android:layout_alignParentBottom="true"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/button1"
        android:layout_marginTop="50dp"
        android:src="@drawable/ic_launcher" />

</RelativeLayout>
```
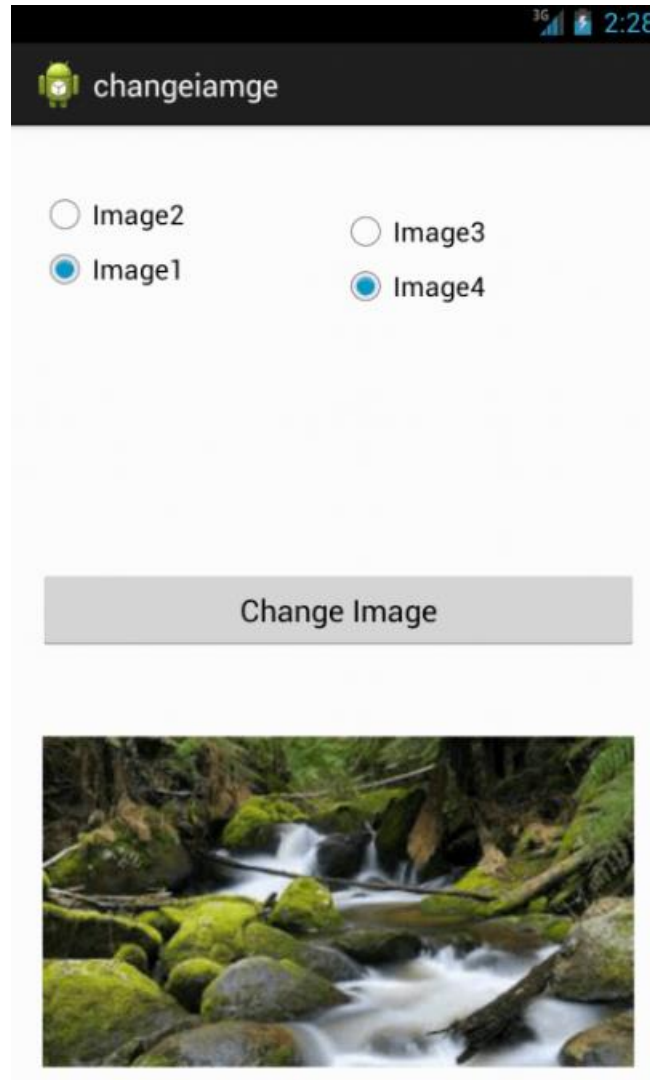
Output :

ASSIGNMENT – 9

- **Android Program to Create Multiple Activities within an Application**

Activity One

```java
package com.example.creatingmultipleactivities;

import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;

public class MainActivity extends Activity {

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

            public void run() {
                try {
                    sleep(2000);
                    startActivity(new Intent(

"com.example.creatingmultipleactivities.second_activity"));
                } catch (InterruptedException e) {
                    // TODO Auto-generated catch
block
                    e.printStackTrace();
                }
```

```java
                finally {
                    finish();
                }
            }
        };
        th.start();
    }

    @Override
    protected void onPause() {
        // TODO Auto-generated method stub
        super.onPause();

    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action bar if it is present.
        getMenuInflater().inflate(R.menu.main,
menu);
        return true;
    }

}
```

Second Activity

```java
package com.example.creatingmultipleactivities;

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

public class second_activity extends Activity{

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second);

    }
    @Override
    protected void onPause() {
        // TODO Auto-generated method stub
        super.onPause();

    }
}
```

First Activity XML

```xml
<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: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=".MainActivity"
    android:background="@drawable/background">
    <TextView
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="39dp"
        android:gravity="center_horizontal"
        android:text="This is the first Activity"
android:textAppearance="?android:attr/textAppearanceLarge"
        android:textSize="50sp" />
</RelativeLayout>
```

Second Activity XML

```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"
    android:background="@drawable/background">

    <TextView
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="252dp"
        android:text="This is Second Activity"
        android:paddingTop="80dp"
        android:gravity="center"

android:textAppearance="?android:attr/textAppearanceLarge"
        android:textSize="40sp" />

</LinearLayout>
```

AndroidManifest .xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.creatingmultipleactivities"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

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

android:name="com.example.creatingmultipleactivities.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>
        <activity

android:name="com.example.creatingmultipleactivities.second_activity"
```
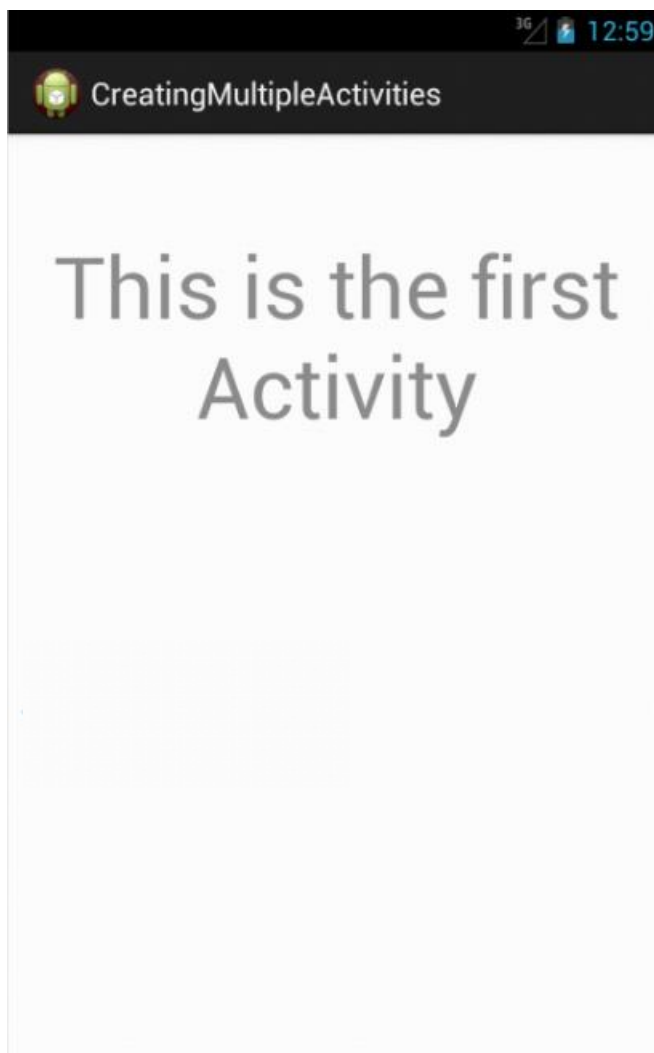
```
                android:label="@string/app_name" >
                <intent-filter>
                    <action
android:name="com.example.creatingmultipleactivities
.second_activity" />

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

</manifest>
```

Output :

ASSIGNMENT – 10

- **Android Program to Demonstrate Action Button by Implementing on Click Listener**

MainActivity.java

```
package com.example.creating_action_button;

import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.widget.Button;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button next = (Button)
findViewById(R.id.next);
        next.setOnClickListener(new
View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                startActivity(new
Intent("com.example.creating_action_button.second"))
;
    //              finish();
            }
        });
```

```java
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action bar if it is present.
        getMenuInflater().inflate(R.menu.main,
menu);
        return true;
    }

}
```

Second_Activity.java


```java
package com.example.creating_action_button;

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

public class second_activity extends Activity {

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

ActivityMain.xml

```xml
<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: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=".MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="258dp"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="25dp"
        android:layout_marginTop="78dp"
        android:text="This is first Activity"
        android:background="@drawable/ic_launcher"

android:textAppearance="?android:attr/textAppearanceLarge" />

    <Button
```

```xml
        android:id="@+id/next"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView1"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="20dp"
        android:text="Next" />

</RelativeLayout>
```

Second_Activity.xml

```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:background="@drawable/background1"
    android:orientation="vertical" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="match_parent"
        android:layout_height="250dp"
        android:gravity="center"
        android:text="Welcome to the second
Activity"

android:textAppearance="?android:attr/textAppearance
Large" />

</LinearLayout>
```

AndroidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.creating_action_button"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

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

android:name="com.example.creating_action_button.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>
                <activity
```
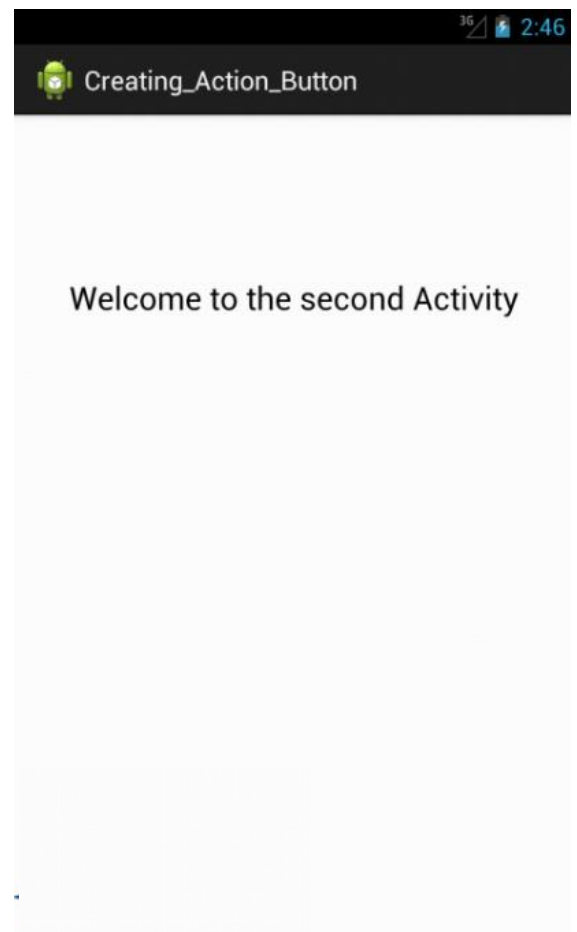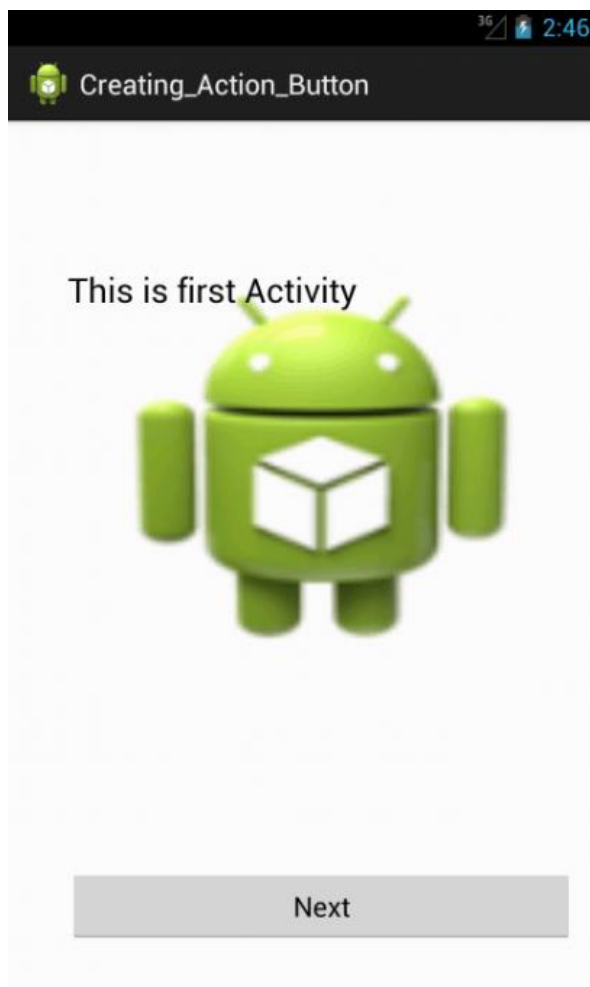
```
android:name="com.example.creating_action_button.sec
ond_activity"
            android:label="@string/app_name" >
            <intent-filter>
                <action
android:name="com.example.creating_action_button.sec
ond" />

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

</manifest>
```

Output :

This is first Activity

Next

Welcome to the second Activity

ASSIGNMENT – 11

- **Android Program to Demonstrate Sound Button Application**

MainActivity.java

```java
package com.example.creating_sound_button;

import android.media.MediaPlayer;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.widget.Button;

public class MainActivity extends Activity {

    MediaPlayer button_sound;

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button b1 = (Button)
findViewById(R.id.button1);
        Button b2 = (Button)
findViewById(R.id.button2);
        Button b3 = (Button)
findViewById(R.id.button3);
        Button b4 = (Button)
findViewById(R.id.button4);

        b1.setOnClickListener(new
View.OnClickListener() {
```

```java
        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub
            button_sound =
MediaPlayer.create(MainActivity.this,
                    R.raw.but_click);
            button_sound.start();
        }
    });
    b2.setOnClickListener(new
View.OnClickListener() {

        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub
            button_sound =
MediaPlayer.create(MainActivity.this,
                    R.raw.sound1);
            button_sound.start();
        }
    });
    b3.setOnClickListener(new
View.OnClickListener() {

        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub
            button_sound =
MediaPlayer.create(MainActivity.this,
                    R.raw.sound2);
            button_sound.start();
        }
    });
    b4.setOnClickListener(new
View.OnClickListener() {
```

```java
            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                button_sound =
MediaPlayer.create(MainActivity.this,
                        R.raw.sound3);
                button_sound.start();
            }
        });

    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action bar if it is present.
        getMenuInflater().inflate(R.menu.main,
menu);
        return true;
    }

    @Override
    protected void onPause() {
        // TODO Auto-generated method stub
        super.onPause();

    }

}
```

ActivityMain.xml

```xml
<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: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=".MainActivity"
    android:background="@drawable/background">

    <Button
        android:id="@+id/button1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="58dp"
        android:text="Sound1" />

    <Button
        android:id="@+id/button2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button1"
```

```xml
        android:layout_below="@+id/button1"
        android:layout_marginTop="59dp"
        android:text="Sound2" />

    <Button
        android:id="@+id/button4"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button3"
        android:layout_below="@+id/button3"
        android:layout_marginTop="36dp"
        android:text="Sound4" />

    <Button
        android:id="@+id/button3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button2"
        android:layout_below="@+id/button2"
        android:layout_marginTop="40dp"
        android:text="Sound3" />

</RelativeLayout>
```
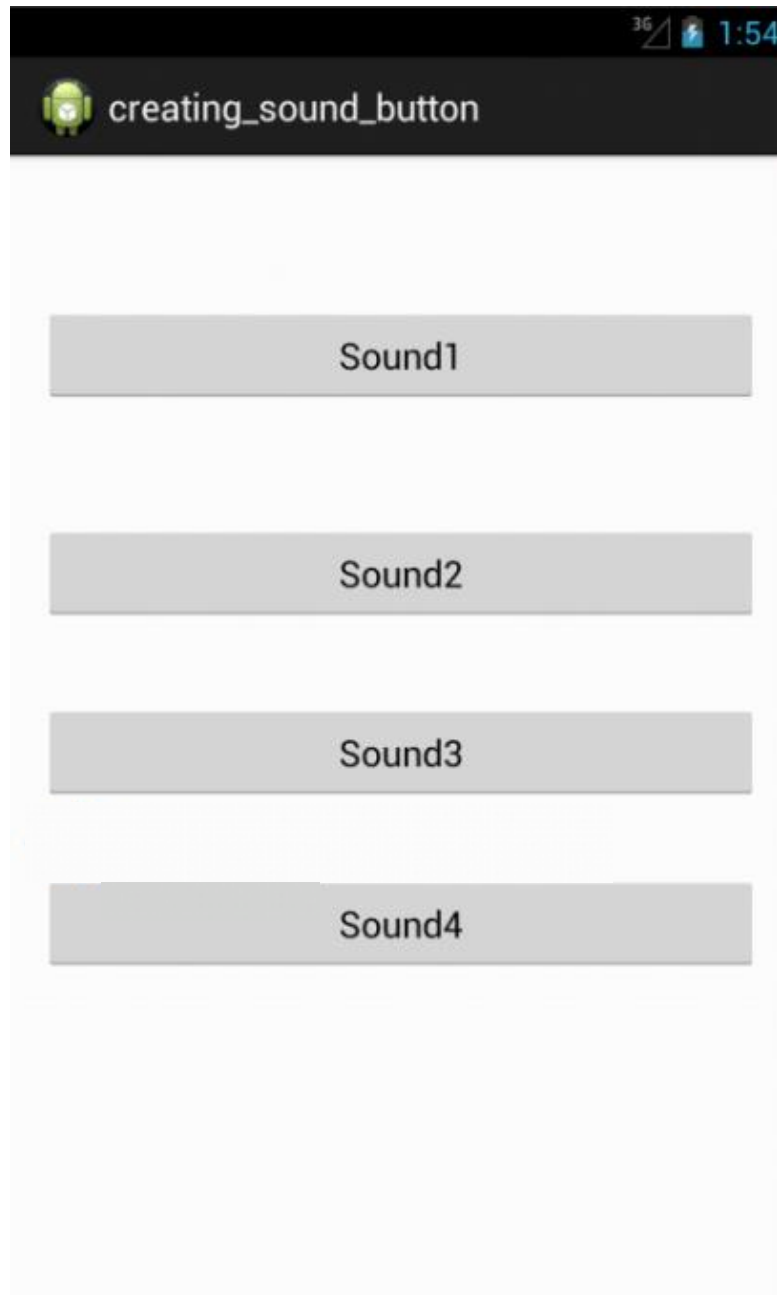
Output :

ASSIGNMENT – 12

- **Android Program to Set the Wallpaper of Your Device using Bitmap Class**

MainActivity.java

```java
package com.example.backgroundapp;

import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.widget.Button;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button button =(Button) findViewById(R.id.button1);

        button.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                startActivity(new Intent("com.example.backgroundapp.bakapp"));
            }
        });
```

```java
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action bar if it is present.
        getMenuInflater().inflate(R.menu.main,
menu);
        return true;
    }

}
```

BackappActivity.java

```java
package com.example.backgroundapp;

import java.io.IOException;
import java.io.InputStream;
import android.app.Activity;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.os.Bundle;
import android.view.View;
import android.view.Window;
import android.view.WindowManager;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.Toast;

public class bakapp extends Activity implements
OnClickListener {
    ImageView display;
```

```java
    int tophone;

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);

        // to our activity to cover the whole screen

requestWindowFeature(Window.FEATURE_NO_TITLE);

getWindow().setFlags(WindowManager.LayoutParams.FLAG
_FULLSCREEN,

WindowManager.LayoutParams.FLAG_FULLSCREEN);

        setContentView(R.layout.back);
        Button but = (Button)
findViewById(R.id.setwallpaper);
        tophone = R.drawable.image4;
        but.setOnClickListener(this);
        display = (ImageView)
findViewById(R.id.ivdisplay);
        ImageView image1 = (ImageView)
findViewById(R.id.IVimage1);
        ImageView image2 = (ImageView)
findViewById(R.id.IVimage2);
        ImageView image3 = (ImageView)
findViewById(R.id.IVimage3);
        ImageView image4 = (ImageView)
findViewById(R.id.image4);
        ImageView image5 = (ImageView)
findViewById(R.id.IVimage5);

        image1.setOnClickListener(this);
```

```java
            image2.setOnClickListener(this);
            image3.setOnClickListener(this);
            image4.setOnClickListener(this);
            image5.setOnClickListener(this);

    }

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        Toast var;
        switch (v.getId()) {
        case R.id.IVimage1:

display.setImageResource(R.drawable.image4);
            var = Toast.makeText(bakapp.this, "image
changed",
                    Toast.LENGTH_SHORT);

            var.show();

            tophone = R.drawable.image4;
            break;
        case R.id.IVimage2:

display.setImageResource(R.drawable.image5);
            var = Toast.makeText(bakapp.this, "image
changed",
                    Toast.LENGTH_SHORT);

            var.show();

            tophone = R.drawable.image5;
            break;
        case R.id.IVimage3:
```

```
display.setImageResource(R.drawable.image6);
        var = Toast.makeText(bakapp.this, "image
changed",
                Toast.LENGTH_SHORT);

        var.show();

        tophone = R.drawable.image6;
        break;
    case R.id.image4:

display.setImageResource(R.drawable.image7);
        var = Toast.makeText(bakapp.this, "image
changed",
                Toast.LENGTH_SHORT);

        var.show();

        tophone = R.drawable.image7;
        break;
    case R.id.IVimage5:

display.setImageResource(R.drawable.image8);
        var = Toast.makeText(bakapp.this, "image
changed",
                Toast.LENGTH_SHORT);

        var.show();

        tophone = R.drawable.image8;
        break;
    case R.id.setwallpaper:
        // to set a background we need to use
bitmap
```

```java
                InputStream is =
getResources().openRawResource(tophone);
                // to phone is a variable that is
updated everytime we click on an
                // ImageView to that imageview resource
and by clicking the button
                // we set the phone background to that
image.
                Bitmap bm =
BitmapFactory.decodeStream(is);
                // decode inputstream is
                try {

getApplicationContext().setWallpaper(bm);
                    // to set the wallpaper of the phone
background we need to ask
                    // permission from the user so add
permission of background from
                    // manifest file

                } catch (IOException e) {
                    // TODO Auto-generated catch block
                    e.printStackTrace();
                }
                var = Toast.makeText(bakapp.this,
"Wallpaper image changed",
                        Toast.LENGTH_SHORT);

                var.show();

                break;
            }
        }

}
```

ActivityMain.xml

```xml
<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: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=".MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Application to Change background
picture of device"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button1"
        android:layout_width="fill_parent"
```

```
        android:layout_height="wrap_content"

        android:layout_alignParentBottom="true"

        android:layout_marginBottom="96dp"

        android:text="Click to launch" />


</RelativeLayout>
```

BackappActivity.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/ivdisplay"

                android:layout_width="200dp"

                android:layout_height="200dp"

                android:layout_gravity="center"

                android:src="@drawable/image4" />
"

        <Button

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

```xml
    android:layout_width="fill_parent"

    android:layout_height="wrap_content"

    android:text="set image background" >

</Button>


<HorizontalScrollView

    android:layout_width="200dp"

    android:layout_height="wrap_content"

    android:layout_gravity="center" >


    <LinearLayout

        android:layout_width="fill_parent"

        android:layout_height="wrap_content"

        android:orientation="horizontal">


        <ImageView

            android:id="@+id/IVimage1"

            android:layout_width="125dp"

            android:layout_height="125dp"

            android:padding="15dp"

            android:src="@drawable/image4" />


        <ImageView

            android:id="@+id/IVimage2"

            android:layout_width="125dp"

            android:layout_height="125dp"
```

```xml
            android:padding="15dp"

            android:src="@drawable/image5" />


        <ImageView

            android:id="@+id/IVimage3"

            android:layout_width="125dp"

            android:layout_height="125dp"

            android:padding="15dp"

            android:src="@drawable/image6" />


        <ImageView

            android:id="@+id/image4"

            android:layout_width="125dp"

            android:layout_height="125dp"

            android:padding="15dp"

            android:src="@drawable/image7" />

        <ImageView

            android:id="@+id/IVimage5"

            android:layout_width="125dp"

            android:layout_height="125dp"

            android:padding="15dp"

            android:src="@drawable/image8" />

        </LinearLayout>

    </HorizontalScrollView>


</LinearLayout>
```

AndroidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.backgroundapp"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />
    <uses-permission
android:name="android.permission.SET_WALLPAPER"/>

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

android:name="com.example.backgroundapp.MainActivity"
            android:label="@string/app_name" >
            <intent-filter>
```

```xml
            <action
android:name="android.intent.action.MAIN" />

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

android:name="com.example.backgroundapp.bakapp"
            android:label="@string/app_name"
            android:screenOrientation="portrait">
            <intent-filter>
                <action
android:name="com.example.backgroundapp.bakapp" />

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

</manifest>
```
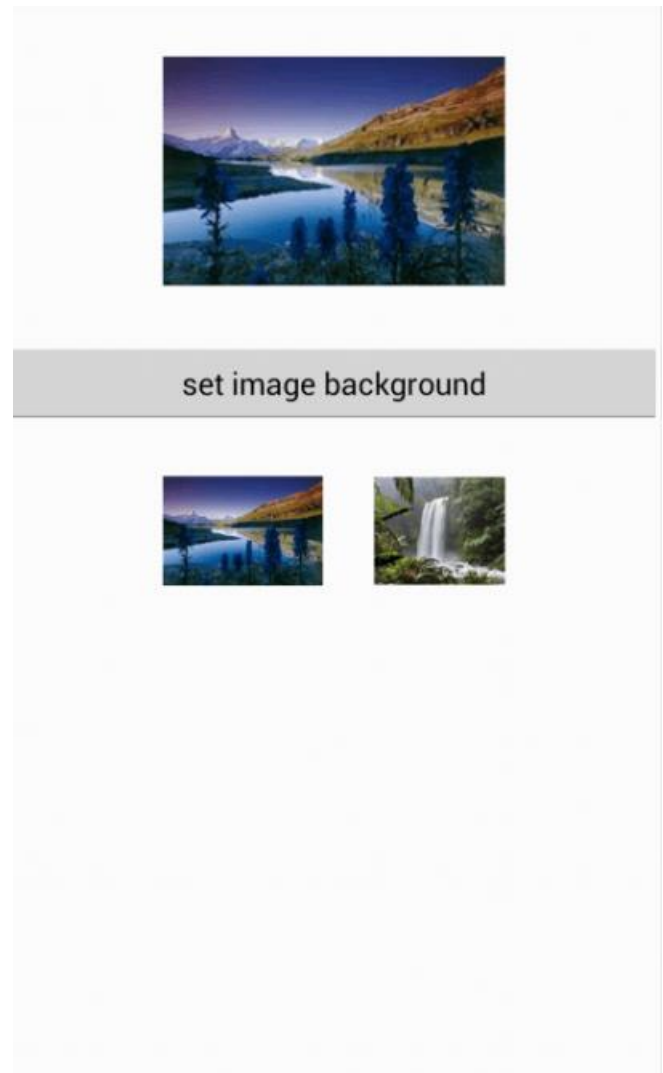
Output :

ASSIGNMENT – 13

- **Android Program to Demonstrate the Menu Application**

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.design.widget.CoordinatorLayout
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="example.javatpoint.com.optionmenu.MainActivity">
    <android.support.design.widget.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"

android:theme="@style/AppTheme.AppBarOverlay">

        <android.support.v7.widget.Toolbar
            android:id="@+id/toolbar"
            android:layout_width="match_parent"

android:layout_height="?attr/actionBarSize"
            android:background="?attr/colorPrimary"

app:popupTheme="@style/AppTheme.PopupOverlay" />

    </android.support.design.widget.AppBarLayout>

    <include layout="@layout/content_main" />

</android.support.design.widget.CoordinatorLayout>
```

context_main.xml

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

app:layout_behavior="@string/appbar_scrolling_view_behavior"

tools:context="example.javatpoint.com.optionmenu.MainActivity"
    tools:showIn="@layout/activity_main">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</android.support.constraint.ConstraintLayout>
```

menu_main.xml

```xml
<menu 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"

    tools:context="example.javatpoint.com.optionmenu.MainActivity">


    <item  android:id="@+id/item1"
        android:title="Item 1"/>
    <item  android:id="@+id/item2"
        android:title="Item 2"/>
    <item  android:id="@+id/item3"
        android:title="Item 3"
        app:showAsAction="withText"/>
</menu>
```

MainActivity.java

```java
package example.javatpoint.com.optionmenu;


import android.os.Bundle;

import android.support.v7.app.AppCompatActivity;

import android.support.v7.widget.Toolbar;

import android.view.Menu;

import android.view.MenuItem;

import android.widget.Toast;


public class MainActivity extends AppCompatActivity
{


    @Override

    protected void onCreate(Bundle
savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        Toolbar toolbar = (Toolbar)
findViewById(R.id.toolbar);

        setSupportActionBar(toolbar);

    }


    @Override

    public boolean onCreateOptionsMenu(Menu menu) {
```

```java
        // Inflate the menu; this adds items to the
action bar if it is present.

        getMenuInflater().inflate(R.menu.menu_main,
menu);

        return true;

    }


    @Override

    public boolean onOptionsItemSelected(MenuItem
item) {

        int id = item.getItemId();

         switch (id){

            case R.id.item1:
Toast.makeText(getApplicationContext(),"Item 1
Selected",Toast.LENGTH_LONG).show();

                return true;

            case R.id.item2:
Toast.makeText(getApplicationContext(),"Item 2
Selected",Toast.LENGTH_LONG).show();

                return true;

            case R.id.item3:
Toast.makeText(getApplicationContext(),"Item 3
Selected",Toast.LENGTH_LONG).show();

                return true;          default:

                return
super.onOptionsItemSelected(item);

        }

    }

  }
```
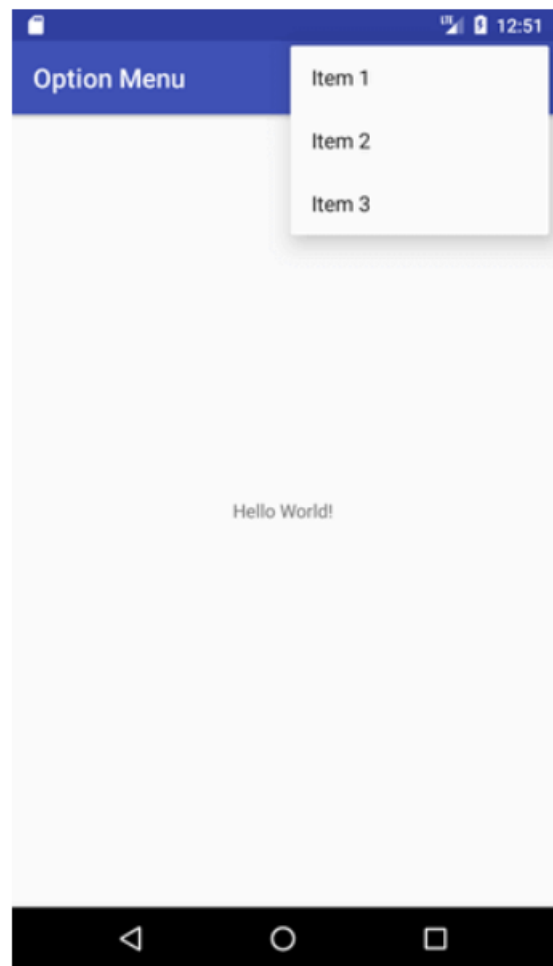
ASSIGNMENT – 14

- **Android Program to Demonstrate Toast in an Application**

MainActivity.java

```
package codedost.toast;

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

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.toast_button);

        b1.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {

Toast.makeText(MainActivity.this,"You just Toasted
me!!!",Toast.LENGTH_LONG).show();
                /*Another way to display a Toast
message
```

```
                    Toast
t=Toast.makeText(MainActivity.this,"You just Toasted
me!!!",Toast.LENGTH_LONG);
                        t.show();
                */
            }
        });
    }


}
```

```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:id="@+id/activity_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"

android:paddingBottom="@dimen/activity_vertical_margin"

android:paddingLeft="@dimen/activity_horizontal_margin"

android:paddingRight="@dimen/activity_horizontal_margin"

android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="codedost.toast.MainActivity">

    <Button
```
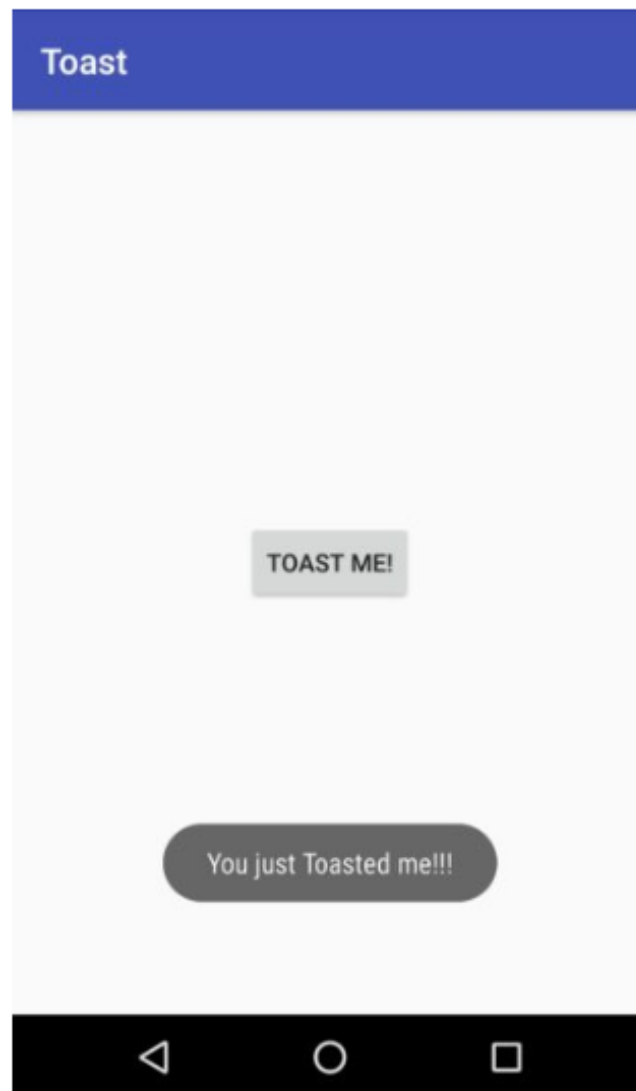
```
        android:id="@+id/toast_button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Toast me!"
        android:layout_centerVertical="true"
        android:layout_centerHorizontal="true"
    />

</RelativeLayout>
```

Output :

ASSIGNMENT – 15

- **Android Program to Demonstrate List view Activity**

activity_main.xml

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

tools:context="listview.example.com.listview.MainActivity">

    <ListView
        android:id="@+id/listView"
        android:layout_width="match_parent"
        android:layout_height="fill_parent"
         />
</android.support.constraint.ConstraintLayout>
```

mylist.xml

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

<TextView
xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Medium Text"
    android:textStyle="bold"

android:textAppearance="?android:attr/textAppearanceMedium"
    android:layout_marginLeft="10dp"
    android:layout_marginTop="5dp"
    android:padding="2dp"
    android:textColor="#4d4d4d"
     />
```

strings.xml

```xml
<resources>
    <string name="app_name">ListView</string>
    <string-array name="array_technology">
        <item>Android</item>
        <item>Java</item>
        <item>Php</item>
        <item>Hadoop</item>
        <item>Sap</item>
        <item>Python</item>
        <item>Ajax</item>
        <item>C++</item>
        <item>Ruby</item>
        <item>Rails</item>
```

```xml
        <item>.Net</item>
        <item>Perl</item>
    </string-array>
</resources>
```

MainActivity.java

```java
package listview.example.com.listview;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity
{
    ListView listView;
    TextView textView;
    String[] listItem;
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
   listView=(ListView)findViewById(R.id.listView);

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

        listItem =
getResources().getStringArray(R.array.array_technolo
gy);
        final ArrayAdapter<String> adapter = new
ArrayAdapter<String>(this,
                android.R.layout.simple_list_item_1,
android.R.id.text1, listItem);
        listView.setAdapter(adapter);
```

```java
listView.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?>
adapterView, View view, int position, long l) {
                // TODO Auto-generated method stub
                String
value=adapter.getItem(position);
Toast.makeText(getApplicationContext(),value,Toast.L
ENGTH_SHORT).show();
            }
        });
    }
}
```

Output :