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SOFTWARE TRAINING & DEVELOPMENT

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nareshit

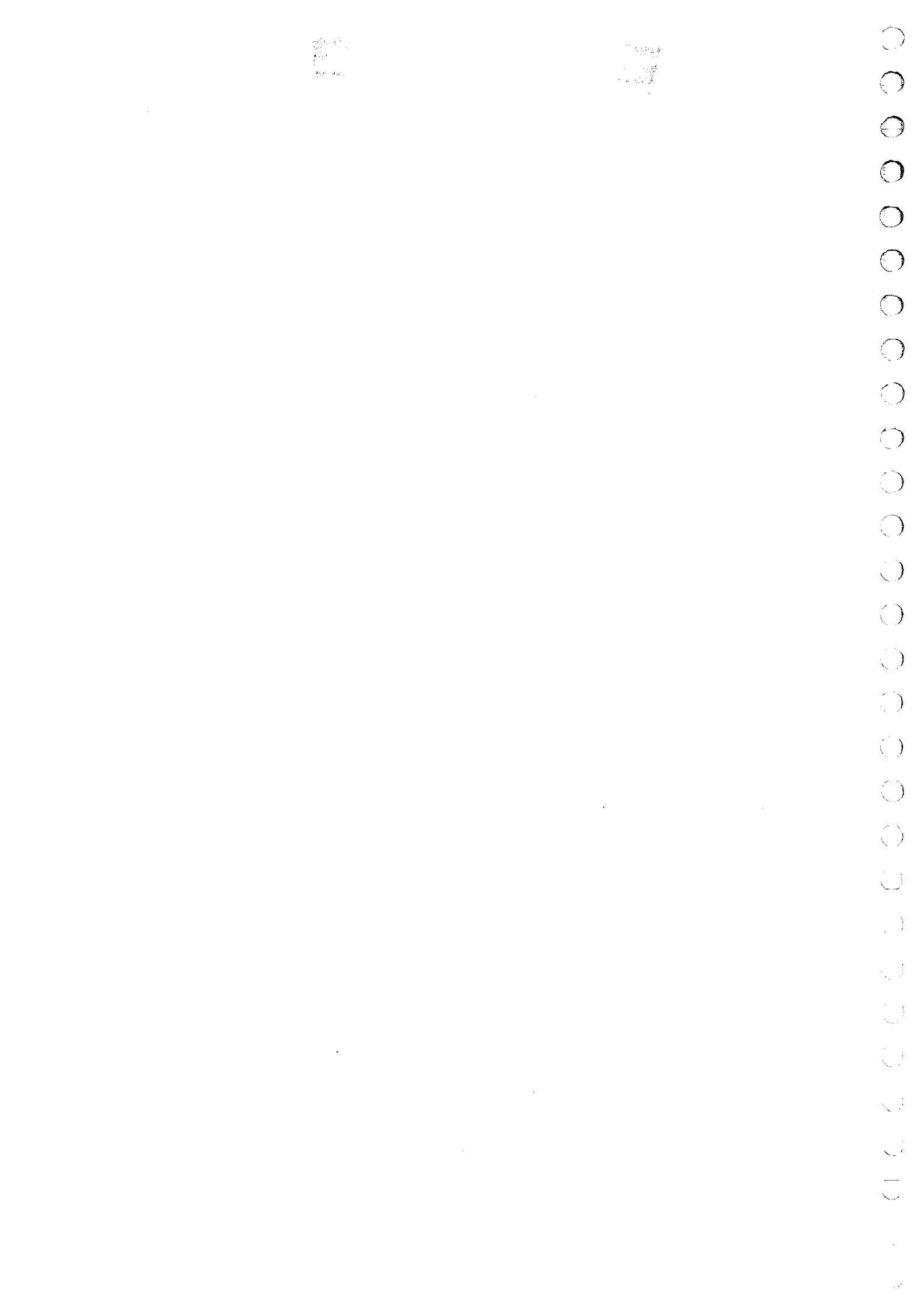
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ANDROID

EXAMPLES



Example On Activity Life Cycle**MainActivity.java**

```
package com.example.activitylifecycle;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        System.out.println("....onCreate()....");
    }

    @Override
    protected void onStart() {
        // TODO Auto-generated method stub
        super.onStart();
        System.out.println("....onStart()....");
    }

    @Override
    protected void onResume() {
        // TODO Auto-generated method stub
        super.onResume();
        System.out.println("....onResume()....");
    }

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

    @Override
    protected void onStop() {
        // TODO Auto-generated method stub
        super.onStop();
        System.out.println("....onStop()....");
    }

    @Override
    protected void onDestroy() {
        // TODO Auto-generated method stub
        super.onDestroy();
        System.out.println("....onDestroy()....");
    }
}
```

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Output:-

```
I 02-09 14:29:5... 29719 29719 com.example.act... System.out ....onCreate()...
I 02-09 14:29:5... 29719 29719 com.example.act... System.out ....onStart()...
I 02-09 14:29:5... 29719 29719 com.example.act... System.out ....onResume()...
I 02-09 14:30:1... 29719 29719 com.example.act... System.out ....onPause()...
I 02-09 14:30:1... 29719 29719 com.example.act... System.out ....onStop()...
W 02-09 14:30:1... 29719 29719 com.example.act... IInputConn... getSelectedText on inactive InputConnection
W 02-09 14:30:1... 29719 29719 com.example.act... IInputConn... setComposingText on inactive InputConnection
W 02-09 14:30:1... 29719 29719 com.example.act... IInputConn... getExtractedText on inactive InputConnection
I 02-09 14:30:3... 29719 29719 com.example.act... System.out ....onStart()...
I 02-09 14:30:3... 29719 29719 com.example.act... System.out ....onResume()...
E 02-09 14:30:3... 29719 29719 com.example.act... SpannableS... SPAN_EXCLUSIVE_EXCLUSIVE spans cannot have a zero length
E 02-09 14:30:3... 29719 29719 com.example.act... SpannableS... SPAN_EXCLUSIVE_EXCLUSIVE spans cannot have a zero length
I 02-09 14:31:0... 29719 29719 com.example.act... System.out ....onPause()...
I 02-09 14:31:0... 29719 29719 com.example.act... System.out ....onStop()...
W 02-09 14:31:0... 29719 29719 com.example.act... IInputConn... getSelectedText on inactive InputConnection
W 02-09 14:31:0... 29719 29719 com.example.act... IInputConn... setComposingText on inactive InputConnection
W 02-09 14:31:0... 29719 29719 com.example.act... IInputConn... getExtractedText on inactive InputConnection
I 02-09 14:31:2... 29719 29719 com.example.act... System.out ....onStart()...
I 02-09 14:31:2... 29719 29719 com.example.act... System.out ....onResume()...
I 02-09 14:31:3... 29719 29719 com.example.act... System.out ....onPause()...
I 02-09 14:31:3... 29719 29719 com.example.act... System.out ....onStop()...
I 02-09 14:31:3... 29719 29719 com.example.act... System.out ....onDestroy()...
```

1) Example LinearLayout (Vertical and Horizontal) using XML:**Java File – MainActivity.java**

```
package com.example.linearLayout;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;

public class MainActivity extends Activity {

    //here all views started creating
    //intilize and declaring all variables and object here
    //comment----ctr+shift+/
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_common);
    }
}
```

Layout xml File –**1) activity_horizontal.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="horizontal" >
```

```
<TextView  
    android:id="@+id/textView1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Naresh" />  
  
<Button  
    android:id="@+id/button1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Button" />  
  
<CheckBox  
    android:id="@+id/checkBox1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="CheckBox" />  
  
<ToggleButton  
    android:id="@+id/toggleButton1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="ToggleButton" />  
  
</LinearLayout>
```

2) activity_vertical.xml:

```
<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="Naresh" />  
  
<Button  
    android:id="@+id/button1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Button" />  
  
<CheckBox  
    android:id="@+id/checkBox1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="CheckBox" />  
  
<Spinner    android:id="@+id/spinner1"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content" />
```

```
<RadioGroup  
    android:id="@+id/radioGroup1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" >  
  
    <RadioButton  
        android:id="@+id/radio0"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:checked="true"  
        android:text="RadioButton" />  
  
    <RadioButton  
        android:id="@+id/radio1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="RadioButton" />  
  
    <RadioButton  
        android:id="@+id/radio2"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="RadioButton" />  
</RadioGroup>  
  
<RatingBar  
    android:id="@+id/ratingBar1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />  
  
<CheckedTextView  
    android:id="@+id/checkedTextView1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="CheckedTextView" />  
  
</LinearLayout>
```

3)activity_common.xml:

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:layout_margin="20dp"  
    android:orientation="vertical" >  
  
    <LinearLayout  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:orientation="horizontal" >  
  
        <TextView  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:text="UserName" >
```

```
</TextView>

<EditText
    android:layout_width="200dp"
    android:layout_height="wrap_content" >
</EditText>
</LinearLayout>

<LinearLayout
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal" >

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Password" >
</TextView>

<EditText
    android:layout_width="200dp"
    android:layout_height="wrap_content" >
</EditText>
</LinearLayout>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Button"
    android:layout_gravity="center">
</Button>

</LinearLayout>
```

Android Manifest File –

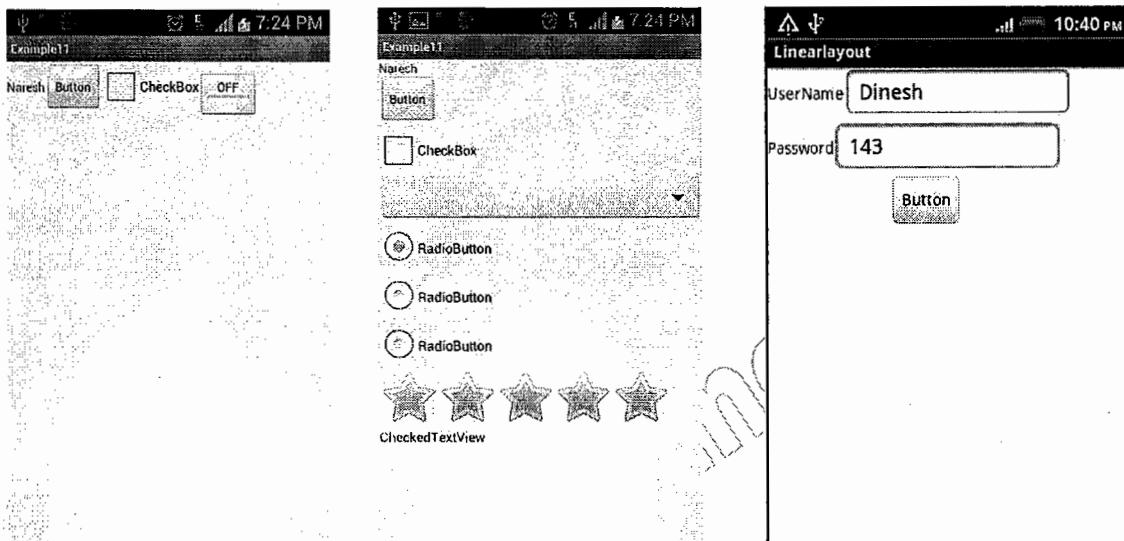
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.linearLayout"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.linearLayout.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>
```

Output Snapshot -**2) Example RelativeLayout Using XML:-****Java File – MainActivity.java**

```
package com.example.relativelayout;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

Layout xml File -activity_main.xml:

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >

    <TextView
        android:id="@+id/user"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="userName" />

    <EditText
        android:id="@+id/user_edit"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_toRightOf="@+id/user" >
    </EditText>

    <TextView
        android:id="@+id/pass"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/user"
        android:layout_marginTop="30dp"
        android:text="Password" />

    <EditText
        android:id="@+id/pass_edit"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_below="@+id/user_edit"
        android:layout_toRightOf="@+id/pass" >
    </EditText>
    <Button
        android:layout_height="wrap_content"
        android:layout_width="wrap_content"
        android:layout_below="@+id/pass_edit"
        android:layout_centerInParent="true"
        android:text="Button"/>

</RelativeLayout>
```

android Manifest File -

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

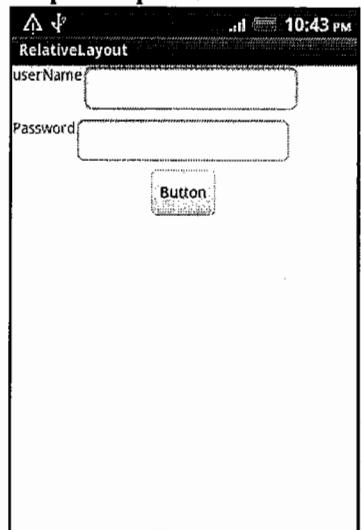
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

    <application
        android:allowBackup="true"
```

```
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.relativelayout.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>
```

Output Snapshot -**Example RelativeLayoutExample using XML:-****Java File – MainActivity.java**

```
package com.example.relativelayoutexample;

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

public class MainActivity extends Activity {

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

Layout xml File -activity_main.xml:

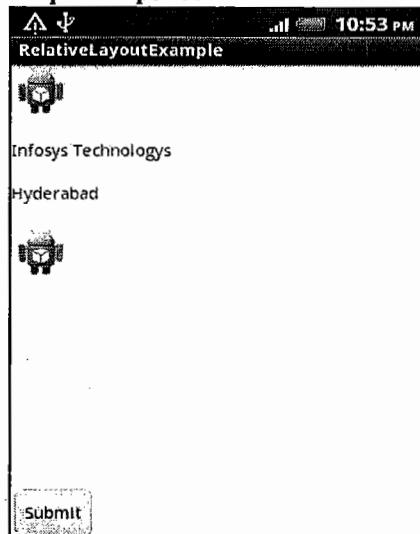
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:layout_marginLeft="100dp" >
    <ImageView
        android:id="@+id/logo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/ic_launcher"
    />

    <TextView
        android:id="@+id infosy_txt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Infosys Technologies"
        android:layout_below="@id/logo"
        android:layout_marginTop="20dp"
    />
    <TextView
        android:id="@+id/hyd_txt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hyderabad"
        android:layout_below="@+id infosy_txt"
        android:layout_marginTop="20dp"
    />
    <ImageView
        android:id="@+id/image"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/ic_launcher"
        android:layout_below="@+id/hyd_txt"
        android:layout_marginTop="20dp"
    />
    <Button
        android:id="@+id/submit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:text="Submit"/>
</RelativeLayout>
```

android Manifest File -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.relativelayoutexample"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />
<application>
```

```
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
<activity
    android:name="com.example.relativelayoutexample.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>
```

Output Snapshot -

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Example TableLayout Using XML:-**Java File – MainActivity.java**

```
package com.example.tablelayout;

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

public class MainActivity extends Activity {

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

    @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;  
}  
}
```

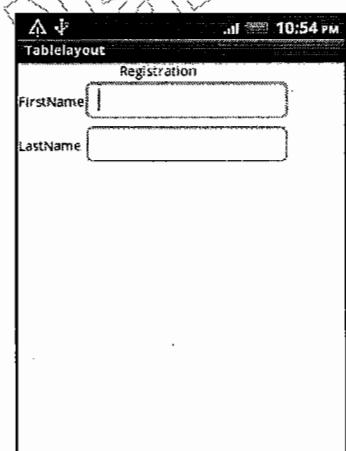
Layout xml File -activity_main.xml :

```
<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/regist_text"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Registration"  
        android:layout_marginLeft="100dp">  
    </TextView>  
  
    <TableLayout  
        android:id="@+id/tablelayout"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content" >  
  
        <TableRow  
            android:id="@+id/tablerow1"  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content" >  
  
            <TextView  
                android:id="@+id/firstname_text"  
                android:layout_width="wrap_content"  
                android:layout_height="wrap_content"  
                android:text="FirstName" >  
            </TextView>  
  
            <EditText  
                android:id="@+id/firstname_edit"  
                android:layout_width="200dp"  
                android:layout_height="wrap_content" />  
        </TableRow>  
  
        <TableRow  
            android:id="@+id/tablerow2"  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content" >  
  
            <TextView  
                android:id="@+id/lastname_text"  
                android:layout_width="wrap_content"  
                android:layout_height="wrap_content"  
                android:text="LastName" >  
            </TextView>
```

```
<EditText  
    android:id="@+id/lastname_edit"  
    android:layout_width="200dp"  
    android:layout_height="wrap_content" />  
</TableRow>  
</TableLayout>  
</LinearLayout>
```

android Manifest File -

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.tablelayout"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
<uses-sdk  
    android:minSdkVersion="8"  
    android:targetSdkVersion="18" />  
<application  
    android:allowBackup="true"  
    android:icon="@drawable/ic_launcher"  
    android:label="@string/app_name"  
    android:theme="@style/AppTheme" >  
    <activity  
        android:name="com.example.tablelayout.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>
```

Output Snapshot -

Example FrameLayout Using XML:-

Java File - FrameActivity.java

```
package com.example.framelayout;

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

public class FrameActivity extends Activity {

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

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

Layout xml File -activity_frame.xml :

```
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >

    <ImageView
        android:id="@+id/img1"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:src="@drawable/ic_launcher" />

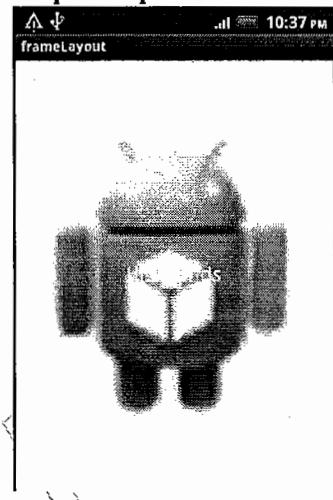
    <TextView
        android:id="@+id/text1"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:gravity="center"
        android:text="Hi Friends"
        android:textSize="20dp"
        android:textColor="#ff4"
        />
</FrameLayout>
```

android Manifest File -

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

```
android:versionCode="1"
android:versionName="1.0" >

<uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="18" />
<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.framelayout.FrameActivity"
        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>
```

Output Snapshot -**Example FrameLayoutDynamic using Java:****Java File – MainActivity.java**

```
package com.example.framelayoutdynamic;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.Gravity;
import android.widget.FrameLayout;
import android.widget.FrameLayout.LayoutParams;
import android.widget.ImageView;
import android.widget.ImageView.ScaleType;
import android.widget.TextView;
```

```
public class MainActivity extends Activity {  
  
    public void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        TextView tv1 = new TextView(this);  
        tv1.setText("Hi This is Frame Layout");  
        tv1.setTextSize(40);  
        tv1.setTextColor(Color.BLACK);  
        TextView tv2 = new TextView(this);  
        tv2.setLayoutParams(new LayoutParams(LayoutParams.FILL_PARENT,  
LayoutParams.WRAP_CONTENT, Gravity.BOTTOM));  
        tv2.setTextSize(50);  
        tv2.setGravity(Gravity.RIGHT);  
        tv2.setText("This is Second Text in Frame layout");  
        tv2.setTextColor(Color.WHITE);  
        ImageView iv1 = new ImageView(this);  
        iv1.setImageResource(R.drawable.lighthouse);  
        iv1.setLayoutParams(new LayoutParams(LayoutParams.FILL_PARENT,  
LayoutParams.FILL_PARENT));  
        iv1.setScaleType(ScaleType.MATRIX);  
        FrameLayout fl = new FrameLayout(this);  
        fl.setLayoutParams(new LayoutParams(LayoutParams.FILL_PARENT,  
LayoutParams.FILL_PARENT));  
        fl.addView(iv1);  
        fl.addView(tv1);  
        fl.addView(tv2);  
        setContentView(fl);  
    }  
}
```

android Manifest File –

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

Output Snapshot –**Example on LayoutMargin :****Java File – MainActivity.java**

```
package com.example.layoutmarging;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

Layout xml File –Activity_main.xml:

```
<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/text1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20dp"
```

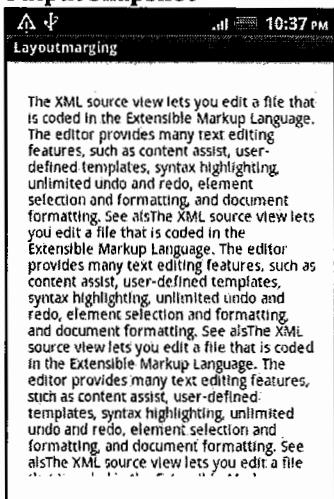
```
        android:layout_marginTop="30dp"
        android:layout_marginRight="15dp"
        android:layout_marginBottom="25dp"
        android:text="The XML source view lets you edit a file that is coded in the Extensible Markup Language.
The editor provides many text editing features, such as content assist, user-defined templates, syntax
highlighting, unlimited undo and redo, element selection and formatting, and document formatting.
See alsThe XML source view lets you edit a file that is coded in the Extensible Markup Language. The editor
provides many text editing features, such as content assist, user-defined templates, syntax highlighting,
unlimited undo and redo, element selection and formatting, and document formatting.
See alsThe XML source view lets you edit a file that is coded in the Extensible Markup Language. The editor
provides many text editing features, such as content assist, user-defined templates, syntax highlighting,
unlimited undo and redo, element selection and formatting, and document formatting.
See alsThe XML source view lets you edit a file that is coded in the Extensible Markup Language. The editor
provides many text editing features, such as content assist, user-defined templates, syntax highlighting,
unlimited undo and redo, element selection and formatting, and document formatting.
See alsThe XML source view lets you edit a file that is coded in the Extensible Markup Language. The editor
provides many text editing features, such as content assist, user-defined templates, syntax highlighting,
unlimited undo and redo, element selection and formatting, and document formatting.
See als "/>
</LinearLayout>
```

Android Manifest File –

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

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.layoutmarging.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>
```

Output Snapshot –



Example on LayoutPadding:

Java File – MainActivity.java

```
package com.example.layoutpadding;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

Layout xml File –activity_main.xml:

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

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
</LinearLayout>
```

```
    android:layout_height="wrap_content"
    android:layout_margin="100dp"
    android:padding="30dp"

    android:textColor="#8B0000"
    android:textSize="30sp"
    android:textStyle="bold|italic"
    android:typeface="monospace"
    android:text="Sign UP"  />

<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="100dp"
    android:padding="40dp"
    android:text="Sign IN" />

</LinearLayout>
```

Android Manifest File -

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

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.layoutpadding.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>
```

Output Snapshot -**Example on LayoutWeight :****Java File – MainActivity.java**

```
package com.example.layoutweight;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

Layout xml File –activity_main.xml:

```
<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:layout_weight="1"
    android:text="Text1" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:text="Text2" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:text="Text3" />

</LinearLayout>
```

Android Manifest File -

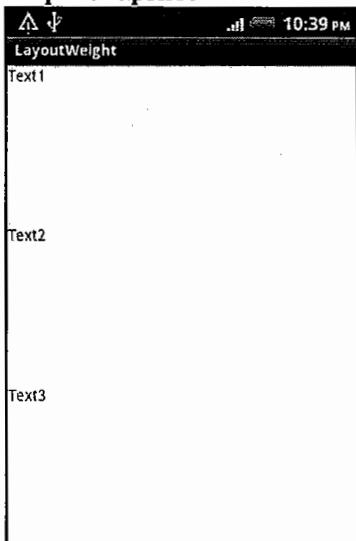
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.layoutweight"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.layoutweight.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>
```

Output Snapshot -**Example on LinearLayout Using java****Java File – MainActivity.java**

```
package com.example.linear;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.util.TypedValue;
import android.view.Gravity;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.LinearLayout;
import android.widget.LinearLayout.LayoutParams;
import android.widget.TextView;

public class MainActivity extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        // creating LinearLayout
        LinearLayout linLayout = new LinearLayout(this);
        // specifying vertical orientation
        linLayout.setOrientation(LinearLayout.VERTICAL);
        // creating LayoutParams
        LayoutParams linLayoutParams = new LayoutParams(LayoutParams.MATCH_PARENT,
        LayoutParams.MATCH_PARENT);
        // set LinearLayout as a root element of the screen
        setContentView(linLayout, linLayoutParams);
        //textView Creation
        LayoutParams textLayoutParams = new LayoutParams(LayoutParams.WRAP_CONTENT,
        LayoutParams.WRAP_CONTENT);
        textLayoutParams.gravity = Gravity.CENTER;
```

```
textLpView.bottomMargin=30;
TextView tv = new TextView(this);
tv.setText("Registration");
tv.setTextSize(TypedValue.COMPLEX_UNIT_DIP, 30);
tv.setTextColor(Color.RED);
tv.setLayoutParams(textLpView);
linLayout.addView(tv);
LinearLayout linLayout1 = new LinearLayout(this);
// specifying vertical orientation
linLayout1.setOrientation(LinearLayout.HORIZONTAL);
//TextView
LayoutParams textLpView1 = new LayoutParams(LayoutParams.WRAP_CONTENT,
LayoutParams.WRAP_CONTENT);
textLpView1.gravity = Gravity.LEFT;
textLpView1.rightMargin=20;
TextView tv1 = new TextView(this);
tv1.setText("FirstName");
tv1.setTextSize(TypedValue.COMPLEX_UNIT_DIP, 20);
tv1.setLayoutParams(textLpView1);
linLayout1.addView(tv1);
//EditText
LayoutParams textLpView2 = new LayoutParams(LayoutParams.WRAP_CONTENT,
LayoutParams.WRAP_CONTENT);
EditText edit = new EditText(this);
edit.setHint("Enter Text here");
edit.setLayoutParams(textLpView2);
linLayout1.addView(edit);
linLayout.addView(linLayout1);
//ImageView with Margins
LinearLayout.LayoutParams leftMarginParams = new LinearLayout.LayoutParams(200, 200);
leftMarginParams.leftMargin = 50;
ImageView image = new ImageView(this);
image.setImageResource(R.drawable.ic_launcher);
linLayout.addView(image, leftMarginParams);
//
LinearLayout.LayoutParams rightGravityParams = new LinearLayout.LayoutParams(
LayoutParams.WRAP_CONTENT, LayoutParams.WRAP_CONTENT);
rightGravityParams.gravity = Gravity.CENTER;

Button btn2 = new Button(this);
btn2.setText("Login");
btn2.setTextSize(TypedValue.COMPLEX_UNIT_DIP, 20);

btn2.setBackgroundColor(Color.GREEN);
linLayout.addView(btn2, rightGravityParams);
}
}
```

Layout xml File -activity_main.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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />

</RelativeLayout>
```

android Manifest File -

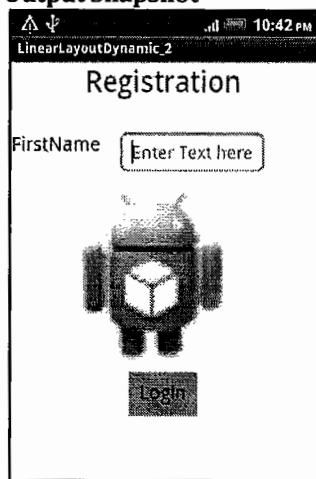
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.linear"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme">
        <activity
            android:name="com.example.linear.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>
```

Output Snapshot -



Example on RelativeLayout Using Java :-

Java File - SecondActivity.java

```
package com.example.relativelayoutdyn;

import android.app.Activity;
import android.os.Bundle;
import android.widget.RelativeLayout;
import android.widget.RelativeLayoutLayoutParams;
import android.widget.TextView;

public class SecondActivity extends Activity{
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);
        RelativeLayout layout = new RelativeLayout(this);
        RelativeLayout.LayoutParams layoutParams = new
        RelativeLayout.LayoutParams(LayoutParams.WRAP_CONTENT, LayoutParams.WRAP_CONTENT);
        layout.setLayoutParams(layoutParams);

        RelativeLayout.LayoutParams params1 = new
        RelativeLayout.LayoutParams(LayoutParams.WRAP_CONTENT, LayoutParams.WRAP_CONTENT);
        RelativeLayout.LayoutParams params2 = new
        RelativeLayout.LayoutParams(LayoutParams.WRAP_CONTENT, LayoutParams.WRAP_CONTENT);
        RelativeLayout.LayoutParams params3 = new
        RelativeLayout.LayoutParams(LayoutParams.WRAP_CONTENT, LayoutParams.WRAP_CONTENT);
        RelativeLayout.LayoutParams params4 = new
        RelativeLayout.LayoutParams(LayoutParams.WRAP_CONTENT, LayoutParams.WRAP_CONTENT);

        TextView tv1 = new TextView(this);
        params1.leftMargin=20;
        params1.bottomMargin=20;
        tv1.setId(1);
        tv1.setText("Mango");

        TextView tv2 = new TextView(this);
        params2.addRule(RelativeLayout.RIGHT_OF, tv1.getId());
        params2.leftMargin=20;
        tv2.setId(2);
        tv2.setText("Apple");

        TextView tv3 = new TextView(this);
        params3.addRule(RelativeLayout.BELOW, tv1.getId());
        tv3.setId(3);
        params3.bottomMargin=40;
        tv3.setText("Samposa");

        TextView tv4 = new TextView(this);
        params4.addRule(RelativeLayout.RIGHT_OF, tv3.getId());
        params4.addRule(RelativeLayout.ALIGN_BOTTOM, tv3.getId());
        params4.leftMargin=20;
        tv4.setId(4);
        tv4.setText("Idlea");
```

```
        layout.addView(tv1, params1);
        layout.addView(tv2, params2);
        layout.addView(tv3, params3);
        layout.addView(tv4, params4);
        setContentView(layout);
    }

}
```

MainActivity.java

```
package com.example.relativelayoutdyn;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.widget.RelativeLayout;
import android.widget.TextView;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        RelativeLayout relParent = new RelativeLayout(MainActivity.this);

        RelativeLayout.LayoutParams rlparent = new
        RelativeLayout.LayoutParams(RelativeLayout.LayoutParams.FILL_PARENT,RelativeLayout.LayoutParams.FILL_PARENT);
        RelativeLayout.LayoutParams relParam1 = new
        RelativeLayout.LayoutParams(RelativeLayout.LayoutParams.WRAP_CONTENT,RelativeLayout.LayoutParams.WRAP_CONTENT);
        RelativeLayout.LayoutParams relParam2 = new
        RelativeLayout.LayoutParams(RelativeLayout.LayoutParams.WRAP_CONTENT,RelativeLayout.LayoutParams.WRAP_CONTENT);
        RelativeLayout.LayoutParams relParam3 = new
        RelativeLayout.LayoutParams(RelativeLayout.LayoutParams.WRAP_CONTENT,
        RelativeLayout.LayoutParams.WRAP_CONTENT);
        RelativeLayout.LayoutParams relParam4= new
        RelativeLayout.LayoutParams(RelativeLayout.LayoutParams.WRAP_CONTENT,RelativeLayout.LayoutParams.WRAP_CONTENT);

        relParent.setLayoutParams(rlparent);
        //adding to Top layout
        TextView txtTitle = new TextView(MainActivity.this);
        relParam1.addRule(RelativeLayout.ALIGN_PARENT_TOP);
        relParam1.addRule(RelativeLayout.CENTER_HORIZONTAL);
        txtTitle.setText("HomeScreen");
        txtTitle.setId(1);
        txtTitle.setLayoutParams(relParam1);
        txtTitle.setTextColor(Color.BLUE);
        txtTitle.setTextSize(18);

        //adding to below Top layout
        TextView txtTitle1 = new TextView(MainActivity.this);
```

```
relParam2.addRule(RelativeLayout.BELOW,txtTitle.getId());
txtTitle1.setText("BirlaMandir");
txtTitle1.setLayoutParams(relParam2);
txtTitle1.setTextColor(Color.RED);
txtTitle1.setTextSize(30);
//Adding Middle
TextView txtTitleMiddle= new TextView(MainActivity.this);

relParam3.addRule(RelativeLayout.CENTER_IN_PARENT);
txtTitleMiddle.setText("Nampally");
txtTitleMiddle.setLayoutParams(relParam3);
txtTitleMiddle.setTextColor(Color.BLUE);
txtTitleMiddle.setTextSize(18);

//Adding Bottom Layout
TextView txtTitleBottom = new TextView(MainActivity.this);

relParam4.addRule(RelativeLayout.ALIGN_PARENT_BOTTOM);
relParam4.addRule(RelativeLayout.CENTER_HORIZONTAL);
txtTitleBottom.setText("Hyderabad");
txtTitleBottom.setLayoutParams(relParam4);
txtTitleBottom.setTextColor(Color.BLUE);
txtTitleBottom.setTextSize(18);
relParent.addView(txtTitle);
relParent.addView(txtTitle1);
relParent.addView(txtTitleMiddle);
relParent.addView(txtTitleBottom);
setContentView(relParent);
}
}
```

Android Manifest File -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.relativelayoutdyn"
    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.relativelayoutdyn.MainActivity"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

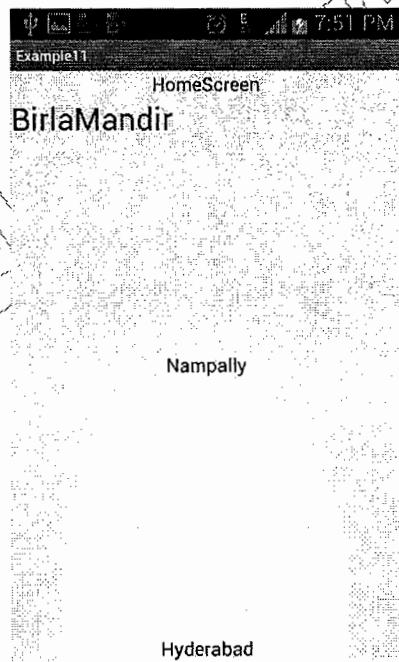
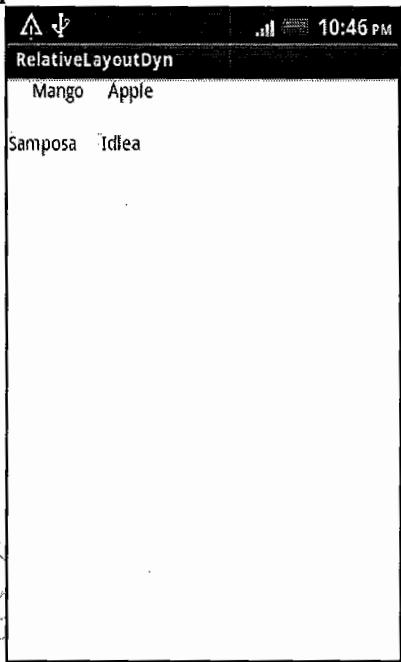
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
    
```

```
</activity> -->

<activity
    android:name="com.example.relativelayoutdyn.SecondActivity"
    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>
```

Output Snapshot -**Android- AnalogClock-DigitalClock- Example****MyAndroidAppActivity.class**

```
package com.mkyong.android;
import android.app.Activity;
import android.os.Bundle;
import android.widget.AnalogClock;
import android.widget.DigitalClock;

public class MyAndroidAppActivity extends Activity {

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

```
        AnalogClock ac = (AnalogClock) findViewById(R.id.analogClock1);
        //what can i do with AnalogClock?

        DigitalClock dc = (DigitalClock) findViewById(R.id.digitalClock1);
        //what can i do with DigitalClock also? for display only

    }

}
```

main.xml -

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

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Analog Clock"
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <AnalogClock
        android:id="@+id/analogClock1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Digital Clock"
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <DigitalClock
        android:id="@+id/digitalClock1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="DigitalClock" />

</LinearLayout>
```

Android Manifest File :

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
```

```
    android:label="@string/app_name" >
<activity
    android:label="@string/app_name"
    android:name=".MyAndroidAppActivity" >
    <intent-filter >
        <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output :



Android Checkbox Example

JavaFile : MyAndroidAppActivity.java

```
package com.example.android;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.Toast;

public class MyAndroidAppActivity extends Activity {

    private CheckBox chkIos, chkAndroid, chkWindows;
    private Button btnDisplay;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        chkIos = (CheckBox) findViewById(R.id.chkIos);
```

```
chkAndroid = (CheckBox) findViewById(R.id.chkAndroid);
chkWindows = (CheckBox) findViewById(R.id.chkWindows);
btnDisplay = (Button) findViewById(R.id.btnDisplay);

chkAndroid.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(((CheckBox)v).isChecked())
        {
            Toast.makeText(getApplicationContext(),
                "checked Android",
                Toast.LENGTH_LONG).show();
        }
        else
        {
            Toast.makeText(getApplicationContext(),
                "UNchecked Android", Toast.LENGTH_LONG)
                .show();
        }
    }
});
```

Xml File : main.xml:-

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

    <CheckBox
        android:id="@+id/chkIos"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/chk_ios" />

    <CheckBox
        android:id="@+id/chkAndroid"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:checked="true"
        android:text="@string/chk_android" />

    <CheckBox
        android:id="@+id/chkWindows"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/chk_windows" />

    <Button
        android:id="@+id	btnDisplay"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string(btn_display)" />

</LinearLayout>
```

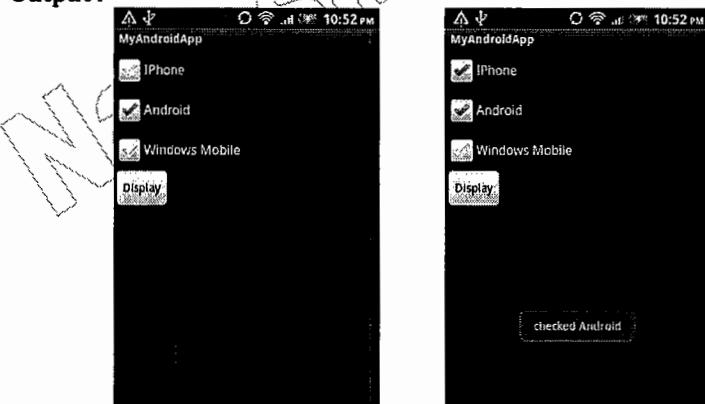
Android Manifest File :-

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name="com.example.android.MyAndroidAppActivity" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output :-



Example on Android DatePicker

JavaFile : MyAndroidAppActivity.java

```
package com.example.android;

import java.util.Calendar;
import android.app.Activity;
import android.app.DatePickerDialog;
```

```
import android.app.Dialog;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.TextView;

public class MyAndroidAppActivity extends Activity {

    private TextView tvDisplayDate;
    private DatePicker dpResult;
    private Button btnChangeDate;
    private int year;
    private int month;
    private int day;
    static final int DATE_DIALOG_ID = 999;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        btnChangeDate = (Button) findViewById(R.id.btnChangeDate);
        tvDisplayDate = (TextView) findViewById(R.id.tvDate);
        dpResult = (DatePicker) findViewById(R.id.dpResult);
        final Calendar c = Calendar.getInstance();
        year = c.get(Calendar.YEAR);
        month = c.get(Calendar.MONTH);
        day = c.get(Calendar.DAY_OF_MONTH);

        // set current date into textview
        tvDisplayDate.setText(new StringBuilder()
            // Month is 0 based, just add 1
            .append(month + 1).append("-").append(day).append("-")
            .append(year).append(" "));

        // set current date into datepicker
        dpResult.init(year, month, day, null);

        btnChangeDate.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {

                showDialog(DATE_DIALOG_ID);

            }
        });
    }

    @Override
    protected Dialog onCreateDialog(int id) {
        switch (id) {
        case DATE_DIALOG_ID:
            // set date picker as current date

```

```
        return new DatePickerDialog(this, datePickerListener, year, month,
                                  day);
    }
    return null;
}

private DatePickerDialog.OnDateSetListener datePickerListener = new
DatePickerDialog.OnDateSetListener() {

    // when dialog box is closed, below method will be called.
    public void onDateSet(DatePicker view, int selectedYear,
                          int selectedMonth, int selectedDay) {
        year = selectedYear;
        month = selectedMonth;
        day = selectedDay;

        // set selected date into textView
        tvDisplayDate.setText(new StringBuilder().append(month + 1)
                               .append("-").append(day).append("-").append(year)
                               .append(" "));

        // set selected date into datepicker also
        dpResult.init(year, month, day, null);
    }
};

}


```

Xml File : main.xml:-

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

    <Button
        android:id="@+id/btnChangeDate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Change Date" />

    <TextView
        android:id="@+id/lblDate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Current Date (M-D-YYYY): "
        android:textAppearance="?android:attr/textAppearanceLarge" />

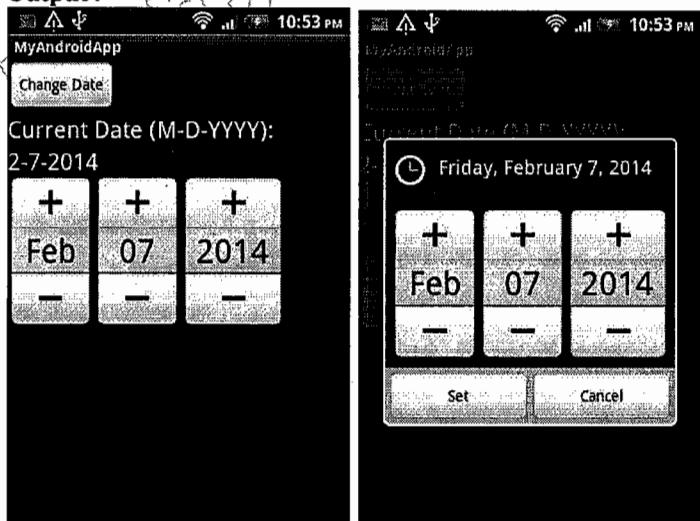
    <TextView
        android:id="@+id/tvDate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text=""
        android:textAppearance="?android:attr/textAppearanceLarge" />
```

```
<DatePicker  
    android:id="@+id/dpResult"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />  
  
</LinearLayout>
```

Android Manifest File :

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.android"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="10" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:label="@string/app_name"  
            android:name="com.example.android.MyAndroidAppActivity" >  
            <intent-filter >  
                <action android:name="android.intent.action.MAIN" />  
                <category android:name="android.intent.category.LAUNCHER" />  
            </intent-filter>  
        </activity>  
    </application>  
</manifest>
```

Output :



Example on Android Edit Text

JavaFile : MainActivity.java:-

```
package com.android.example;

import android.app.Activity;
import android.os.Bundle;
import android.text.Editable;
import android.text.TextWatcher;
import android.view.KeyEvent;
import android.view.View;
import android.view.View.OnFocusChangeListener;
import android.view.View.OnKeyListener;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends Activity {

    private EditText edittext;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        addKeyListener();
    }

    public void addKeyListener() {
        // get edittext component
        edittext = (EditText) findViewById(R.id.editText1);

        /*// add a keylistener to keep track user input
        edittext.setOnKeyListener(new OnKeyListener() {
            public boolean onKey(View v, int keyCode, KeyEvent event) {

                // if keydown and "enter" is pressed
                if ((event.getAction() == KeyEvent.ACTION_DOWN)
                    && (keyCode == KeyEvent.KEYCODE_ENTER)) {

                    // display a floating message
                    Toast.makeText(MainActivity.this,
                        edittext.getText(), Toast.LENGTH_LONG).show();
                    return true;
                } else if ((event.getAction() == KeyEvent.ACTION_DOWN)
                    && (keyCode == KeyEvent.KEYCODE_9)) {

                    // display a floating message
                    Toast.makeText(MainActivity.this,
                        "Number 9 is pressed!",
                        Toast.LENGTH_LONG).show();
                    return true;
                }
            }
        });
    }
}
```

```
});  
*/  
edittext.addTextChangedListener(new TextWatcher() {  
  
    @Override  
    public void onTextChanged(CharSequence s, int start, int before,  
        int count) {  
        // TODO Auto-generated method stub  
        String answerString = s.toString();  
  
        // and now we make a Toast  
        // modify "yourActivity.this" with your activity name .this  
        Toast.makeText(MainActivity.this,  
            "The string from EditText is: " + answerString, 0)  
            .show();  
    }  
  
    @Override  
    public void beforeTextChanged(CharSequence s, int start, int count,  
        int after) {  
        // TODO Auto-generated method stub  
    }  
  
    @Override  
    public void afterTextChanged(Editable s) {  
        // TODO Auto-generated method stub  
    }  
});  
edittext.setOnFocusChangeListener(new OnFocusChangeListener() {  
  
    @Override  
    public void onFocusChange(View v, boolean hasFocus) {  
        // TODO Auto-generated method stub  
        if (hasFocus) {  
            Toast.makeText(MainActivity.this,  
                "EditText Focus is Focused: "  
                .show();  
        }  
    }  
});  
}  
}
```

Xml File :main.xml:-

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent" >  
  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignParentLeft="true"
```

```
        android:layout_alignParentTop="true"
        android:layout_marginLeft="51dp"
        android:layout_marginTop="75dp"
        android:text="TextView" />

<EditText
    android:id="@+id/editText1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/textView1"
    android:layout_alignBottom="@+id/textView1"
    android:layout_marginLeft="53dp"
    android:layout_toRightOf="@+id/textView1"
    android:ems="10" >

    <requestFocus />
</EditText>

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText1"
    android:layout_marginTop="64dp"
    android:layout_toLeftOf="@+id/editText1"
    android:text="TextView" />

<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/textView2"
    android:layout_alignBottom="@+id/textView2"
    android:layout_alignLeft="@+id/editText1"
    android:ems="10" />

</RelativeLayout>
```

Android Manifest File :

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

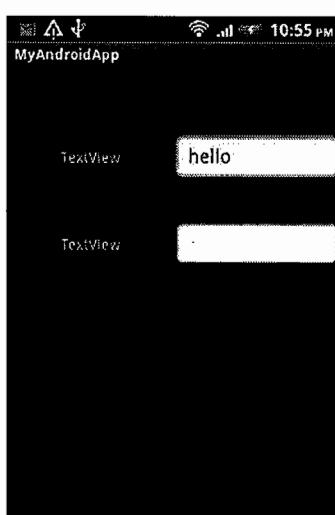
    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name="com.android.example.MainActivity" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
```

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

</manifest>
```

Output :



Example on Android Progress-Bar:-

JavaFile : MyAndroidAppActivity.java

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

public class MyAndroidAppActivity extends Activity {

    Button btnStartProgress;
    ProgressDialog progressBar;
    private int progressBarStatus = 0;
    private Handler progressBarHandler = new Handler();

    private long fileSize = 0;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        addListenerOnButton();
    }
}
```

```
public void addListenerOnButton() {  
    btnStartProgress = (Button) findViewById(R.id.btnStartProgress);  
    btnStartProgress.setOnClickListener(new OnClickListener() {  
  
        @Override  
        public void onClick(View v) {  
  
            // prepare for a progress bar dialog  
            progressBar = new ProgressDialog(v.getContext());  
            progressBar.setCancelable(true);  
            progressBar.setMessage("File downloading ...");  
            progressBar.setProgressStyle(ProgressDialog.STYLE_HORIZONTAL);  
            progressBar.setProgress(0);  
            progressBar.setMax(100);  
            progressBar.show();  
  
            //reset progress bar status  
            progressBarStatus = 0;  
  
            //reset filesize  
            fileSize = 0;  
  
            new Thread(new Runnable() {  
                public void run() {  
                    while (progressBarStatus < 100) {  
  
                        // process some tasks  
                        progressBarStatus = doSomeTasks();  
  
                        // your computer is too fast, sleep 1 second  
                        try {  
                            Thread.sleep(1000);  
                        } catch (InterruptedException e) {  
                            e.printStackTrace();  
                        }  
  
                        // Update the progress bar  
                        progressBarHandler.post(new Runnable() {  
                            public void run() {  
  
                                progressBar.setProgress(progressBarStatus);  
                            }  
                        });  
                }  
            }  
  
            // ok, file is downloaded,  
            if (progressBarStatus >= 100) {  
  
                // sleep 2 seconds, so that you can see the 100%  
                try {  
                    Thread.sleep(2000);  
                } catch (InterruptedException e) {  
                    e.printStackTrace();  
                }  
            }  
        }  
    });  
}
```

```
// close the progress bar dialog  
progressBar.dismiss();  
}  
});  
}  
});  
  
// file download simulator... a really simple  
public int doSomeTasks() {  
  
    while (fileSize <= 1000000) {  
  
        fileSize++;  
  
        if (fileSize == 100000) {  
            return 10;  
        } else if (fileSize == 200000) {  
            return 20;  
        } else if (fileSize == 300000) {  
            return 30;  
        }  
        // ...add your own  
    }  
    return 100;  
}
```

Xml File : main.xml -

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <Button  
        android:id="@+id/btnStartProgress"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Download File" />  
  
</LinearLayout>
```

Android Manifest File :

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name="com.example.android.MyAndroidAppActivity" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />

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

Output :



Example on Android Radio button

JavaFile : MyAndroidAppActivity.class

```
package com.example.android;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
```

```
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

public class MyAndroidAppActivity extends Activity {

    private RadioGroup radioSexGroup;
    private RadioButton radioSexButton;
    private Button btnDisplay;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        radioSexGroup = (RadioGroup) findViewById
                (R.id.radioGroup1);
        btnDisplay = (Button) findViewById(R.id.button1);

        btnDisplay.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {

                // get selected radio button from radioGroup
                int selectedId = radioSexGroup.
                        getCheckedRadioButtonId();

                // find the radiobutton by returned id
                radioSexButton = (RadioButton)
                        findViewById(selectedId);

                Toast.makeText(MyAndroidAppActivity.this,
                        radioSexButton.getText(), Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

Xml File :main.xml -

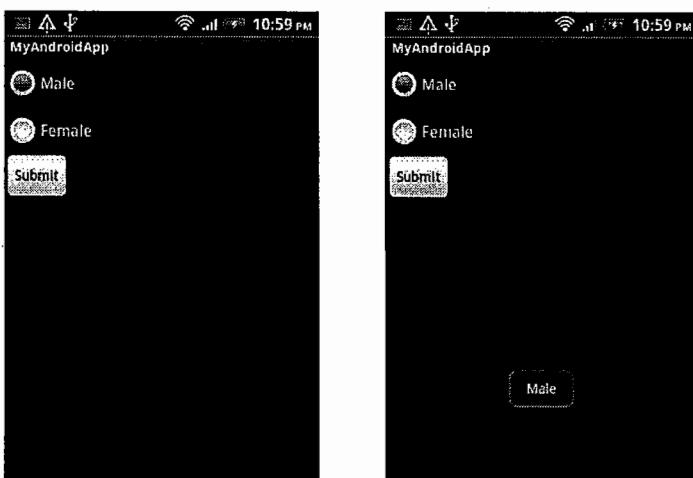
```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <RadioGroup
        android:id="@+id/radioGroup1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical">
```

```
<RadioButton  
    android:id="@+id/radio0"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:checked="true"  
    android:text="Male" />  
  
<RadioButton  
    android:id="@+id/radio1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Female" />  
</RadioGroup>  
  
<Button  
    android:id="@+id/button1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Submit" />  
  
</LinearLayout>
```

Android Manifest File :

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.android"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="10" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:label="@string/app_name"  
            android:name="com.example.android.MyAndroidAppActivity" >  
            <intent-filter>  
                <action android:name="android.intent.action.MAIN" />  
  
                <category android:name="android.intent.category.LAUNCHER" />  
            </intent-filter>  
        </activity>  
    </application>  
</manifest>
```

Output:**Example On Android Spinner Dropdownlist****JavaFile : MyAndroidAppActivity.java:-**

```
package com.example.android;

import java.util.ArrayList;
import java.util.List;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.Spinner;
import android.widget.Toast;

public class MyAndroidAppActivity extends Activity {

    private Spinner spinner1, spinner2;
    private Button btnSubmit;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        spinner1 = (Spinner) findViewById(R.id.spinner1);
        spinner2 = (Spinner) findViewById(R.id.spinner2);
        btnSubmit = (Button) findViewById(R.id.btnSubmit);

        spinner1.setOnItemSelectedListener(new OnItemSelectedListener() {

            @Override
            public void onItemSelected(AdapterView<?> parent, View v,
                int pos, long arg3) {
```

```
// TODO Auto-generated method stub
// TODO Auto-generated method stub
Toast.makeText(parent.getContext(),"OnItemSelectedListener : "+
parent.getItemAtPosition(pos).toString(),Toast.LENGTH_SHORT).show();
}

@Override
public void onNothingSelected(AdapterView<?> arg0) {
// TODO Auto-generated method stub
}

});

//spinner 2 content
List<String> list = new ArrayList<String>();
list.add("list 1");
list.add("list 2");
list.add("list 3");

ArrayAdapter<String> dataAdapter = new ArrayAdapter<String>(this,
        android.R.layout.simple_spinner_item, list);

dataAdapter
.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
spinner2.setAdapter(dataAdapter);
btnSubmit.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {

        Toast.makeText(
                MyAndroidAppActivity.this,
                "OnClickListener : " + "\nSpinner 1 : "
                +
                String.valueOf(spinner1.getSelectedItem())
                +
                "\nSpinner 2 : "
                +
                String.valueOf(spinner2.getSelectedItem()),
                Toast.LENGTH_SHORT).show();
    }
});

});

}
```

Xml File :main.xml -

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

```
    android:orientation="vertical" >

    <Spinner
        android:id="@+id/spinner1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:entries="@array/country_arrays"
        android:prompt="@string/country_prompt" />

    <Spinner
        android:id="@+id/spinner2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />

    <Button
        android:id="@+id	btnSubmit"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Submit" />
</LinearLayout>
```

Android Manifest File :

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name="com.example.android.MyAndroidAppActivity" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Output :**Example on Android TimePicker Example****JavaFile : MainActivity.java**

```
package com.example.android;
import java.util.Calendar;
import android.app.Activity;
import android.app.Dialog;
import android.app.TimePickerDialog;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.TextView;
import android.widget.TimePicker;
```

```
public class MainActivity extends Activity {

    private TextView tvDisplayTime;
    private TimePicker timePicker1;
    private Button btnChangeTime;

    private int hour;
    private int minute;

    static final int TIME_DIALOG_ID = 999;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        btnChangeTime = (Button) findViewById(R.id.btnChangeTime);

        tvDisplayTime = (TextView) findViewById(R.id.tvTime);
        timePicker1 = (TimePicker) findViewById(R.id.timePicker1);
```

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```
final Calendar c = Calendar.getInstance();
hour = c.get(Calendar.HOUR_OF_DAY);
minute = c.get(Calendar.MINUTE);

// set current time into textview
tvDisplayTime.setText(new StringBuilder().append(pad(hour)).append(":")
.append(pad(minute)));

// set current time into timepicker
timePicker1.setCurrentHour(hour);
timePicker1.setCurrentMinute(minute);

btnChangeTime.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        showDialog(TIME_DIALOG_ID);
    }
});

@Override
protected Dialog onCreateDialog(int id) {
    // TODO Auto-generated method stub
    switch (id) {
    case TIME_DIALOG_ID:
        return new TimePickerDialog(this, timePickerListener, hour, minute,
false);
    }
}

TimePickerDialog.OnTimeSetListener timePickerListener = new
TimePickerDialog.OnTimeSetListener() {

    @Override
    public void onTimeSet(TimePicker view, int selectedHour,
        int selectedMinute) {
        // TODO Auto-generated method stub
        hour = selectedHour;
        minute = selectedMinute;

        // set current time into textview
        tvDisplayTime.setText(new StringBuilder().append(pad(hour))
.append(":").append(pad(minute)));

        // set current time into timepicker
        timePicker1.setCurrentHour(hour);
        timePicker1.setCurrentMinute(minute);
    }
}
```

```
};  
  
private static String pad(int c) {  
    if (c >= 10)  
        return String.valueOf(c);  
    else  
        return "0" + String.valueOf(c);  
}  
}
```

Xml File :main.xml -

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
<Button  
    android:id="@+id/btnChangeTime"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Change Time" />  
  
<TextView  
    android:id="@+id/lblTime"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Current Time (H:M): "  
    android:textAppearance="?android:attr/textAppearanceLarge" />  
  
<TextView  
    android:id="@+id/tvTime"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text=""  
    android:textAppearance="?android:attr/textAppearanceLarge" />  
  
<TimePicker  
    android:id="@+id/timePicker1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />  
  
</LinearLayout>
```

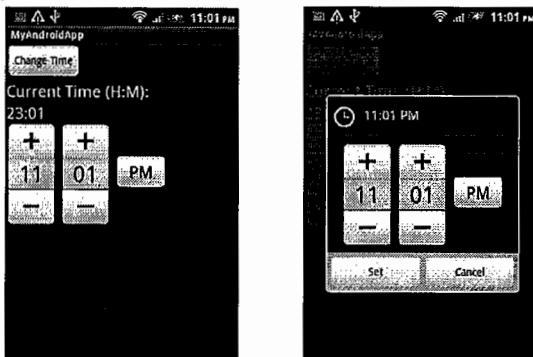
Android Manifest File :

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

```
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >
<activity
    android:label="@string/app_name"
    android:name="com.example.android.MainActivity" >
<intent-filter>
    <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output :

Example on Android Toggle Button

JavaFile : MyAndroidAppActivity.java

```
package com.example.android;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.Toast;
import android.widget.ToggleButton;
import com.exaple.android.R;

public class MyAndroidAppActivity extends Activity {

    private ToggleButton toggleButton1, toggleButton2;
    private Button btnDisplay;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        toggleButton1 = (ToggleButton)
            findViewById(R.id.toggleButton1);
        toggleButton2 = (ToggleButton)
            findViewById(R.id.toggleButton2);
        btnDisplay = (Button)
            findViewById(R.id.button1);
```

```
btnDisplay.setOnClickListener(new OnClickListener() {  
  
    @Override  
    public void onClick(View v) {  
        // TODO Auto-generated method stub  
        StringBuffer result = new StringBuffer();  
  
        result.append("toggleButton1 :").append(toggleButton1.getText());  
        result.append("toggleButton2 :").append(toggleButton2.getText());  
  
        Toast.makeText(MyAndroidAppActivity.this, result.toString(),  
                    Toast.LENGTH_LONG).show();  
    }  
});  
}  
}
```

Xml File :main.xml -

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <ToggleButton  
        android:id="@+id/toggleButton1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="ToggleButton" />  
  
    <ToggleButton  
        android:id="@+id/toggleButton2"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="ToggleButton"  
        android:textOff="Toggle OFF"  
        android:textOn="Toggle ON" />  
  
    <Button  
        android:id="@+id/button1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Display" />  
  
</LinearLayout>
```

Android Manifest File :

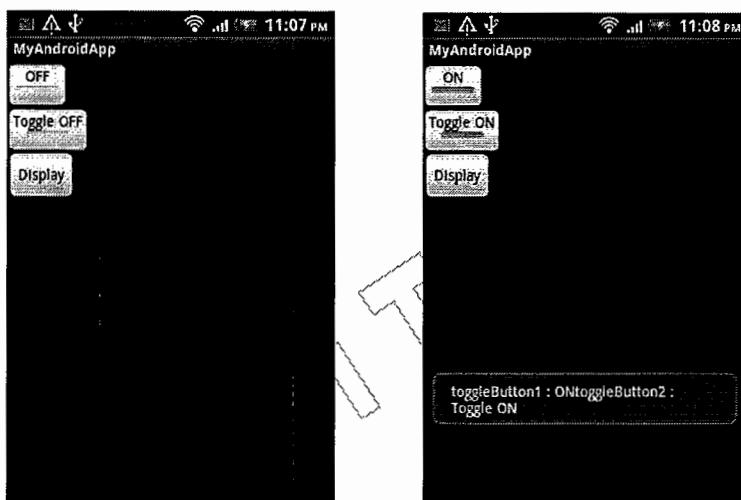
```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.android"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="10" />
```

```
<application
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >
    <activity
        android:label="@string/app_name"
        android:name="com.example.android.MyAndroidAppActivity" >
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output :



Example On AutoComplete Edittext

JavaFile : MainActivity.java:-

```
package com.example.autocompletetextview;
import android.os.Bundle;
import android.app.Activity;
import android.graphics.Color;
import android.view.Menu;
import android.widget.ArrayAdapter;
import android.widget.AutoCompleteTextView;

public class MainActivity extends Activity {
    String[] language = { "C", "C++", "Java",
        ".NET", "iPhone", "Android",
        "ASP.NET", "PHP" };

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

```
// ArrayAdapter<String> adapter = new
// ArrayAdapter<String>(this, android.R.layout.simple_dropdown_item_1line, language);
ArrayAdapter<String> adapter =
    new ArrayAdapter<String>(this,
        android.R.layout.select_dialog_item, language);
AutoCompleteTextView actv =
    (AutoCompleteTextView)
    findViewById(R.id.autoCompleteTextView1);
actv.setThreshold(1);
actv.setAdapter(adapter);
actv.setTextColor(Color.RED);

}
```

}

Xml File :activity_main.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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="15dp"
        android:text="@string/what_is_your_favourite_programming_language_" />

    <AutoCompleteTextView
        android:id="@+id/autoCompleteTextView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/textView1"
        android:layout_marginLeft="36dp"
        android:layout_marginTop="17dp"
        android:ems="10"
        android:text="">

        <requestFocus />
    </AutoCompleteTextView>

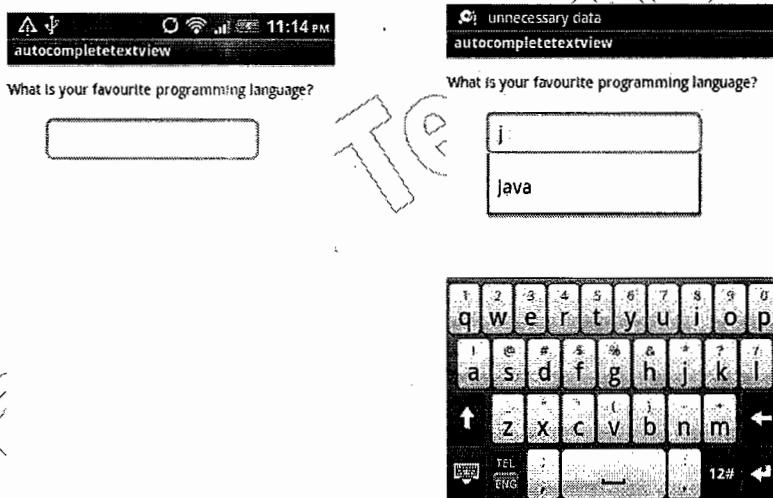
</RelativeLayout>
```

Android Manifest File :

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

```
<uses-sdk  
    android:minSdkVersion="8"  
    android:targetSdkVersion="16" />  
  
<application  
    android:allowBackup="true"  
    android:icon="@drawable/ic_launcher"  
    android:label="@string/app_name"  
    android:theme="@style/AppTheme" >  
    <activity  
        android:name="com.example.autocompletetextview.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>
```

Output :



Example on Custom Toast

JavaFile : MainActivity.java

```
package com.example.customtoast;  
import android.app.Activity;  
import android.os.Bundle;  
import android.view.Gravity;  
import android.view.LayoutInflater;  
import android.view.Menu;  
import android.view.View;  
import android.view.View.OnClickListener;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.Toast;
```

```
public class MainActivity extends Activity {  
    @Override  
    public void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        Button toastButton=(Button)findViewById(R.id.toastButton);  
        toastButton.setOnClickListener(new OnClickListener() {  
  
            @Override  
            public void onClick(View v) {  
                // TODO Auto-generated method stub  
  
                View layout = getLayoutInflater().inflate(R.layout.customtoast,  
                (ViewGroup) findViewById(R.id.custom_toast_layout));  
  
                Toast toast = new Toast(getApplicationContext());  
                toast.setDuration(Toast.LENGTH_LONG);  
                toast.setGravity(Gravity.CENTER_VERTICAL, 0, 0);  
                toast.setView(layout);  
                toast.show();  
            }  
        });  
    }  
    @Override  
    public boolean onCreateOptionsMenu(Menu menu){  
        getMenuInflater().inflate(R.menu.activity_main, menu);  
        return true;  
    }  
}
```

Xml File :activity_main.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"  
    tools:context=".MainActivity" >  
  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignParentLeft="true"  
        android:layout_alignParentTop="true"  
        android:layout_marginLeft="62dp"  
        android:layout_marginTop="26dp"  
        android:text="CustomToast Example" />  
  
    <Button  
        android:id="@+id/toastButton"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignLeft="@+id/textView1"  
        android:layout_below="@+id/textView1"  
        android:layout_marginTop="28dp"  
        android:text="ShowCustomToast" />
```

```
</RelativeLayout>
```

Customtoast.xml -

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/custom_toast_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="#8A7979"
    >

    <ImageView
        android:id="@+id/custom_toast_image"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:contentDescription="@string/hello_world"
        android:src="@drawable/ic_launcher"/>

    <TextView
        android:id="@+id/custom_toast_message"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:contentDescription="@string/Toast"
        android:text="This is Custom Toast" />
</LinearLayout>
```

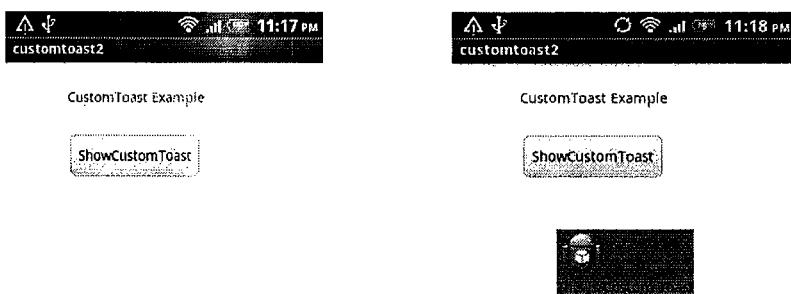
Android Manifest File :

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

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="16" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.customtoast.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>
```

Output :**Example on Gallery Demo**

JavaFile : GallaryDemo.java

```
package com.gallery;

import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.Gallery;
import android.widget.ImageView;

public class GallaryDemo extends Activity {
    Gallery gal;
    int[] images={R.drawable.image1,R.drawable.image2,R.drawable.image3,R.drawable.image4,R.drawable.image5,R.drawable.image6,R.drawable.image7,R.drawable.image8,R.drawable.image9,R.drawable.ic_launcher};

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        gal=(Gallery)findViewById(R.id.gal);
        gal.setAdapter(new MyGalaxyAdapter(getApplicationContext()));

    }

    class MyGalaxyAdapter extends BaseAdapter{
        Context context;
        public MyGalaxyAdapter(Context c){
            context=c;
        }
        @Override
```

```
public int getCount() {
    // TODO Auto-generated method stub
    return images.length;
}
@Override
public Object getItem(int position) {
    // TODO Auto-generated method stub
    return position;
}
@Override
public long getItemId(int position) {
    // TODO Auto-generated method stub
    return position;
}
@Override
public View getView(int position, View convertView, ViewGroup parent) {
    // TODO Auto-generated method stub

    ImageView iv=new ImageView(context);
    iv.setImageResource(images[position]);

    return iv;
}

}
```

Xml File :main.xml -

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Gallary Demo"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

    <Gallery android:id="@+id/gal"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent" />

</LinearLayout>
```

Android Manifest File :

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

```
<uses-sdk android:minSdkVersion="10" />

<application
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >
    <activity
        android:label="@string/app_name"
        android:name=".GallaryDemo" >
        <intent-filter >
            <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output :**Example on Progress Bar Demo****JavaFile : ProgressBarDemo.java**

```
package com.progress;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ProgressBar;

public class ProgressBarDemo extends Activity {
    ProgressBar pb;
    Button bt;
    int i=1000;
    /** Called when the activity is first created. */
```

```
@Override  
public void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.main);  
  
    pb=(ProgressBar)findViewById(R.id.progress);  
    pb.setMax(10000);  
    pb.setProgress(0);  
  
    bt=(Button)findViewById(R.id.bt);  
    bt.setOnClickListener(new OnClickListener() {  
  
        @Override  
        public void onClick(View v) {  
            // TODO Auto-generated method stub  
            if(i!=10000){  
                pb.setProgress(i);  
                i+=1000;  
            }  
  
            else {  
                pb.setVisibility(View.GONE);  
            }  
        }  
    });  
}
```

Xml File :main.xml -

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <TextView  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Progress Bar Demo"  
        android:textColor="#aa0000"  
        android:gravity="center"  
        android:textSize="20dp"  
        android:textStyle="bold" />  
  
    <ProgressBar android:id="@+id/progress"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        style="@android:style/Widget.ProgressBar.Horizontal"  
        android:progress="0"  
        android:max="10000"  
        android:layout_marginTop="50dp"/>  
  
    <Button android:id="@+id/bt"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"
```

```
    android:text="Show Progress"
    android:textColor="#0000EE"
    android:gravity="center"
    android:textSize="20dp"
    android:textStyle="bold"
    android:layout_marginTop="50dp"/>

</LinearLayout>
```

Android Manifest File :

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

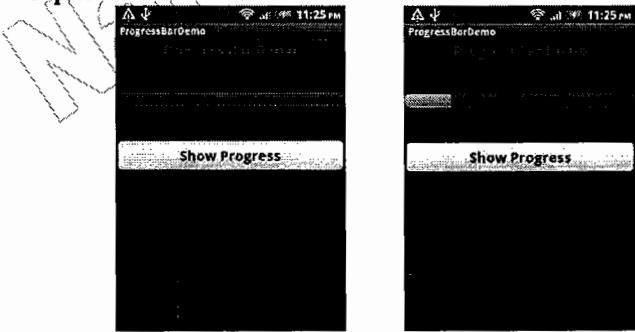
    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".ProgressBarDemo" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output :



Example On Context Menu :

Java File – MainActivity.java

```
package com.example.contextmenu;

import android.app.Activity;
import android.os.Bundle;
import android.view.ContextMenu;
```

```
import android.view.ContextMenu.ContextMenuItemInfo;
import android.view.MenuItem;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends Activity {
    ListView listView1;
    String contacts[]={"Ajay","Sachin","Sumit","Tarun","Yogesh"};

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

        listView1=(ListView)findViewById(R.id.listView1);

        ArrayAdapter<String> adapter=new
        ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,contacts);
        listView1.setAdapter(adapter);

        // Register the ListView for Context menu
        registerForContextMenu(listView1);
    }

    @Override
    public void onCreateContextMenu(ContextMenu menu, View v, ContextMenuItemInfo menuInfo)
    {
        super.onCreateContextMenu(menu, v, menuInfo);
        menu.setHeaderTitle("Select The Action");
        menu.add(0, v.getId(), 0, "Call");//groupId, itemId, order, title
        menu.add(0, v.getId(), 0, "SMS");
    }

    @Override
    public boolean onContextItemSelected(MenuItem item){
        if(item.getTitle().equals("Call")){
            Toast.makeText(getApplicationContext(),"calling code",Toast.LENGTH_LONG).show();
        }
        else if(item.getTitle().equals("SMS")){
            Toast.makeText(getApplicationContext(),"sending sms code",Toast.LENGTH_LONG).show();
        }else{
            return false;
        }
        return true;
    }
}
```

Layout Xml File -Activity_main.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:background="@android:color/black"
    tools:context=".MainActivity" >

<ListView
    android:id="@+id/listView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerInParent="true"
    android:layout_margin="60dp"
    android:background="@android:color/white" >
</ListView>

<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_marginTop="18dp"
    android:textColor="#FF0000"
    android:textSize="20sp"
    android:text="This is Context Menu Example" />

</RelativeLayout>
```

Android Manifest File -

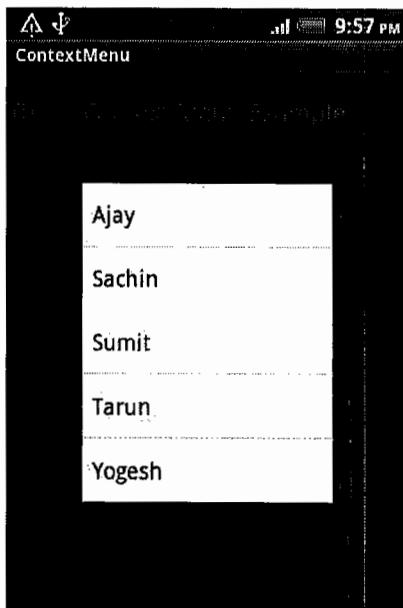
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.contextmenu"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.contextmenu.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>
```

Output Snapshot -**Example ON Option Menu:****Java File – MainActivity.java**

```
package com.example.optionmenu;

import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends Activity {

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

    @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 boolean onOptionsItemSelected(MenuItem item) {
        switch (item.getItemId()) {
            case R.id.item1:
                Toast.makeText(getApplicationContext(),"Your are in Home Screen",Toast.LENGTH_LONG).show();
        }
    }
}
```

```
        return true;

    case R.id.item2:
        Toast.makeText(getApplicationContext(),"Your are in Setting Screen",Toast.LENGTH_LONG).show();
        return true;

    case R.id.item3:
        Toast.makeText(getApplicationContext(),"Your Logout From App",Toast.LENGTH_LONG).show();
        return true;

    default:
        return super.onOptionsItemSelected(item);
    }
}
```

Layout Xml File -Activity_main.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" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is OptionMenu Example." />

</RelativeLayout>
```

Menu Xml file-Main.xml:

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

    <item android:id="@+id/item1"
        android:title="Home"/>

    <item android:id="@+id/item2"
        android:title="Settings"/>

    <item android:id="@+id/item3"
        android:title="LogOut"/>

</menu>
```

Android Manifest File -

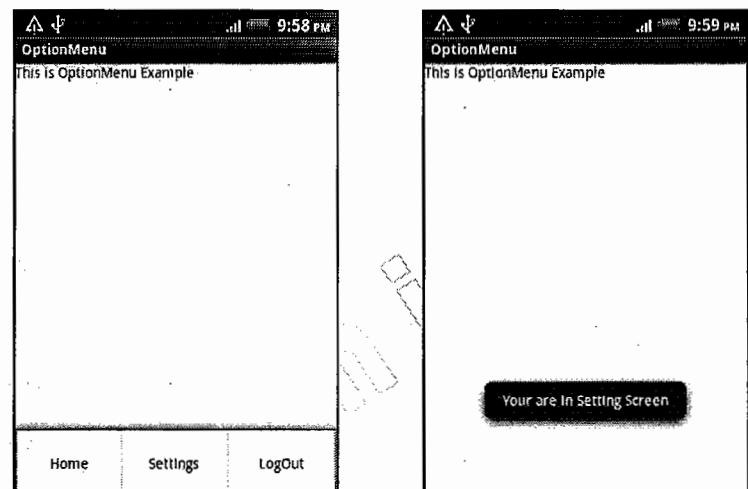
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.optionmenu"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.optionmenu.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>
```

Output Snapshot -**Example on Popup Menu:****Java File – MainActivity.java**

```
package com.example.popupmenu;

import android.app.Activity;
import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.PopupMenu;
import android.widget.Toast;

public class MainActivity extends Activity {

    Button button1;
```

```
@Override  
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
  
    button1 = (Button) findViewById(R.id.button1);  
  
    button1.setOnClickListener(new OnClickListener() {  
  
        @Override  
        public void onClick(View v) {  
            //Creating the instance of PopupMenu  
            PopupMenu popup = new PopupMenu(MainActivity.this, button1);  
            //Inflating the Popup using xml file  
            popup.getMenuInflater().inflate(R.menu.pop, popup.getMenu());  
  
            //registering popup with OnMenuItemClickListener  
            popup.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {  
                public boolean onMenuItemClick(MenuItem item) {  
                    Toast.makeText(MainActivity.this, "You Clicked : " +  
item.getTitle(),Toast.LENGTH_SHORT).show();  
                    return true;  
                }  
            });  
  
            popup.show(); //Showing popup menu  
        }  
    }); //closing the setOnClickListener method  
  
}  
}
```

Layout Xml File -Activity_main.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/button1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignParentLeft="true"  
        android:layout_alignParentTop="true"  
        android:layout_marginLeft="62dp"  
        android:layout_marginTop="50dp"  
        android:text="Show Popup" />  
  
</RelativeLayout>
```

Menu Xml File -Main.xml :

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

    <item
        android:id="@+id/action_settings"
        android:orderInCategory="100"
        android:showAsAction="never"
        android:title="@string/action_settings"/>

</menu>
```

Pop.xml :

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

    <item android:id="@+id/one"
        android:title="One"/>
    <item
        android:id="@+id/two"
        android:title="Two"/>
    <item
        android:id="@+id/three"
        android:title="Three"/>

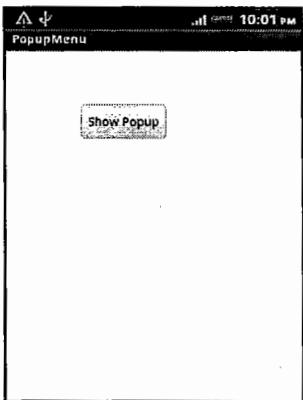
</menu>
```

Android Manifest File –

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

    <uses-sdk
        android:minSdkVersion="11"
        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.popupmenu.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>
```

Output Snapshot -**Example Alert Dialogs:****Java File – MainActivity.java**

```
package com.example.android;

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.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends Activity {

    final Context context = this;
    private Button button;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

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

        // add button listener
        button.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {

                AlertDialog.Builder alertDialogBuilder = new AlertDialog.Builder(context);
                // set title
                alertDialogBuilder.setTitle("Your Title");

                // set dialog message
                alertDialogBuilder.setMessage("Click yes to exit!")
                .setCancelable(false)
```

```
.setPositiveButton("Yes", new DialogInterface.OnClickListener() {
    public void onClick(DialogInterface dialog, int id) {
        // if this button is clicked, close
        // current activity

        MainActivity.this.finish();
    }
})
.setNegativeButton("No", new DialogInterface.OnClickListener() {
    public void onClick(DialogInterface dialog, int id) {
        // if this button is clicked, just close
        // the dialog box and do nothing
        dialog.cancel();
    }
});

// create alert dialog
AlertDialog alertDialog = alertDialogBuilder.create();

// show it
alertDialog.show();

}
});
```

Layout Xml File -Main.xml :

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

    <Button    android:id="@+id/buttonAlert"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Alert Box" />

</LinearLayout>
```

Android Manifest File -

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

    <uses-sdk android:minSdkVersion="10" />

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

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

<application
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >
    <activity
        android:label="@string/app_name"
        android:name="com.example.android.MainActivity" >
        <intent-filter >
            <action android:name="android.intent.action.MAIN" />
            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>
</manifest>
```

Output Snapshot -**Example on Custom Dialog:****Java File - MainActivity.java**

```
package com.example.android;

import android.app.Activity;
import android.app.Dialog;
import android.content.Context;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.TextView;

public class MainActivity extends Activity {

    final Context context = this;
    private Button button;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
```

```
button = (Button) findViewById(R.id.buttonShowCustomDialog);

// add button listener
button.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View arg0) {

        // custom dialog
        final Dialog dialog = new Dialog(context);
        dialog.setContentView(R.layout.custom);
        dialog.setTitle("Title...");

        // set the custom dialog components - text, image and button
        TextView text = (TextView) dialog.findViewById(R.id.text);
        text.setText("Android custom dialog example!");
        ImageView image = (ImageView) dialog.findViewById(R.id.image);
        image.setImageResource(R.drawable.ic_launcher);

        Button dialogButton = (Button) dialog.findViewById(R.id.dialogButtonOK);
        // if button is clicked, close the custom dialog
        dialogButton.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                dialog.dismiss();
            }
        });
        dialog.show();
    }
});
```

Layout Xml File -Custom.xml :

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

    <ImageView
        android:id="@+id/image"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginRight="5dp" />

    <TextView
        android:id="@+id/text"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:textColor="#FFF"
        android:layout_toRightOf="@+id/image"/>/>
<Button
```

```
    android:id="@+id/dialogButtonOK"
    android:layout_width="100px"
    android:layout_height="wrap_content"
    android:text=" Ok "
    android:layout_marginTop="5dp"
    android:layout_marginRight="5dp"
    android:layout_below="@+id/image"    />

</RelativeLayout>
```

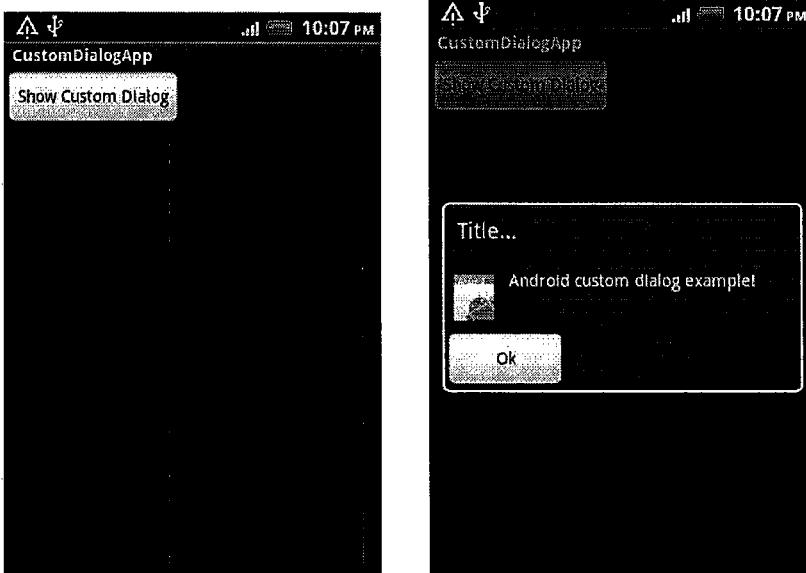
Main.xml :

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

    <Button
        android:id="@+id/buttonShowCustomDialog"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Custom Dialog" />
</LinearLayout>
```

Android Manifest File -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.android"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk android:minSdkVersion="10" />
    <uses-permission android:name="android.permission.CALL_PHONE" />
    <uses-permission android:name="android.permission.READ_PHONE_STATE" />
    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name="com.example.android.MainActivity" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output Snapshot -**Example on Prompt Dialog:****Java File – MainActivity.java**

```
package com.example.android;

import android.app.Activity;
import android.app.AlertDialog;
import android.content.Context;
import android.content.DialogInterface;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity {

    final Context context = this;
    private Button button;
    private EditText result;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        // components from main.xml
        button = (Button) findViewById(R.id.buttonPrompt);
        result = (EditText) findViewById(R.id.editTextResult);

        // add button listener
        button.setOnClickListener(new OnClickListener() {
```

```
@Override
public void onClick(View arg0) {

    // get prompts.xml view
    LayoutInflater li = LayoutInflater.from(context);
    View promptsView = li.inflate(R.layout.prompts, null);

    AlertDialog.Builder alertDialogBuilder = new AlertDialog.Builder(context);

    // set prompts.xml to alertDialog builder
    alertDialogBuilder.setView(promptsView);

    final EditText userInput = (EditText) promptsView.findViewById
    (R.id.editTextDialogUserInput);

    // set dialog message
    alertDialogBuilder.setCancelable(false)
        .setPositiveButton("OK", new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int id) {
                // get user input and set it to result
                // edit text

                result.setText(userInput.getText());
            }
        })
        .setNegativeButton("Cancel", new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int id) { dialog.cancel(); }
        });
    // create alertDialog
    AlertDialog alertDialog = alertDialogBuilder.create();

    // show it
    alertDialog.show();
});

}

}
```

Layout Xml File -Main.xml :

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

    <Button android:id="@+id/buttonPrompt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Prompt Dialog" />

```

```
<EditText  
    android:id="@+id/editTextResult"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content" >  
  
</EditText>  
  
</LinearLayout>
```

Prompts.xml :

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:id="@+id/layout_root"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical"  
    android:padding="10dp" >  
  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Type Your Message :"  
        android:textAppearance="?android:attr/textAppearanceLarge" />  
  
    <EditText  
        android:id="@+id/editTextDialogUserInput"  
        android:layout_width="match_parent"  
        android:layout_height="wrap_content" >  
        <requestFocus />  
    </EditText>  
  
</LinearLayout>
```

Android Manifest File –

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.android"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="10" />  
  
    <uses-permission android:name="android.permission.CALL_PHONE" />  
    <uses-permission android:name="android.permission.READ_PHONE_STATE" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
  
        <activity android:label="@string/app_name"  
            android:name="com.example.android.MainActivity" >  
            <intent-filter >  
                <action android:name="android.intent.action.MAIN" />  
                <category android:name="android.intent.category.LAUNCHER" />
```

```
</intent-filter>
</activity>
</application>

</manifest>
```

Output Snapshot -





Example ON Notification :-

Java file : NotifyMessage.java

```
package com.androidexample.notification;

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

public class NotifyMessage extends Activity {
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        TextView txt=new TextView(this);
        txt.setText("Activity after click on notification");
        setContentView(txt);
    }
}
```

```
package com.androidexample.notification;

import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.app.Activity;
import android.app.Notification;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Context;
import android.content.Intent;

public class NotificationAlert extends Activity {
```

```
private static final int NOTIFY_ME_ID=1337;

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

    final Button notify = (Button) findViewById(R.id.notify);

    notify.setOnClickListener(new OnClickListener() {
        public void onClick(View v) {

            //***** Create notification *****/
            final NotificationManager mgr=
                (NotificationManager) getSystemService(Context.NOTIFICATION_SERVICE);

            Notification note=new Notification(R.drawable.stat_notify_chat,
                "Android Example Status message!",
                System.currentTimeMillis());

            // This pending intent will open after notification click
            PendingIntent i=PendingIntent.getActivity(getApplicationContext(), 0,
                new Intent(getApplicationContext(),
                    NotifyMessage.class),
                0);

            note.setLatestEventInfo(getApplicationContext(), "Android Example",
                "This is the android example notification message", i);
            //After uncomment this line you will see number of notification
            //note.number=2;
            mgr.notify(NOTIFY_ME_ID, note);
        }
    });
}
```

Xml File :Notification_alert.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"
    tools:context=".NotificationAlert" >

    <Button android:text="Notify to user"
        android:clickable="true"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
    android:id="@+id/notify"
    android:layout_marginLeft="80dip"
    android:layout_marginRight="80dip"
  ></Button>

</RelativeLayout>
```

Android Manifest file :

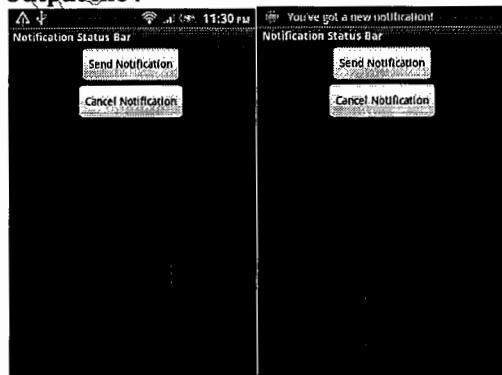
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
  package="com.androidexample.notification"
  android:versionCode="1"
  android:versionName="1.0" >

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

  <application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
      android:name="com.androidexample.notification.NotificationAlert"
      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=".NotifyMessage" ></activity>
  </application>
</manifest>
```

Output file :



Example WebView 1:**Java File : WebView1Activity.java**

```
package com.webView;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.webkit.WebView;
import android.widget.Button;

public class WebView1Activity extends Activity {
    WebView web;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        // TODO Auto-generated method stub
        web=(WebView)findViewById(R.id.web);
        web.loadUrl("www.google.com");
    }
}
```

Xml File :Main.xml –

```
<?xml version="1.0" encoding="utf-8"?>
<WebView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/web"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" />
```

Android Manifest File :

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

    <uses-sdk android:minSdkVersion="10" />
    <uses-permission android:name="android.permission.INTERNET"/>

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".WebView1Activity" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
```

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

</manifest>
```

Output File :**Web page not available**

The Web page at www.google.com might be temporarily down or it may have moved permanently to a new web address.

Here are some suggestions:

- Check to make sure your device has a signal and data connection
- Reload this web page later.
- View a cached copy of the web page from Google

Example On Implicit Intent**MainActivity.java:-**

```
package com.example.implicitintents;

import android.app.Activity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends Activity {
    Spinner spinner;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        spinner = (Spinner) findViewById(R.id.spinner);
        ArrayAdapter adapter = ArrayAdapter.createFromResource(this,
            R.array.intents, android.R.layout.simple_spinner_item);
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spinner.setAdapter(adapter);
    }
}
```

```
public void onClick(View view) {  
    int position = spinner.getSelectedItemPosition();  
    Intent intent = null;  
    switch (position) {  
        case 0:  
            intent = new Intent(Intent.ACTION_VIEW,  
                Uri.parse("http://www.vogella.com"));  
            break;  
        case 1:  
            intent = new Intent(Intent.ACTION_CALL,  
                Uri.parse("tel:(+49)12345789"));  
            break;  
        case 2:  
            intent = new Intent(Intent.ACTION_DIAL,  
                Uri.parse("tel:(+49)12345789"));  
            startActivity(intent);  
            break;  
        case 3:  
            intent = new Intent(Intent.ACTION_VIEW,  
                Uri.parse("geo:50.123,7.1434?z=19"));  
            break;  
        case 4:  
            intent = new Intent(Intent.ACTION_VIEW,  
                Uri.parse("geo:0,0?q=query"));  
            break;  
        case 5:  
            intent = new Intent("android.media.action.IMAGE_CAPTURE");  
            break;  
        case 6:  
            intent = new Intent(Intent.ACTION_VIEW,  
                Uri.parse("content://contacts/people/"));  
            break;  
        case 7:  
            intent = new Intent(Intent.ACTION_EDIT,  
                Uri.parse("content://contacts/people/15"));  
            break;  
    }  
    if (intent != null) {  
        startActivity(intent);  
    }  
}
```

@Override

```
public void onActivityResult(int requestCode, int resultCode, Intent data) {  
    if (resultCode == Activity.RESULT_OK && requestCode == 0) {  
        String result = data.toURI();  
        Toast.makeText(this, result, Toast.LENGTH_LONG).show();  
    }  
}
```

activity_main.xml

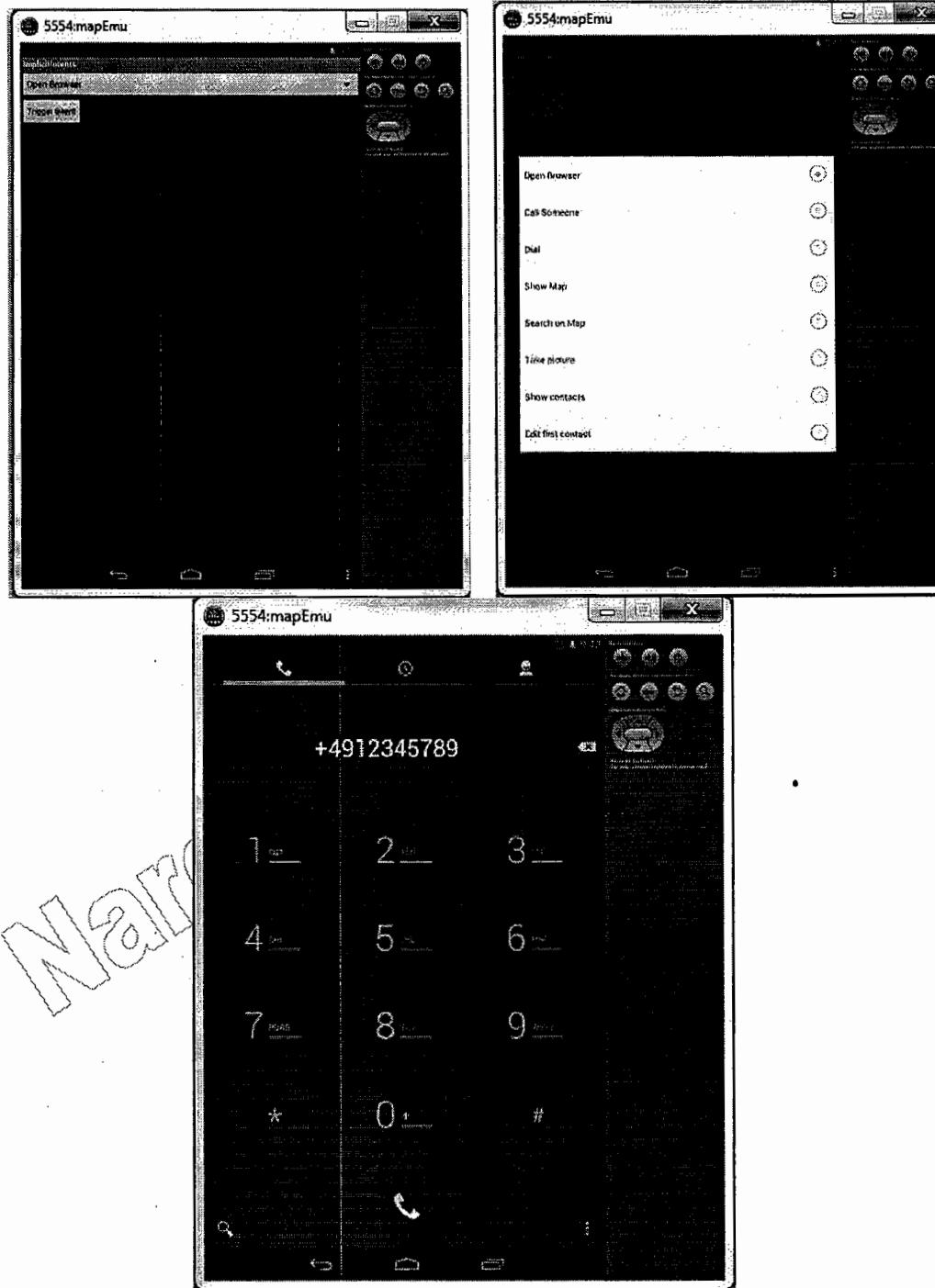
```
<?xml version="1.0" encoding="utf-8"?>
```

```
<GridLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:alignmentMode="alignBounds"  
    android:columnCount="1" >  
  
    <Spinner  
        android:id="@+id/spinner"  
        android:layout_gravity="fill_horizontal"  
        android:drawSelectorOnTop="true"  
    >  
    </Spinner>  
  
    <Button  
        android:id="@+id/trigger"  
        android:onClick="onClick"  
        android:text="Trigger Intent">  
    </Button>  
  
</GridLayout>
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.implicitintents"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="15" />  
  
    <!-- <uses-permission android:name="android.permission.CALL_PRIVILEGED" >  
    </uses-permission> -->  
    <uses-permission android:name="android.permission.CALL_PHONE" >  
    </uses-permission>  
    <uses-permission android:name="android.permission.CAMERA" >  
    </uses-permission>  
    <uses-permission android:name="android.permission.READ_CONTACTS" >  
    </uses-permission>  
    <uses-permission android:name="android.permission.INTERNET"/>  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:name=".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>
```

Output SnapShot:-



Example On Explicit Intents**Java file : First.class**

```
package com.intents;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class First extends Activity {
    Button second;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.first);

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

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent intent=new Intent(First.this, Second.class);
                startActivity(intent);
            }
        });
    }
}
```

Second.java

```
package com.intents;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class Second extends Activity {
    Button third;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second);

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

            @Override
            public void onClick(View v) {

```

```
// TODO Auto-generated method stub
Intent intent=new Intent(Second.this,Third.class);
startActivity(intent);
}
}
}
```

Third.class:-

```
package com.intents;
import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.Gravity;
import android.widget.TextView;

public class Third extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        TextView tv=new TextView(this);
        tv.setText("This Is Third Screen");
        tv.setTextColor(Color.RED);
        tv.setGravity(Gravity.CENTER);
        tv.setTextSize(20);
        setContentView(tv);
    }
}
```

Layout_xml File:First.xml:

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Explicit Intents Demo"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

    <TextView android:id="@+id/f"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="This Is First Screen"
        android:textColor="#0000EE"
        android:gravity="center"
        android:textSize="15dp"
        android:layout_marginTop="50dp" />

```

```
    android:textStyle="bold" />

<Button android:id="@+id/second"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:text="Second"
        android:textColor="#800800"
        android:gravity="center"
        android:textSize="20dp"
        android:layout_gravity="center"
        android:layout_marginTop="50dp"/>

</LinearLayout>
```

Main.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="@string/hello" />

</LinearLayout>
```

Second.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Explicit Intents Demo"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

    <TextView android:id="@+id/f"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="This Is Second Screen"
        android:textColor="#0000EE"
        android:gravity="center"
        android:textSize="15dp"
        android:layout_marginTop="50dp"
        android:textStyle="bold"/>
```

```
<Button android:id="@+id/third"
    android:layout_width="150dp"
    android:layout_height="wrap_content"
    android:text="Third"
    android:textColor="#0000EE"
    android:gravity="center"
    android:textSize="20dp"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"/>
</LinearLayout>
```

AndroidManifest file :-

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.intents"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk android:minSdkVersion="10" />
    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >

        <activity android:name=".Second"
            android:label="Second Screen"/>
        <activity android:name=".Third"
            android:label="Third Screen"/>
            <activity
                android:label="@string/app_name"
                android:name=".First" >
                <intent-filter >
                    <action android:name="android.intent.action.MAIN" />

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

Output Snapshot:



Example On Explicit Intents 2:-

Java file :

package com.intents;

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

public class First extends Activity {
    Button second;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

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

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent i=new Intent(First.this, Second.class);
                i.putExtra("key1", "welcome");
                i.putExtra("key2",10);
                i.putExtra("key3", true);
                i.putExtra("key4", 10.1f);
                i.putExtra("key5", 10.12345);
                startActivity(i);
            }
        });
    }
}

package com.intents;

import java.util.ArrayList;

import android.app.ListActivity;
import android.os.Bundle;
import android.widget.ArrayAdapter;

public class Second extends ListActivity {
    ArrayList list;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        list=new ArrayList();

        Bundle b=getIntent().getExtras();
        list.add(b.getString("key1"));
        list.add(b.getInt("key2"));
        list.add(b.getBoolean("key3"));
    }
}
```

```
list.add(b.getFloat("key4"));
list.add(b.getDouble("key5"));

ArrayAdapter adapter=new ArrayAdapter(this, android.R.layout.simple_list_item_1, list);
setListAdapter(adapter);
}
```

Layout_xml File:

Main.xml:

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Passing Data From One Activity To Another Activity"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

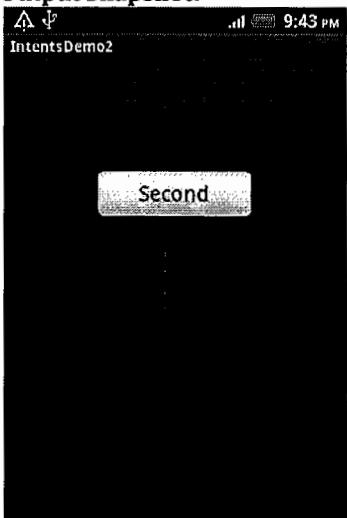
    <Button android:id="@+id/second"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:text="Second"
        android:textColor="#0000EE"
        android:gravity="center"
        android:layout_gravity="center"
        android:textSize="20dp"
        android:layout_marginTop="50dp"/>
</LinearLayout>
```

AndroidManifest file :

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.intents"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk android:minSdkVersion="10" />
    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity android:name=".Second"/>
        <activity
            android:label="@string/app_name"
            android:name=".First" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
            </intent-filter>
        </activity>
    </application>
```

</manifest>

Output Snapshot:



Example On Explicit Intents 3:-

Java file :

```
package com.intents;
```

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

public class First extends Activity {
    Button implicit;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        implicit=(Button)findViewById(R.id.button1);
        implicit.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent intent=new Intent();
                intent.setAction("action1");
                intent.setAction("action2");
                intent.addCategory("catagery1");
                intent.addCategory("catagery2");
                startActivity(intent);
            }
        });
    }
}
```

```
package com.intents;

import android.app.Activity;
import android.content.res.ColorStateList;
import android.graphics.Color;
import android.os.Bundle;
import android.view.Gravity;
import android.widget.TextView;

public class Second extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        TextView tv=new TextView(this);
        tv.setText("This Is second Screen");
        tv.setTextColor(Color.RED);
        tv.setGravity(Gravity.CENTER);
        tv.setTextSize(20);
        setContentView(tv);
    }
}
```

Layout_xml File:

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Implicit Intents Demo"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold"/>

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Implicit"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

</LinearLayout>
```

AndroidManifest file :

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

```
android:versionCode="1"
android:versionName="1.0" >

<uses-sdk android:minSdkVersion="10" />

<application
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >

    <activity android:name=".Second"
        android:label="Second Screen">

        <intent-filter >
            <action android:name="action1"/>
            <action android:name="action2"/>

            <category android:name="catagery1"/>
            <category android:name="catagery2"/>

            <category android:name="android.intent.category.DEFAULT"/>
        </intent-filter>
    </activity>
    <activity
        android:label="@string/app_name"
        android:name=".First" >
        <intent-filter >
            <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output Snapshot:



Example On Explicit Intents 4:-

Java file :

```
package com.intents;

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

public class First extends Activity {
    Button button;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        button=(Button)findViewById(R.id.button1);
        button.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent intent=new Intent();
                intent.setAction("action1");
                intent.addCategory("catagery1");
                startActivity(intent);
            }
        });
    }
}
```

```
package com.intents;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.Gravity;
import android.widget.TextView;

public class Second extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        TextView tv=new TextView(this);
        tv.setText("This Is Second Screen");
        tv.setGravity(Gravity.CENTER);
        tv.setTextSize(20);
        tv.setTextColor(Color.GREEN);
        setContentView(tv);
    }
}

package com.intents;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.Gravity;
import android.widget.TextView;

public class Third extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        TextView tv=new TextView(this);
        tv.setText("This Is Third Screen");
        tv.setGravity(Gravity.CENTER);
        tv.setTextSize(20);
        tv.setTextColor(Color.RED);
        setContentView(tv);
    }
}
```

Layout_xml File:

Main.xml:

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

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

```
    android:text="@string/hello" />

<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Button"
    android:textColor="#aa0000"
    android:textSize="20dp"
    android:textStyle="bold" />

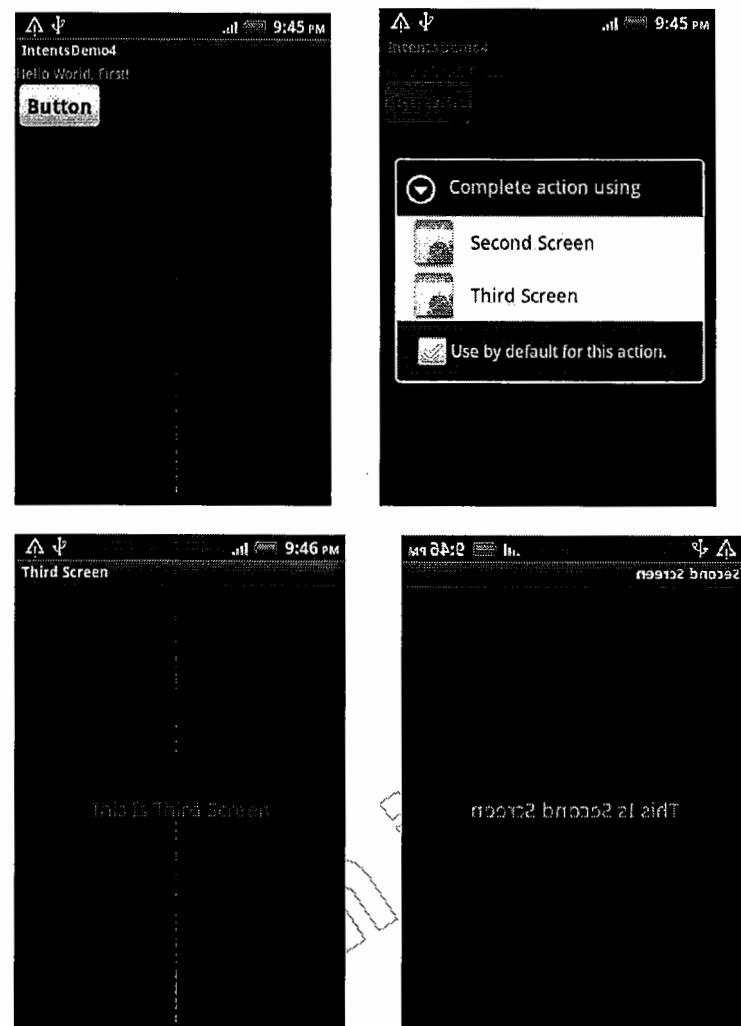
</LinearLayout>
```

AndroidManifest file :

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.intents"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk android:minSdkVersion="10" />
    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >

        <activity android:name=".Second"
            android:label="Second Screen">
            <intent-filter >
                <action android:name="action1"/>
                <category android:name="catagery1"/>
                <category android:name="android.intent.category.DEFAULT"/>
            </intent-filter>
        </activity>
        <activity android:name=".Third"
            android:label="Third Screen">
            <intent-filter >
                <action android:name="action1"/>
                <category android:name="catagery1"/>
                <category android:name="android.intent.category.DEFAULT"/>
            </intent-filter>
        </activity>
        <activity
            android:label="@string/app_name"
            android:name=".First" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output Snapshot:



Naresh Technologies

Example On startActivityForResult:-

Java file :

```
package com.intents;
```

```
import android.app.ListActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class Book extends ListActivity {
    String[] values={"Hello1","Hello2","Hello3","Hello4","Hello5","Hello6","Hello7","Hello8","Hello9","Hello10"};
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        ArrayAdapter adapter=new ArrayAdapter(this,android.R.layout.simple_list_item_1, values);
```

```
setListAdapter(adapter);
}

@Override
protected void onListItemClick(ListView l, View v, int position, long id) {
    // TODO Auto-generated method stub
    String s=values[position];

    Intent intent=new Intent();
    intent.putExtra("key1", s);
    setResult(RESULT_OK, intent);
    finish();
}

package com.intents;

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

public class First extends Activity {
    Button book;
    public static final int BOOK=1;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

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

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent intent=new Intent(First.this, Book.class);
                startActivityForResult(intent, BOOK);
            }
        });
    }

    @Override
    protected void onActivityResult(int requestCode,
                                   int resultCode, Intent data) {
        // TODO Auto-generated method stub

        if(requestCode==BOOK && resultCode==RESULT_OK){

            String s=data.getStringExtra("key1");
            Toast.makeText(getApplicationContext(), "Selected Text Is...."+s, 5000).show();
        }
    }
}
```

Layout_xml File:

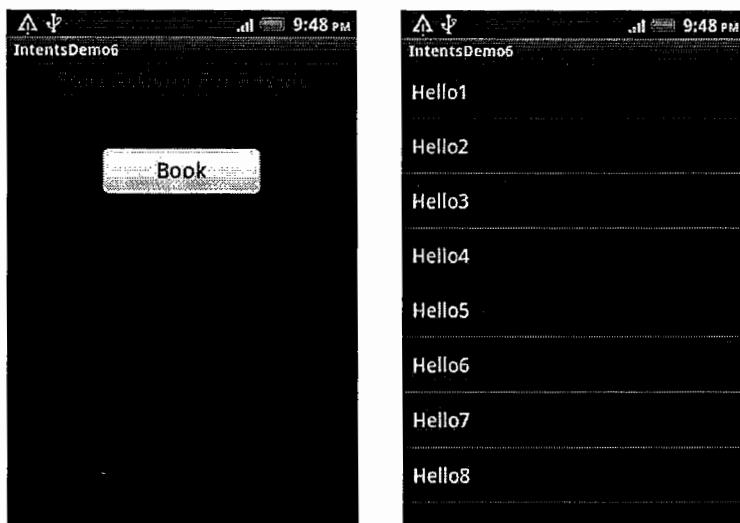
Main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Start Activity For Result"
        android:textColor="#0000EE"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />
    <Button android:id="@+id/book"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:text="Book"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:layout_marginTop="50dp"
        android:layout_gravity="center"/>
</LinearLayout>
```

AndroidManifest file :

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.intents"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk android:minSdkVersion="10" />
    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity android:name=".Book"></activity>
        <activity
            android:label="@string/app_name"
            android:name=".First" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output Snapshot:



Example on startActivityForResult 2:-

Java file : CameraExample.java

```
package com.intents;
import android.app.Activity;
import android.content.Intent;
import android.graphics.Bitmap;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ImageView;

public class CameraExample extends Activity {
    public static final int CAMERA=1;
    Button bt;
    ImageView iv;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        iv=(ImageView)findViewById(R.id.iv);
        bt=(Button)findViewById(R.id.bt);
        bt.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent intent=new
                Intent(android.provider.MediaStore.ACTION_IMAGE_CAPTURE);
                startActivityForResult(intent, CAMERA);
            }
        });
    }
}
```

```
@Override  
protected void onActivityResult(int requestCode, int resultCode, Intent data) {  
    // TODO Auto-generated method stub  
    if(requestCode==CAMERA){  
        Bitmap photo=(Bitmap)data.getExtras().get("data");  
  
        iv.setImageBitmap(photo);  
    }  
}
```

Layout_xml File: main.xml:

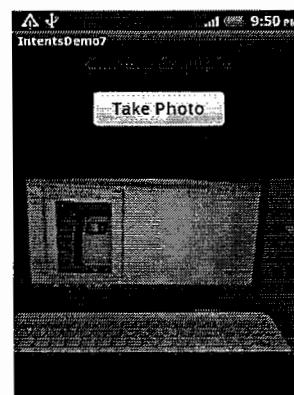
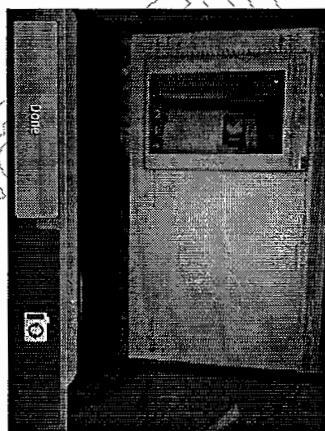
```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
<TextView  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:text="Camera Example"  
    android:textColor="#0000EE"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:textStyle="bold" />  
  
<Button android:id="@+id/bt"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:text="Take Photo"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:layout_marginTop="20dp"  
    android:layout_gravity="center"/>  
  
<ImageView android:id="@+id/iv"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:src="@drawable/ic_launcher"  
    android:scaleType="fitCenter"/>  
</LinearLayout>
```

AndroidManifest file :

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.intents"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
<uses-sdk android:minSdkVersion="10" />  
<uses-permission android:name="android.permission.CAMERA"/>
```

```
<application  
    android:icon="@drawable/ic_launcher"  
    android:label="@string/app_name" >  
    <activity  
        android:label="@string/app_name"  
        android:name=".CameraExample" >  
        <intent-filter >  
            <action android:name="android.intent.action.MAIN" />  
            <category android:name="android.intent.category.LAUNCHER" />  
        </intent-filter>  
    </activity>  
</application>  
</manifest>
```

Output Snapshot:



Example On Pending Intent:-

Java file : IntentsDemo8.java

```
package com.intents;  
import android.app.Activity;  
import android.app.Notification;  
import android.app.NotificationManager;  
import android.app.PendingIntent;
```

```
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class IntentsDemo8 extends Activity {
    Button start,stop;
    public static final int NOTIFICATION=1;
    NotificationManager nm;
    Notification notification;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        nm=(NotificationManager) getSystemService(NOTIFICATION_SERVICE);
        notification=new Notification(R.drawable.ic_launcher, "Hai",System.currentTimeMillis());
        start=(Button)findViewById(R.id.start);
        start.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                String title="Click Me";
                String data="Visit Official Site Of Android";

                Intent intent=new Intent(Intent.ACTION_VIEW, Uri.parse("http://www.android.com"));
                PendingIntent pendingIntent=PendingIntent.getActivity(getApplicationContext(), NOTIFICATION,
                intent,Intent.FLAG_ACTIVITY_NEW_TASK);
                notification.setLatestEventInfo(getApplicationContext(), title, data, pendingIntent);
                nm.notify(NOTIFICATION, notification);
            }
        });
        stop=(Button)findViewById(R.id.stop);
        stop.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                nm.cancel(NOTIFICATION);
            }
        });
    }
}
```

Layout_xml File: main.xml :

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

```
<TextView  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:text="Notification Demo"  
    android:textColor="#0000EE"  
    android:textSize="20dp"  
    android:textStyle="bold"  
    android:gravity="center" />  
<Button android:id="@+id/start"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:text="Start"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:textStyle="bold"  
    android:layout_marginTop="40dp"/>  
<Button android:id="@+id/stop"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:text="Stop"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:textStyle="bold"/>  
</LinearLayout>
```

AndroidManifest file :

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.intents"  
    android:versionCode="1"  
    android:versionName="1.0">  
  
    <uses-sdk android:minSdkVersion="10" />  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:label="@string/app_name"  
            android:name=".IntentsDemo8" >  
            <intent-filter >  
                <action android:name="android.intent.action.MAIN" />  
                <category android:name="android.intent.category.LAUNCHER" />  
            </intent-filter>  
        </activity>  
    </application>  
</manifest>
```

Output Snapshot:**Example ON startActivityForResult:-****java file : MainActivity.java**

```
package com.example.startactivityforresult;

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

public class MainActivity extends Activity {
    TextView textView1;
    Button button1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        textView1=(TextView)findViewById(R.id.textView1);
        button1=(Button)findViewById(R.id.button1);

        button1.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {
                Intent intent=new Intent(MainActivity.this,SecondActivity.class);
                startActivityForResult(intent, 2);// Activity is started with requestCode 2
            }
        });
    }

    // Call Back method to get the Message form other Activity
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data)
```

```
{  
    super.onActivityResult(requestCode, resultCode, data);  
  
    // check if the request code is same as what is passed here it is 2  
    if(requestCode==2)  
    {  
        String message=data.getStringExtra("MESSAGE");  
        textView1.setText(message);  
    }  
}  
  
@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;  
}  
}
```

SecondActivity.java

```
package com.example.startactivityforresult;  
  
import android.app.Activity;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.Menu;  
import android.view.View;  
import android.view.View.OnClickListener;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class SecondActivity extends Activity {  
    EditText editText1;  
    Button button1;  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_second);  
  
        editText1=(EditText)findViewById(R.id.editText1);  
        button1=(Button)findViewById(R.id.button1);  
  
        button1.setOnClickListener(new OnClickListener() {  
  
            @Override  
            public void onClick(View arg0) {  
                String message=editText1.getText().toString();  
                Intent intent=new Intent();  
                intent.putExtra("MESSAGE",message);  
                setResult(2,intent);  
                finish(); //finishing activity  
            }  
        });  
    }  
}
```

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

LayoutFile:activity_main.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:layout_alignLeft="@+id/button1"  
    android:layout_alignParentTop="true"  
    android:layout_marginTop="48dp"  
    android:text="Default Message" />  
  
<Button  
    android:id="@+id/button1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_below="@+id/textView1"  
    android:layout_centerHorizontal="true"  
    android:layout_marginTop="42dp"  
    android:text="GetMessage" />  
  
</RelativeLayout>
```

activity_second.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=".SecondActivity" >  
  
<EditText  
    android:id="@+id/editText1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignParentTop="true"  
    android:layout_marginTop="61dp"
```

```
    android:layout_toRightOf="@+id/textView1"
    android:ems="10" />

<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/editText1"
    android:layout_alignBottom="@+id/editText1"
    android:layout_alignParentLeft="true"
    android:text="Enter Message:" />

<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText1"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="34dp"
    android:text="Submit" />

</RelativeLayout>
```

Android Manifest File:

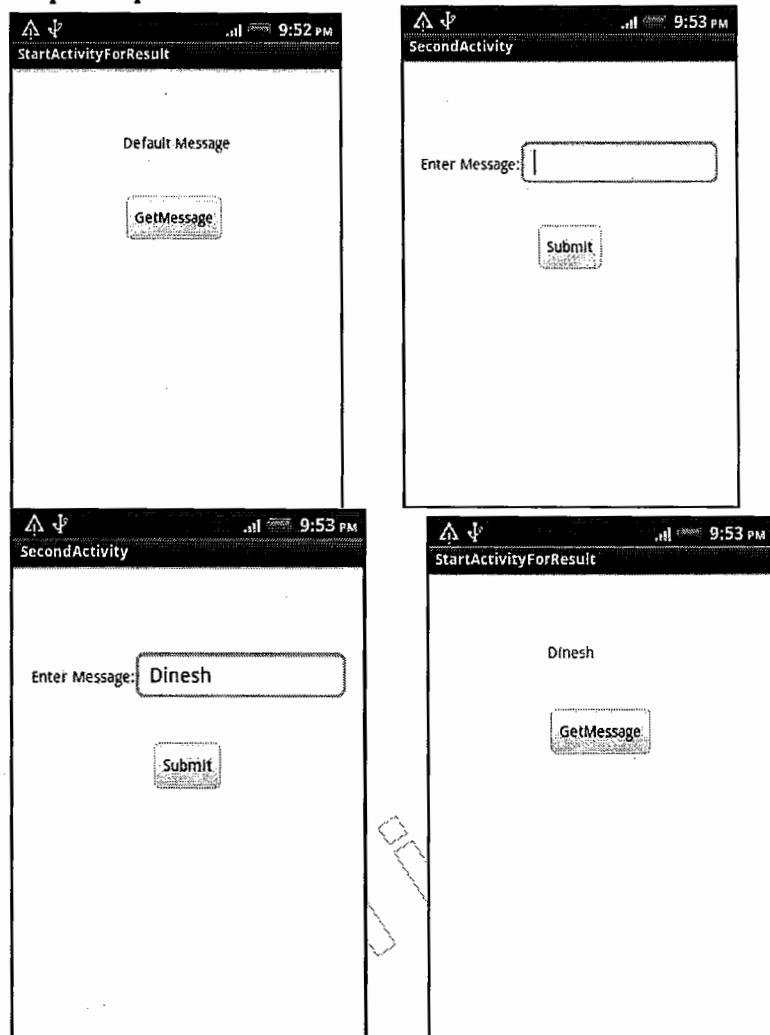
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.startactivityforresult"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.startactivityforresult.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.startactivityforresult.SecondActivity"
            android:label="@string/title_activity_second" >
        </activity>
    </application>
</manifest>
```

Output snapshot:



ologies

Example on IntentFilterDialPhone :-

Java file : MainActivity.java

```
package com.example.intentfilterdailphone;

import android.app.Activity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
```

```
public class MainActivity extends Activity {

    private Button button;
    String number;
    EditText edittext;
```

```
public void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
    edittext = (EditText) findViewById(R.id.txtNumber);  
    number = edittext.getText().toString();  
    button = (Button) findViewById(R.id.btnDial);  
  
    // add button listener  
    button.setOnClickListener(new OnClickListener() {  
  
        @Override  
        public void onClick(View arg0) {  
            number = edittext.getText().toString();  
            Intent callIntent = new Intent(Intent.ACTION_CALL);  
            // callIntent.setData(Uri.parse("tel:0377778888"));  
  
            callIntent.setData(Uri.parse("tel:" + number));  
  
            startActivity(callIntent);  
        }  
    });  
}
```

Layout_xml File:activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <TextView  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Enter the phone number" />  
  
    <EditText  
        android:id="@+id/txtNumber"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:inputType="phone" />  
  
    <Button  
        android:id="@+id	btnDial"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Dial" />  
</LinearLayout>
```

AndroidManifest file :

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

```
package="com.example.intentfilterdailphone"
android:versionCode="1"
android:versionName="1.0"

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

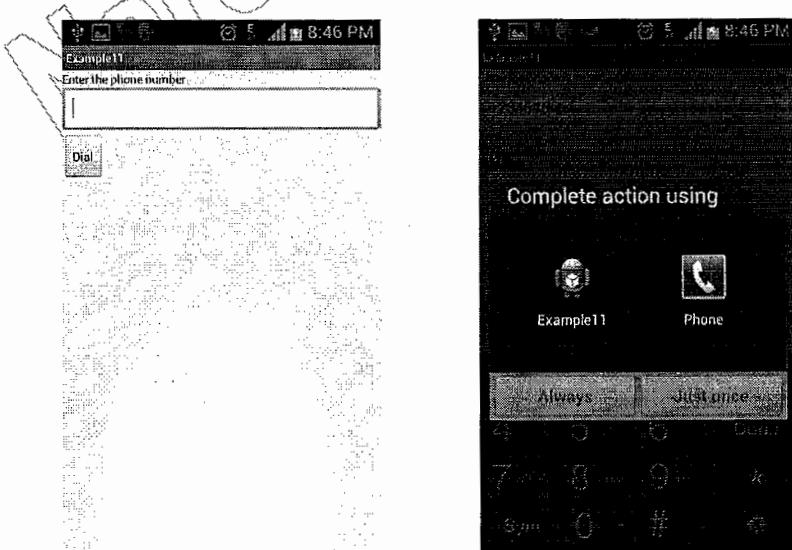
<uses-permission android:name="android.permission.CALL_PHONE" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.intentfilterdailphone.MainActivity"
        android:label="@string/app_name" >
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
        <intent-filter android:priority="100" >
            <action android:name="android.intent.action.CALL" />

            <category android:name="android.intent.category.DEFAULT" />

            <data android:scheme="tel" />
        </intent-filter>
    </activity>
</application>
</manifest>
```

Output Snapshot:

Example On IntentFilter:-

Java file : ActivityDate.java

```
package com.example.intentfilter;

import java.sql.Date;
import java.text.SimpleDateFormat;
import android.app.Activity;
import android.os.Bundle;
import android.widget.TextView;

public class ActivityDate extends Activity {

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

        SimpleDateFormat sdf = new SimpleDateFormat("dd.MM.yyyy");
        String date = sdf.format(new Date(System.currentTimeMillis()));

        TextView tvDate = (TextView) findViewById(R.id.tvDate);
        tvDate.setText(date);
    }
}
```

ActivityDateEx.java:-

```
package com.example.intentfilter;

import java.sql.Date;
import java.text.SimpleDateFormat;
import android.app.Activity;
import android.os.Bundle;
import android.widget.TextView;

public class ActivityDateEx extends Activity {

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

        SimpleDateFormat sdf = new SimpleDateFormat("EEE, MMM d, yyyy");
        String date = sdf.format(new Date(System.currentTimeMillis()));

        TextView tvDate = (TextView) findViewById(R.id.tvDate);
        tvDate.setText(date);
    }
}
```

ActivityTime.Java

```
package com.example.intentfilter;
import java.sql.Date;
```

```
import java.text.SimpleDateFormat;  
  
import android.app.Activity;  
import android.os.Bundle;  
import android.widget.TextView;  
  
public class ActivityTime extends Activity {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.time);  
  
        SimpleDateFormat sdf = new SimpleDateFormat("HH:mm:ss");  
        String time = sdf.format(new Date(System.currentTimeMillis()));  
  
        TextView tvTime = (TextView) findViewById(R.id.tvTime);  
        tvTime.setText(time);  
    }  
}
```

MainActivity.java

```
package com.example.intentfilter;  
  
import android.app.Activity;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.view.View.OnClickListener;  
import android.widget.Button;  
  
public class MainActivity extends Activity implements OnClickListener {  
  
    /** Called when the activity is first created. */  
    @Override  
    public void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        Button btnTime = (Button) findViewById(R.id.btnTime);  
        Button btnDate = (Button) findViewById(R.id.btnDate);  
  
        btnTime.setOnClickListener(this);  
        btnDate.setOnClickListener(this);  
    }  
  
    @Override  
    public void onClick(View v) {  
        Intent intent;  
  
        switch(v.getId()) {  
        case R.id.btnTime:  
            intent = new Intent("ru.startandroid.intent.action.showtime");  
            startActivity(intent);  
            break;  
        case R.id.btnDate:  
            intent = new Intent("ru.startandroid.intent.action.showdate");  
            startActivity(intent);  
            break;  
        }  
    }  
}
```

```
        intent = new Intent("ru.startandroid.intent.action.showdate");
        startActivity(intent);
        break;
    }
}
}

Layout_xml File: activity_main.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
<GridLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:alignmentMode="alignBounds"
    android:columnCount="1" >

    <Spinner
        android:id="@+id/spinner"
        android:layout_gravity="fill_horizontal"
        android:drawSelectorOnTop="true">
    </Spinner>
    <Button
        android:id="@+id/trigger"
        android:onClick="onClick"
        android:text="Trigger Intent">
    </Button>

</GridLayout>
```

Date.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" >

    <TextView
        android:id="@+id/tvDate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:layout_marginTop="20dp"
        android:text="TextView"
        android:textSize="30sp" >
    </TextView>

</LinearLayout>
```

Time.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" >
```

```
<TextView  
    android:id="@+id/tvTime"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_gravity="center_horizontal"  
    android:layout_marginTop="20dp"  
    android:text="TextView"  
    android:textSize="30sp" >  
</TextView>  
  
</LinearLayout>
```

AndroidManifest file :

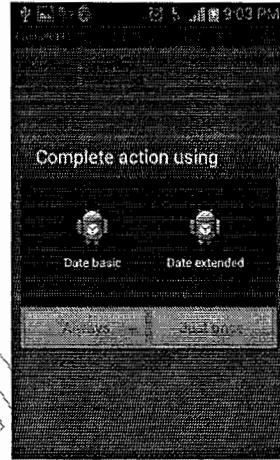
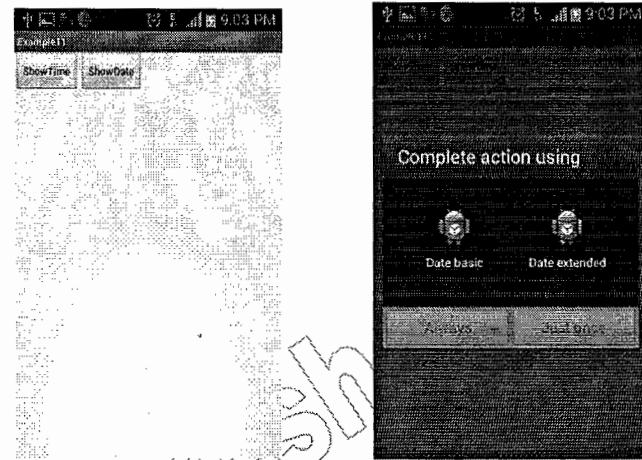
```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.intentfilter"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk  
        android:minSdkVersion="8"  
        android:targetSdkVersion="17" />  
  
    <application  
        android:allowBackup="true"  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name"  
        android:theme="@style/AppTheme" >  
        <activity  
            android:name="com.example.intentfilter.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="ActivityTime" >  
            <intent-filter>  
                <action android:name="ru.startandroid.intent.action.showtime" />  
            </action>  
  
            <category android:name="android.intent.category.DEFAULT" >  
            </category>  
        </intent-filter>  
    </activity>  
    <activity  
        android:name="ActivityDate"  
        android:label="Date basic" >  
        <intent-filter>  
            <action android:name="ru.startandroid.intent.action.showdate" />  
        </action>  
  
        <category android:name="android.intent.category.DEFAULT" >  
        </category>
```

```
</intent-filter>
</activity>
<activity
    android:name="ActivityDateEx"
    android:label="Date extended" >
    <intent-filter>
        <action android:name="ru.startandroid.intent.action.showdate" >
        </action>

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

</manifest>
```

Output Snapshot:



Listview

Example On Listview:-

ListViewDemo1.java:-

```
package com.list;

import android.app.Activity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.AdapterView.OnItemLongClickListener;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

public class ListViewDemo1 extends Activity {

    String[] values={"Hyderabad","delhi",
                    "Kolkata","Bengalore","Chennai"};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        ListView list = (ListView) findViewById(R.id.list);

        ArrayAdapter adapter = new ArrayAdapter(this,
                android.R.layout.simple_list_item_1, values);
        list.setAdapter(adapter);

        //OnClickListener
        list.setOnItemClickListener(new OnItemClickListener() {

            @Override
            public void onItemClick(AdapterView<?> arg0, View v,
                    int position,
                    long arg3) {
                // TODO Auto-generated method stub

                Toast.makeText(getApplicationContext(),
                        "List Item name ... "+values[position],
                        Toast.LENGTH_LONG).show();
            }
        });
        list.setOnItemLongClickListener(new OnItemLongClickListener() {

            @Override
            public boolean onItemLongClick(AdapterView<?> arg0, View v,
                    int position, long arg3) {

```

```
        Toast.makeText(getApplicationContext(),
                "List LongItem name ..." +values[position],
                Toast.LENGTH_LONG).show();

        return false;

    });

list.setOnItemSelectedListener(
    new OnItemSelectedListener() {

        @Override
        public void onItemSelected(
            AdapterView<?> arg0, View v,
            int position, long arg3) {
            // TODO Auto-generated method stub
            Toast.makeText(getApplicationContext(),
                    "List SelectedItem name..." +
                    +values[position], Toast.LENGTH_LONG).show();
        }

        @Override
        public void onNothingSelected(AdapterView<?> arg0) {
            // TODO Auto-generated method stub
        }
    });
}
```

Main.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:text="List View Demo"
        android:textColor="#336600"
        android:textSize="20dp"
        android:textStyle="bold" />

    <ListView
        android:id="@+id/list"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" >
    </ListView>
```

```
</LinearLayout>

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".ListViewDemo1" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />

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

Output file:**Example on Listview 2 :-****ListViewDemo2.java:-**

```
package com.list;

import android.app.ListActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.ListView;
```

```
import android.widget.Toast;

public class ListViewDemo2 extends ListActivity {
    String[] values={"ListView1","ListView2","ListView3","ListView4","ListView5","ListView6","ListView7","ListView8","ListView9","ListView10"};
    /** Called when the activity is first created.*/
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        ArrayAdapter adapter=new ArrayAdapter(this,
            android.R.layout.simple_list_item_1,values);

        setListAdapter(adapter);
    }
    @Override
    protected void onListItemClick(ListView l, View v,
        int position, long id) {
        // TODO Auto-generated method stub

        Toast.makeText(getApplicationContext(),
            "Selected Text Is..." +
            +values[position],5000).show();

    }
}
```

Androidmanifest.xml:-

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".ListViewDemo2" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

**Example on Listview 3 :-****ListViewDemo4.java:-**

```

package com.list;

import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.AdapterView.OnItemLongClickListener;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;

public class ListViewDemo4 extends Activity {
    ListView list;
    String[] names = { "Dss1", "Dss2", "Dss3", "Dss4", "Dss5" };
    String[] phones = { "9849098490", "9849012345", "9849054321", "9849054678",
        "9878978979" };
    TextView tv1, tv2;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        list = (ListView) findViewById(R.id.list);

        list.setAdapter(new MyArrayAdapter(getApplicationContext()));

        list.setOnItemSelectedListener(new OnItemSelectedListener() {

            @Override
            public void onItemSelected(AdapterView<?> arg0, View arg1,

```

```
        int arg2, long arg3) {
    // TODO Auto-generated method stub
    Toast.makeText(
        getApplicationContext(),
        "Selected Text Is..." + names[arg2] + ":"
        + phones[arg2], 5000).show();
}

@Override
public void onNothingSelected(AdapterView<?> arg0) {
    // TODO Auto-generated method stub
}

});

list.setOnItemClickListener(new OnItemClickListener() {

    @Override
    public void onItemClick(AdapterView<?> arg0, View arg1, int arg2,
            long arg3) {
        // TODO Auto-generated method stub
        Toast.makeText(
            getApplicationContext(),
            "Selected Text Is..." + names[arg2] + ":"
            + phones[arg2], 5000).show();
    }
});

list.setOnItemLongClickListener(new OnItemLongClickListener() {

    @Override
    public boolean onItemLongClick(AdapterView<?> arg0, View arg1,
            int arg2, long arg3) {
        // TODO Auto-generated method stub
        Toast.makeText(
            getApplicationContext(),
            "Selected Text Is..." + names[arg2] + ":"
            + phones[arg2], 5000).show();
        return true;
    }
});

public class MyArrayAdapter extends BaseAdapter {

    public MyArrayAdapter(Context applicationContext) {
        // TODO Auto-generated constructor stub
    }

    @Override
    public int getCount() {
        // TODO Auto-generated method stub
        return names.length;
    }
}
```

```
@Override  
public Object getItem(int position) {  
    // TODO Auto-generated method stub  
    return null;  
}  
  
@Override  
public long getItemId(int position) {  
    // TODO Auto-generated method stub  
    return 0;  
}  
  
@Override  
public View getView(int position, View convertView,  
    ViewGroup parent) {  
    // TODO Auto-generated method stub  
    LayoutInflater inflater = (LayoutInflater)  
        getSystemService(LAYOUT_INFLATER_SERVICE);  
    View v = inflater.inflate(R.layout.custom, null);  
  
    // TODO Auto-generated method stub  
    TextView tv1 = (TextView) v.findViewById(R.id.text1);  
    tv1.setText(names[position]);  
  
    TextView tv2 = (TextView) v.findViewById(R.id.text2);  
    tv2.setText(phones[position]);  
  
    return v;  
}  
}  
}
```

Main.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <TextView  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Custom List View Demo"  
        android:textColor="#aa0000"  
        android:gravity="center"  
        android:textSize="20dp"  
        android:textStyle="bold" />  
  
    <ListView android:id="@+id/list"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"/>  
  
</LinearLayout>
```

Custom.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:textColor="#aa0000"
        android:gravity="left"
        android:textSize="20dp"
        android:textStyle="bold"
        android:id="@+id/text1" />

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:textColor="#336600"
        android:gravity="left"
        android:textSize="15dp"
        android:textStyle="bold"
        android:id="@+id/text2" />

</LinearLayout>
```

Androidmanifest.xml:-

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

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".ListViewDemo4" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />

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

**Example on Listview 4:-****ListViewDemo6.java:-**

```
package com.list;
import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.AdapterView.OnItemLongClickListener;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.BaseAdapter;
import android.widget.ImageView;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;

public class ListViewDemo6 extends Activity {
    ListView list;
    TextView tv1,tv2,tv3;
    ImageView iv1,iv2;
    String[] names={"Dss1,Dss2,Dss3,Dss4"};
    String[] phones={"12345,123456,123457,123458"};
    String[] emails={"Dss1@gmail_1.com,Dss1@gmail_2.com,Dss1@gmail_3.com,Dss1@gmail_4.com"};
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        list=(ListView)findViewById(R.id.list);
        list.setAdapter(new MyArrayAdapter(getApplicationContext()));

        list.setOnItemSelectedListener(new OnItemSelectedListener() {
```

```
    @Override
    public void onItemSelected(AdapterView<?> arg0, View arg1,
        int arg2, long arg3) {
        // TODO Auto-generated method stub
        Toast.makeText(getApplicationContext(),"Selected Text
Is..."+names[arg2]+"\n"+phones[arg2]+"\n"+emails[arg2],Toast.LENGTH_LONG).show();
    }

    @Override
    public void onNothingSelected(AdapterView<?> arg0) {
        // TODO Auto-generated method stub
    }
};

list.setOnItemClickListener(new OnItemClickListener() {

    @Override
    public void onItemClick(AdapterView<?> arg0, View arg1, int arg2,
        long arg3) {
        // TODO Auto-generated method stub
        Toast.makeText(getApplicationContext(),"Selected Text
Is..."+names[arg2]+"\n"+phones[arg2]+"\n"+emails[arg2],Toast.LENGTH_LONG).show();
    }
});

list.setOnItemLongClickListener(new OnItemLongClickListener() {

    @Override
    public boolean onItemLongClick(AdapterView<?> arg0, View arg1,
        int arg2, long arg3) {
        // TODO Auto-generated method stub
        Toast.makeText(getApplicationContext(),"Selected Text
Is..."+names[arg2]+"\n"+phones[arg2]+"\n"+emails[arg2],Toast.LENGTH_LONG).show();

        return true;
    }
});

}

class MyArrayAdapter extends BaseAdapter{
    Context context;
    public MyArrayAdapter(Context c){
        context=c;
    }
    @Override
    public int getCount() {
        // TODO Auto-generated method stub
        return names.length;
    }
    @Override
    public Object getItem(int position) {
        // TODO Auto-generated method stub
        return position;
    }
}
```

```
    }
    @Override
    public long getItemId(int position) {
        // TODO Auto-generated method stub
        return position;
    }
    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        // TODO Auto-generated method stub
        LayoutInflater
inflater=(LayoutInflater) getSystemService(LAYOUT_INFLATER_SERVICE);
        View v=inflater.inflate(R.layout.custom, null);

        iv1=(ImageView)v.findViewById(R.id.iv1);
        iv1.setBackgroundDrawable(getResources().getDrawable(R.drawable.ic_launcher));

        tv1=(TextView)v.findViewById(R.id.name);
        tv1.setText(names[position]);

        tv2=(TextView)v.findViewById(R.id.phone);
        tv2.setText(phones[position]);

        tv3=(TextView)v.findViewById(R.id.email);
        tv3.setText(emails[position]);

        iv2=(ImageView)v.findViewById(R.id.iv2);
        iv2.setBackgroundDrawable(getResources().getDrawable(R.drawable.ic_launcher));

        return v;
    }
}
}


```

Main.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Custom List View"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp".xml
        android:textStyle="bold"
        />

    <ListView android:id="@+id/list"
        android:layout_width="fill_parent"
```

```
    android:layout_height="wrap_content"/>  
  </LinearLayout>
```

Custom.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="horizontal" >  
  
    <ImageView android:id="@+id/iv1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"/>  
  
    <LinearLayout android:orientation="vertical"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content">  
  
        <TextView android:id="@+id/name"  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:textColor="#aa0000"  
            android:textSize="15dp"  
            android:textStyle="bold"  
            android:paddingLeft="40dp"  
            android:paddingRight="40dp"/>  
  
        <TextView android:id="@+id/phone"  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:textColor="#800800"  
            android:textSize="15dp"  
            android:textStyle="bold"  
            android:paddingLeft="40dp"  
            android:paddingRight="40dp"/>  
  
        <TextView android:id="@+id/email"  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:textColor="#ccffcc"  
            android:textSize="15dp"  
            android:textStyle="bold"  
            android:paddingLeft="40dp"  
            android:paddingRight="40dp"/>  
  
    </LinearLayout>  
  
    <ImageView android:id="@+id/iv2"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"/>  
  
  </LinearLayout>
```

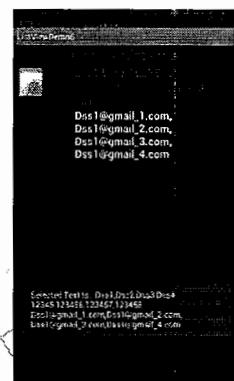
Androidmanifest.xml:-

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

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

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".ListViewDemo6" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />

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



Example On ListView 5:-

ListViewActivity.java:-

```
package sat.tuts4mobile.customlistview;

import java.util.ArrayList;

import android.app.Activity;
import android.database.DataSetObserver;
import android.os.Bundle;
import android.view.View;
import android.view.ViewGroup;
import android.widgetListAdapter;
import android.widget.ListView;

public class ListViewActivity extends Activity {
```

```
String[] text = { "Afghanistan", "Algeria", "Australia"
                 , "Bermuda", "Bhutan", "Canada", "China", "India"
                 , "Japan",
                 "Kuwait", "Malaysia", "Mexico" };

int[] image = { R.drawable.afghanistan, R.drawable.algeria
                , R.drawable.australia,
                R.drawable.bermuda, R.drawable.bhutan, R.drawable.canada
                , R.drawable.china,
                R.drawable.india, R.drawable.japan, R.drawable.kuwait
                , R.drawable.malaysia, R.drawable.mexico };

ListItemDetails item_details;
/** Called when the activity is first created. */

@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.main);

    ArrayList<ListItemDetails> result = GetSearchResults();
    ListView lv = (ListView) findViewById(R.id.listView1);
    lv.setAdapter(new CustomListAdapter(result,
        getApplicationContext()));
}

private ArrayList<ListItemDetails> GetSearchResults() {
    // TODO Auto-generated method stub
    ArrayList<ListItemDetails> results = new ArrayList
        <ListItemDetails>();

    for(int i=0;i<text.length;i++)
    {
        item_details = new ListItemDetails();
        item_details.setName(text[i]);
        item_details.setImageResource(image[i]);
        results.add(item_details);
    }

    return results;
}
}
```

CustomListAdapter.java

```
package sat.tuts4mobile.customlistview;

import java.util.ArrayList;

import android.app.Activity;
import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.ImageView;
import android.widget.TextView;
```

```
public class CustomListAdapter extends BaseAdapter {  
  
    private static ArrayList<ListItemDetails>  
    itemDetailsrrayList;  
  
    LayoutInflater layoutInflater;  
    String[] countryName ;  
    int[] countryFlag;  
    Context context;  
  
    //  
    //  
    //  
    //  
    //  
    public CustomListAdapter(String[] _name , int[] _icon , Context c) {  
        // TODO Auto-generated constructor stub  
        countryName = _name;  
        countryFlag = _icon;  
        context = c;  
    }  
  
    public CustomListAdapter(ArrayList<ListItemDetails> result ,  
                           Context c) {  
        // TODO Auto-generated constructor stub  
        itemDetailsrrayList = result;  
        context = c;  
    }  
  
    public int getCount() {  
        // TODO Auto-generated method stub  
        //return countryName.length;  
        return itemDetailsrrayList.size();  
    }  
  
    public Object getItem(int arg0) {  
        // TODO Auto-generated method stub  
        //return null;  
        return itemDetailsrrayList.get(arg0);  
    }  
  
    public long getItemId(int position) {  
        // TODO Auto-generated method stub  
        return position;  
    }  
  
    public View getView(int position, View convertView, ViewGroup parent) {  
        // TODO Auto-generated method stub  
  
        layoutInflater = (LayoutInflater)context.getSystemService  
        (Context.LAYOUT_INFLATER_SERVICE);  
        View row = layoutInflater.inflate(R.layout.listlayout,  
                                         parent,false);  
  
        TextView textview = (TextView) row.findViewById(R.id.textView1);  
        ImageView imageview = (ImageView) row.findViewById(R.id.imageView1);  
  
        textview.setText(itemDetailsrrayList.get(position).getName());  
        imageview.setImageResource(itemDetailsrrayList.get(position).getImage());  
  
        return (row);  
    }  

```

```
}
```

ListItemDetails.java:-

```
package sat.tuts4mobile.customlistview;

public class ListItemDetails {

    private String name;
    private int image;

    public String getName()
    {
        return name;
    }

    public void setName(String name)
    {
        this.name = name;
    }

    public int getImage()
    {
        return image;
    }

    public void setImage(int image)
    {
        this.image = image;
    }
}
```

Main.xml:-

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

    <ListView
        android:id="@+id/listView1"
        android:layout_width="fill_parent"
        android:layout_height="match_parent" >
    </ListView>
</LinearLayout>
```

Listlayout.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">
```

```
<LinearLayout  
    android:id="@+id/l1"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginBottom="2dip"  
    android:background="#336699" >  
  
    <ImageView  
        android:id="@+id/imageView1"  
        android:layout_width="50dip"  
        android:layout_height="50dip"  
        android:src="@drawable/ic_launcher" />  
  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_marginLeft="5dip"  
        android:layout_marginTop="8dip"  
        android:text="Medium Text"  
        android:textAppearance="?android:attr/textAppearanceMedium" />  
  
</LinearLayout>  
  
</LinearLayout>
```

Androidmanifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="sat.tuts4mobile.customlistview"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="8" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:name=".ListViewActivity"  
            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>
```

Output:-



Example On GridView :-

GridViewDemo1.java:-

```
package com.grid;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.EditText;
import android.widget.GridView;

public class GridViewDemo1 extends Activity {
    GridView grid;
    EditText et;
    String[] values = { "Hello1", "Hello2", "Hello3", "Hello4", "Hello5",
        "Hello6", "Hello7", "Hello8", "Hello9" };

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        GridView grid = (GridView) findViewById(R.id.gr);
        et = (EditText) findViewById(R.id.edit);

        ArrayAdapter adapter = new ArrayAdapter(getApplicationContext(),
            android.R.layout.simple_list_item_1, values);
        grid.setAdapter(adapter);
        grid.setOnItemClickListener(new OnItemClickListener() {

            @Override
            public void onItemClick(AdapterView<?> parent, View v,
                int position, long arg3) {
```

```
// TODO Auto-generated method stub  
et.setText("Selected text is..." + values[position]);  
}  
});  
}  
}
```

Main.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <TextView  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="@string/grid"  
        android:textColor="@color/maroon"  
        android:textSize="20dp"  
        android:gravity="center"  
        android:textStyle="bold" />  
  
    <EditText android:id="@+id/edit"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:textColor="#aa0000"  
        android:textSize="20dp"  
        android:textStyle="bold"/>  
  
    <GridView android:id="@+id/gr"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:numColumns="3"  
    >  
/>  
</LinearLayout>
```

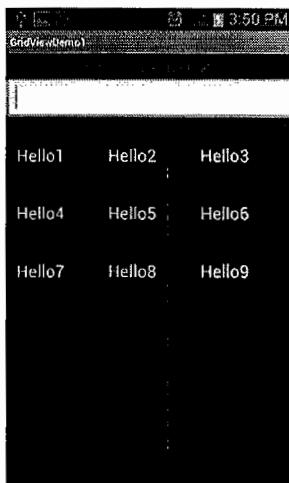
Androidmanifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.grid"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="8" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:label="@string/app_name"
```

```
    android:name=".GridViewDemo1" >
    <intent-filter >
        <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

**Example Gridview :-**

```
package com.grid;

import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.BaseAdapter;
import android.widget.GridView;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;

public class GridViewDemo2 extends Activity {
    GridView grid;
    ImageView iv;
    TextView tv;
    int[] images = { R.drawable.india, R.drawable.brazil, R.drawable.china,
                    R.drawable.united_states };
    String[] names = { "India", "Brazil", "China", "USA" };

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```

        setContentView(R.layout.main);
        grid=(GridView)findViewById(R.id.grid);
        grid.setAdapter(new MyGridAdapter(getApplicationContext()));

        grid.setOnItemClickListener(new OnItemClickListener() {

            @Override
            public void onItemClick(AdapterView<?> arg0, View arg1, int arg2,
                    long arg3) {
                // TODO Auto-generated method stub
                Toast.makeText(getApplicationContext(),"Text Of Grid View
Is..." +names[arg2],Toast.LENGTH_SHORT).show();
            }
        });
    }

    class MyGridAdapter extends BaseAdapter{
        Context context;
        public MyGridAdapter(Context c){
            context=c;
        }
        @Override
        public int getCount() {
            // TODO Auto-generated method stub
            return names.length;
        }
        @Override
        public Object getItem(int position) {
            // TODO Auto-generated method stub
            return position;
        }
        @Override
        public long getItemId(int position) {
            // TODO Auto-generated method stub
            return position;
        }
        @Override
        public View getView(int position, View convertView, ViewGroup parent) {
            // TODO Auto-generated method stub
            LayoutInflater
inflater=(LayoutInflater) getSystemService(LAYOUT_INFLATER_SERVICE);
            View v=inflater.inflate(R.layout.custom, null);

            iv=(ImageView)v.findViewById(R.id.iv);
            iv.setImageResource(images[position]);

            tv=(TextView)v.findViewById(R.id.text);
            tv.setText(names[position]);

            return v;
        }
    }
}

```

Main.xml:-

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

    <ImageView android:id="@+id/iv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/text"
        android:textSize="20dp"
        android:textStyle="bold"
        android:textColor="#336600" />

</LinearLayout>
```

Custom.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Grid View Customization"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

    <GridView android:id="@+id/grid"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:numColumns="2" />

</LinearLayout>
```

Androidmanifest.xml:-

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

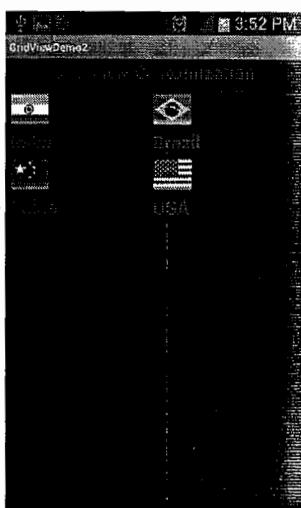
    <uses-sdk android:minSdkVersion="8" />

    <application>
```

```
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >
<activity
    android:label="@string/app_name"
    android:name=".GridViewDemo2" >
    <intent-filter >
        <action android:name="android.intent.action.MAIN" />

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

</manifest>
```



Example on GridView 3 :-

~~Naresh i Technologies~~ **AndroidGridLayoutActivity.java:-**

```
package com.example.android;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.GridView;

public class AndroidGridLayoutActivity extends Activity {

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.grid_layout);

        GridView gridView = (GridView) findViewById(R.id.grid_view);

        // Instance of ImageAdapter Class
```

```
gridView.setAdapter(new ImageAdapter(this));

/**
 * On Click event for Single Gridview Item
 */
gridView.setOnItemClickListener(new OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> parent, View v,
            int position, long id) {

        // Sending image id to FullScreenActivity
        Intent i = new Intent(getApplicationContext(), FullImageActivity.class);
        // passing array index
        i.putExtra("id", position);
        startActivity(i);
    }
});
}
```

FullImageActivity.java:-

```
package com.example.android;

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

public class FullImageActivity extends Activity {

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.full_image);

        // get intent data
        Intent i = getIntent();

        // Selected image id
        int position = i.getExtras().getInt("id");
        ImageAdapter imageAdapter = new ImageAdapter(this);

        ImageView imageView = (ImageView) findViewById(R.id.full_image_view);
        imageView.setImageResource(imageAdapter.mThumbIds[position]);
    }
}
```

ImageAdapter.java:-

```
package com.example.android;

import android.content.Context;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
```

```
import android.widget.GridView;
import android.widget.ImageView;

public class ImageAdapter extends BaseAdapter {
    private Context mContext;

    // Keep all Images in array
    public Integer[] mThumbIds = {
        R.drawable.pic_1, R.drawable.pic_2,
        R.drawable.pic_3, R.drawable.pic_4,
        R.drawable.pic_5, R.drawable.pic_6,
        R.drawable.pic_7, R.drawable.pic_8,
        R.drawable.pic_9, R.drawable.pic_10,
        R.drawable.pic_11, R.drawable.pic_12,
        R.drawable.pic_13, R.drawable.pic_14,
        R.drawable.pic_15
    };

    // Constructor
    public ImageAdapter(Context c){
        mContext = c;
    }

    @Override
    public int getCount() {
        return mThumbIds.length;
    }

    @Override
    public Object getItem(int position) {
        return mThumbIds[position];
    }

    @Override
    public long getItemId(int position) {
        return 0;
    }

    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        ImageView imageView = new ImageView(mContext);
        imageView.setImageResource(mThumbIds[position]);
        imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
        imageView.setLayoutParams(new GridView.LayoutParams(70, 70));
        return imageView;
    }
}
```

grid_layout.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<GridView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/grid_view"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:numColumns="auto_fit"
```

```
    android:columnWidth="90dp"
    android:horizontalSpacing="10dp"
    android:verticalSpacing="10dp"
    android:gravity="center"
    android:stretchMode="columnWidth" >

</GridView>
```

full_image.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/full_image_view"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"/>

</LinearLayout>
```

androidManifest.xml:-

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

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

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name="com.example.android.AndroidGridLayoutActivity" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

        <!-- FullImageActivity -->
        <activity android:name="com.example.android.FullImageActivity"></activity>
    </application>

</manifest>
```

**Example On Broadcast Reciever 1:-****Java file - MainActivity.java**

```
package com.example.staticbroadcastreceiver;

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

public class MainActivity extends Activity {

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

AirPlaneMode.java:-

```
package com.example.staticbroadcastreceiver;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

public class AirPlaneMode extends BroadcastReceiver
{
    @Override
    public void onReceive(Context context, Intent intent)
    {
        // TODO Auto-generated method stub
    }
}
```

```
if(intent.getAction().equals(""+android.intent.action.AIRPLANE_MODE"))
{
    Toast.makeText(context,""+
"Airplane Mode Changed",Toast.LENGTH_LONG).show();
}
}
```

Layout Xml File -Activity_main.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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is BroadCast Receiver Example" />

</RelativeLayout>
```

Android Manifest file -

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

        <receiver android:name=".AirPlaneMode" >
            <intent-filter>
```

```
<action android:name="android.intent.action.AIRPLANE_MODE" />
</intent-filter>
</receiver>
</application>

</manifest>
```

Output snapshot -**Example On Broadcast Reciever Register :****Java file - MainActivity.java:-**

```
package com.example.broadcast.register;

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

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        IntentFilter filter = new IntentFilter(Intent.ACTION_SCREEN_ON);
        filter.addAction(Intent.ACTION_SCREEN_OFF);

        BroadcastReceiver mReceiver = new SleepReceiver();
        registerReceiver(mReceiver, filter);
    }
}
```

SleepReceiver.java:-

```
package com.example.broadcast.register;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

public class SleepReceiver extends BroadcastReceiver {
    Context context;
    @Override
    public void onReceive(Context arg0, Intent intent) {
        context=arg0;
        // TODO Auto-generated method stub
        if (intent.getAction().equals(Intent.ACTION_SCREEN_OFF)) {
            // do whatever you need to do here
            //wasScreenOn = false;
            Toast.makeText(context, "Screen OFF", Toast.LENGTH_LONG).show();
        } else if (intent.getAction().equals(Intent.ACTION_SCREEN_ON)) {
            // and do whatever you need to do here
            Toast.makeText(context, "Screen ON", Toast.LENGTH_LONG).show();
        }
    }
}
```

Layout Xml File -Activity_main.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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />

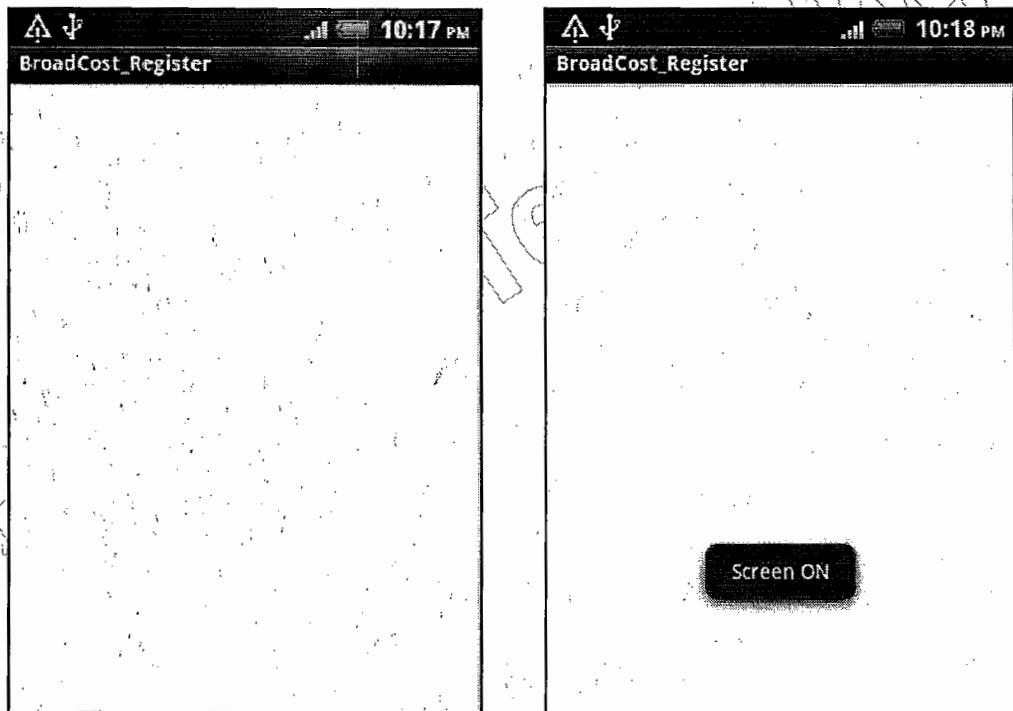
</RelativeLayout>
```

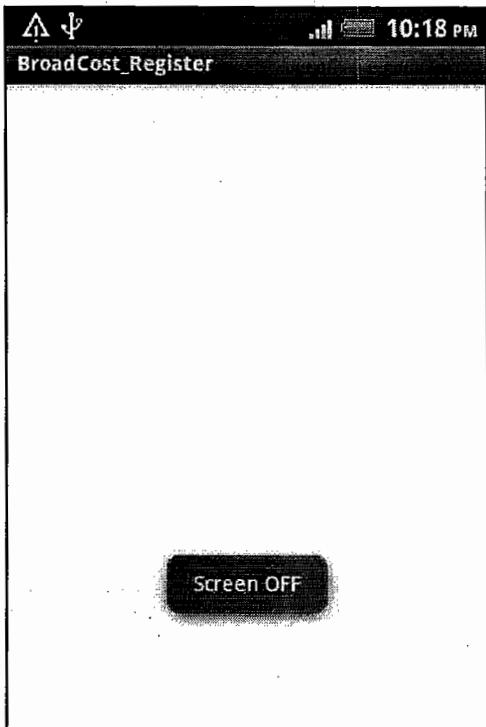
Android Manifest file -

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

Output snapshot -



Example Broadcast Receivers send:

Java file - MainActivity.java:-

package com.example.broadcastreceivertest;

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

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

```
    @Override
```

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

```
        Button button=(Button)findViewById(R.id.btnStartBroadcast);
        button.setOnClickListener(new OnClickListener() {
```

```
            @Override
```

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

```
                // TODO Auto-generated method stub
```

```
                EditText et = (EditText)findViewById(R.id.extraIntent);
```

```
                // add data to the Intent
```

```
                Intent intent = new Intent();
```

```
                intent.putExtra("message", (CharSequence)et.getText().toString());
```

```
                intent.setAction("com.example.android.A_CUSTOM_INTENT");
```

```
        sendBroadcast(intent);
    }

});

}

package com.example.broadcastreceivertest;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

public class MyBroadcastReceiver extends BroadcastReceiver {

    @Override
    public void onReceive(Context context, Intent intent) {
        // TODO Auto-generated method stub

        // Extract data included in the Intent
        CharSequence intentData = intent.getCharSequenceExtra("message");
        Toast.makeText(context,
                " received the Intent's message: " + intentData,
                Toast.LENGTH_LONG).show();
    }
}
```

Layout Xml File -Activity_main.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" >

    <EditText android:id="@+id/extraintent"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:hint="@string/sendMessage" />

    <Button
        android:id="@+id/btnStartBroadcast"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/extraintent"
        android:text="@string/myBroadcastIntent" />

</RelativeLayout>
```

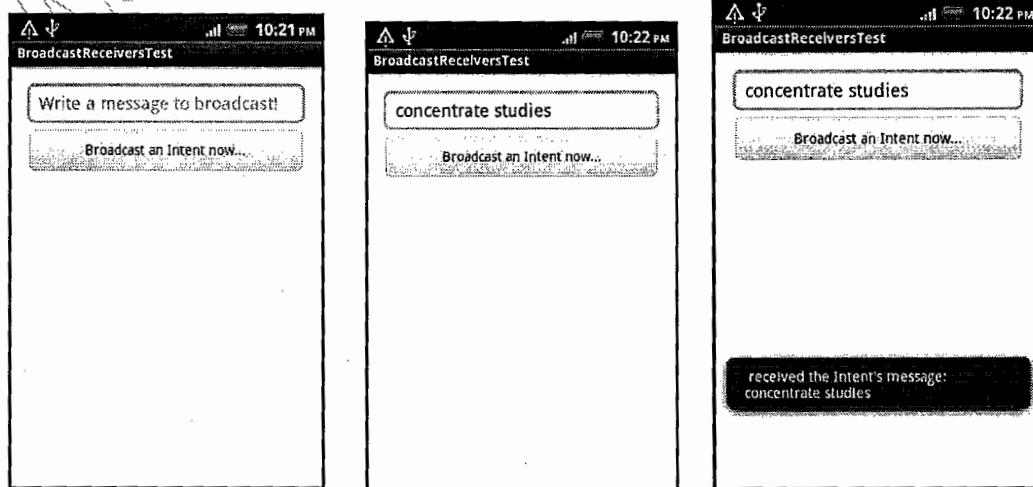

Android Manifest file -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.broadcastreceiverstest"
    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.broadcastreceiverstest.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>
        <receiver android:name="MyBroadcastReceiver">
            <intent-filter>
                <action android:name="com.example.android.A_CUSTOM_INTENT">
                </action>
            </intent-filter>
        </receiver>
    </application>
</manifest>
```

Output snapshot -



Example on Broadcast Receiver Demo :

Java file - MyBroadCastReceiver.java

```
package com.broadcast;

import android.app.Activity;
import android.app.AlarmManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MyBroadCastReceiver extends Activity {
    Button bt;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        bt=(Button)findViewById(R.id.bt);
        bt.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                // TODO Auto-generated method stub
                Intent intent=new Intent(BroadCastReciverDemo.this,MyBroadCastReceiver.class);
                PendingIntent pi=PendingIntent.getBroadcast(getApplicationContext(),1,intent,0);
                EditText et=(EditText)findViewById(R.id.alarm);
                int i=Integer.parseInt(et.getText().toString());
                AlarmManager alarm=(AlarmManager) getSystemService(ALARM_SERVICE);
                alarm.set(AlarmManager.RTC_WAKEUP,
                        System.currentTimeMillis()+(i*1000), pi);
            }
        });
    }
}
```

MyBroadCastReceiver.java:-

```
package com.broadcast;

import android.app.Activity;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.os.Vibrator;
import android.widget.Toast;

public class MyBroadCastReceiver extends BroadcastReceiver {
```

```
@Override  
public void onReceive(Context context, Intent intent) {  
    // TODO Auto-generated method stub  
    Toast.makeText(context, "Please Wake Up!", 10000).show();  
    Vibrator vibrator=(Vibrator)context.getSystemService(context.VIBRATOR_SERVICE);  
    vibrator.vibrate(10000);  
  
}  
}
```

Layout Xml File -Main.xml :

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
<TextView  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:text="Alarm Service"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:textStyle="bold" />  
  
<EditText android:id="@+id/alarm"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:textColor="#0000EE"  
    android:gravity="center"  
    android:inputType="numberDecimal"  
    android:hint="Enter The Time"  
    android:layout_marginTop="50dp"/>  
  
<Button android:id="@+id/bt"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:text="Alarm"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:layout_gravity="center"  
    android:layout_marginTop="50dp"  
    android:textSize="20dp"/>  
</LinearLayout>
```

Android Manifest file -

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

```
<uses-sdk android:minSdkVersion="10" />
<uses-permission
    android:name="android.permission.VIBRATE"/>

<application
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name" >
    <receiver android:name=".MyBroadCastReceiver"/>
        <activity
            android:label="@string/app_name"
            android:name=".BroadCastReciverDemo" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output snapshot -**Example on Service Life Cycle****Java file :- MyService.java**

```
package com.example.servicelifecycle;

import android.app.Service;
import android.content.Intent;
import android.os.IBinder;
import android.widget.Toast;

public class MyService extends Service
{
    /** Called when the service is being created. */
    @Override
    public void onCreate() {
        // TODO Auto-generated method stub
        super.onCreate();
```

```
System.out.println("Service Oncreate Methode");
}

/** The service is starting, due to a call to startService() */
@Override
public int onStartCommand(Intent intent, int flags, int startId) {
    // Let it continue running until it is stopped.
    System.out.println("Service onStartCommand Methode");
    Toast.makeText(this, "Service Started", Toast.LENGTH_LONG).show();
    return START_STICKY;
}

/** A client is binding to the service with bindService() */
@Override
public IBinder onBind(Intent intent) {
    // TODO Auto-generated method stub
    return null;
}

/** Called when all clients have unbound with unbindService() */
@Override
public void onRebind(Intent intent) {
    // TODO Auto-generated method stub
    super.onRebind(intent);
}

/** Called when a client is binding to the service with bindService() */
@Override
public boolean onUnbind(Intent intent) {
    // TODO Auto-generated method stub
    return super.onUnbind(intent);
}

/** Called when The service is no longer used and is being destroyed */
@Override
public void onDestroy() {
    super.onDestroy();
    System.out.println("Service Destroyed");
    Toast.makeText(this, "Service Destroyed", Toast.LENGTH_LONG).show();
}
}
```

MainActivity.java:-

```
package com.example.servicelifecycle;

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

public class MainActivity extends Activity implements OnClickListener {
```

```
@Override  
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
  
    Button start = (Button) findViewById(R.id.start);  
    Button stop = (Button) findViewById(R.id.stop);  
    start.setOnClickListener(this);  
    stop.setOnClickListener(this);  
}  
  
@Override  
public void onClick(View v) {  
    // TODO Auto-generated method stub  
    switch (v.getId()) {  
        case R.id.start:  
            startService(new Intent(getApplicationContext(), MyService.class));  
            break;  
        case R.id.stop:  
            stopService(new Intent(getApplicationContext(), MyService.class));  
            break;  
  
        default:  
            break;  
    }  
}
```

activity_main.xml :

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent" >  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignParentTop="true"  
        android:layout_alignRight="@+id/stop"  
        android:layout_marginTop="20dp"  
        android:text="UnBoundService Example" />  
  
    <Button  
        android:id="@+id/stop"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignRight="@+id/start"  
        android:layout_below="@+id/start"  
        android:layout_marginTop="55dp"  
        android:text="StopService" />  
  
    <Button  
        android:id="@+id/start"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_alignParentRight="true"  
        android:layout_below="@+id/textView1"
```

```
    android:layout_marginRight="85dp"
    android:layout_marginTop="45dp"
    android:text="StartService" />

</RelativeLayout>
```

Manifest file

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

Output :



UnBoundService Example

UnBoundService Example



Service Started

Service Destroyed

Example on Bound Service:-**Bound Service.java :**

```
Java file: Server.class
package com.example.boundservice;
import java.text.SimpleDateFormat;
import java.util.Date;

import android.app.Service;
import android.content.Intent;
import android.os.Binder;
import android.os.IBinder;

public class Server extends Service{

    Binder mBinder = new LocalBinder();
    @Override
    public IBinder onBind(Intent intent) {
        return mBinder;
    }
    public class LocalBinder extends Binder {
        public Server getServerInstance() {
            return Server.this;
        }
    }
    public String getTime() {
        SimpleDateFormat mDateFormat =
            new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");
        return mDateFormat.format(new Date());
    }
}
```

Java file: MainActivity.class

```
Package com.example.boundservice;

import com.example.boundservice.Server.LocalBinder;

import android.app.Activity;
import android.app.Service;
import android.content.ComponentName;
import android.content.Intent;
import android.content.ServiceConnection;
import android.os.Bundle;
import android.os.IBinder;
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 {

    boolean mBounded;
    Server mServer;
```

```
TextView text;
Button button;

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

    text = (TextView) findViewById(R.id.text);
    button = (Button) findViewById(R.id.button);
    button.setOnClickListener(new OnClickListener() {

        public void onClick(View v) {
            text.setText(mServer.getTime());
        }
    });
}

@Override
protected void onStart() {
    super.onStart();
    Intent mIntent = new Intent(this, Server.class);
    bindService(mIntent, mConnection, BIND_AUTO_CREATE);
};

ServiceConnection mConnection = new ServiceConnection() {

    @Override
    public void onServiceConnected(ComponentName name, IBinder service) {
        // TODO Auto-generated method stub
        Toast.makeText(MainActivity.this,
                "Service is connected", 1000).show();
        mBounded = true;
        LocalBinder mLocalBinder = (LocalBinder)service;
        mServer=mLocalBinder.getServerInstance();
    }

    @Override
    public void onServiceDisconnected(ComponentName name) {
        // TODO Auto-generated method stub
        Toast.makeText(MainActivity.this,
                "Service is disconnected", 1000).show();
        mBounded=false;
        mServer=null;
    }
};

@Override
protected void onStop() {
    super.onStop();
    if (mBounded) {
        unbindService(mConnection);
        mBounded = false;
    }
};}
```

Xml file: Activity_main.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/text"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="14dp"
        android:text="TextView" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_marginTop="53dp"
        android:layout_toLeftOf="@+id/textView1"
        android:text="Start" />

</RelativeLayout>
```

Manifest file

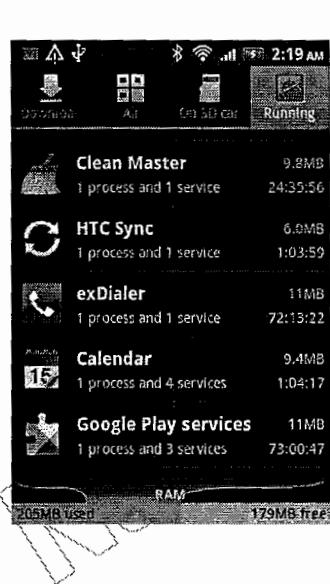
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.boundservice"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.boundservice.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>
```

```
</activity>
<service
    android:name="com.example.boundservice.Server">
    </service></application></manifest>
```

Output:

Example Local Service

Java file :-SimpleServiceController.java:-

```
package com.example.localservice;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import com.example.localservice.*;

public class SimpleServiceController extends Activity {
```

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

        Button start = (Button)findViewById(R.id.serviceButton);
        Button stop = (Button)findViewById(R.id.cancelButton);

        start.setOnClickListener(startListener);
        stop.setOnClickListener(stopListener);

    }

private OnClickListener startListener = new OnClickListener() {
    public void onClick(View v){
        startService(new Intent(SimpleServiceController.this,SimpleService.class));
    }
};

private OnClickListener stopListener = new OnClickListener() {
    public void onClick(View v){
        stopService(new Intent(SimpleServiceController.this,SimpleService.class));
    }
};
```

SimpleService.java:-

```
package com.example.localservice;

import android.app.Service;
import android.content.Intent;
import android.os.IBinder;
import android.widget.Toast;

public class SimpleService extends Service {

    @Override
    public IBinder onBind(Intent arg0) {
        // TODO Auto-generated method stub
        return null;
    }

    @Override
    public void onCreate() {
        super.onCreate();
        Toast.makeText(this,"Service created ...",Toast.LENGTH_LONG).show();
    }
    @Override
    public int onStartCommand(Intent intent, int flags, int startId) {
        super.onStartCommand(intent, flags, startId);
        // TODO Auto-generated method stub
        Toast.makeText(this,"onStartCommand ...",Toast.LENGTH_LONG).show();
        return Service.START_NOT_STICKY;
    }
}
```

```
@Override  
public void onDestroy() {  
    super.onDestroy();  
    Toast.makeText(this, "Service destroyed ...", Toast.LENGTH_LONG).show();  
}  
}
```

Main.xml :

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:orientation="vertical"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
>  
    <Button  
        android:id="@+id/serviceButton"  
        android:text="@string/service"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_gravity="center_horizontal"  
    ></Button>  
    <Button  
        android:id="@+id/cancelButton"  
        android:text="@string/cancel"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_gravity="center_horizontal"  
    ></Button>  
</LinearLayout>
```

Activity_main.xml:

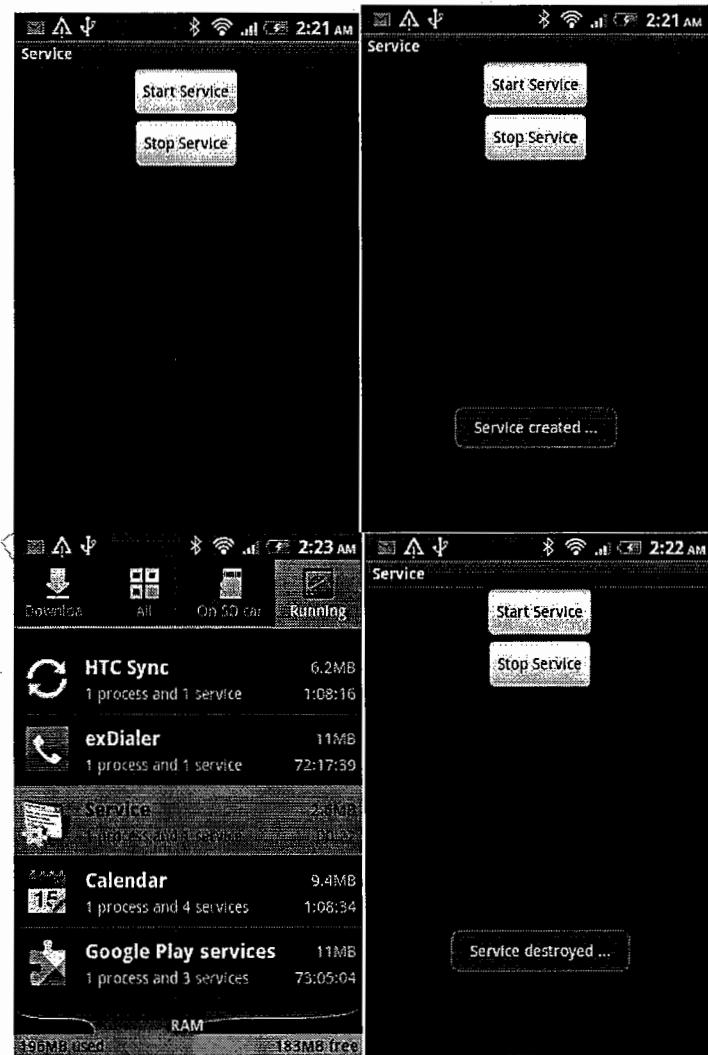
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:paddingBottom="@dimen/activity_vertical_margin"  
    android:paddingLeft="@dimen/activity_horizontal_margin"  
    android:paddingRight="@dimen/activity_horizontal_margin"  
    android:paddingTop="@dimen/activity_vertical_margin"  
    tools:context=".MainActivity" >  
  
    <TextView  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="hello_world" />  
  
</RelativeLayout>
```

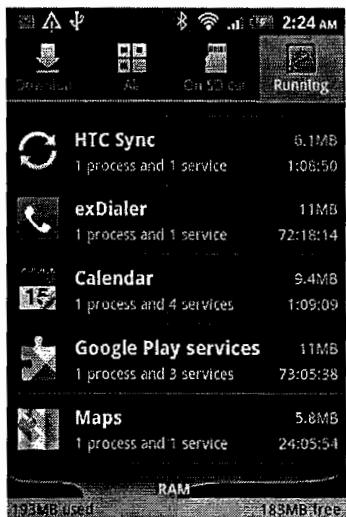
Manifest file

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

```
<application android:icon="@drawable/icon" android:label="@string/app_name">
    <activity android:name=".SimpleServiceController"
        android:label="@string/app_name">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />
            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
    <service android:name=".SimpleService">
        </service>
</application>
<uses-sdk android:minSdkVersion="5" />
</manifest>
```

Output :





Example on Service Notification :

Java file : ServiceLauncher.java

```
package com.example.servicenotification;

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

public class ServiceLauncher extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.servicelauncher);

        Button start = (Button)findViewById(R.id.startButton);
        Button stop = (Button)findViewById(R.id.stopButton);

        start.setOnClickListener(startListener);
        stop.setOnClickListener(stopListener);
    }

    private OnClickListener startListener = new OnClickListener() {
        public void onClick(View v){
            startService(new Intent(ServiceLauncher.this,NotifyService.class));
        }
    };

    private OnClickListener stopListener = new OnClickListener() {
        public void onClick(View v){
            stopService(new Intent(ServiceLauncher.this,NotifyService.class));
        }
    };
}
```

```
    }  
}  
}
```

NotifyService.java

```
package com.example.servicenotification;  
  
import java.util.Calendar;  
import java.util.Timer;  
import java.util.TimerTask;  
  
import android.app.Notification;  
import android.app.NotificationManager;  
import android.app.PendingIntent;  
import android.app.Service;  
import android.content.Intent;  
import android.os.IBinder;  
import android.widget.Toast;  
  
public class NotifyService extends Service {  
  
    private Long counter = 0L;  
    private NotificationManager nm;  
    private Timer timer = new Timer();  
    private final Calendar time = Calendar.getInstance();  
    @Override  
    public IBinder onBind(Intent intent) {  
        // TODO Auto-generated method stub  
        return null;  
    }  
    @Override  
    public void onCreate() {  
        super.onCreate();  
  
        nm = (NotificationManager) getSystemService(NOTIFICATION_SERVICE);  
        Toast.makeText(this, "Service created at " + time.getTime(), Toast.LENGTH_LONG).show();  
        showNotification();  
        incrementCounter();  
  
    }  
  
    @Override  
    public void onDestroy() {  
        super.onDestroy();  
        // Cancel the persistent notification.  
        shutdownCounter();  
        nm.cancel(R.string.service_started);  
        Toast.makeText(this, "Service destroyed at " + time.getTime() + "; counter is at: " + counter,  
Toast.LENGTH_LONG).show();  
        counter=null;  
    }  
  
    /**  
     * Show a notification while this service is running.  
     */
```

```
private void showNotification() {
    // In this sample, we'll use the same text for the ticker and the expanded notification
    CharSequence text = getText(R.string.service_started);

    // Set the icon, scrolling text and timestamp
    Notification notification = new Notification(R.drawable.android, text,
        System.currentTimeMillis());

    // The PendingIntent to launch our activity if the user selects this notification
    PendingIntent contentIntent = PendingIntent.getActivity(this, 0,
        new Intent(this, ServiceLauncher.class), 0);

    // Set the info for the views that show in the notification panel.
    notification.setLatestEventInfo(this, getText(R.string.service_label),
        text, contentIntent);

    // Send the notification.
    // We use a layout id because it is a unique number. We use it later to cancel.
    nm.notify(R.string.service_started, notification);
}

private void incrementCounter() {
    timer.scheduleAtFixedRate(new TimerTask() { public void run() {counter++;} }, 0, 1000L);
}

private void shutdownCounter() {
    if (timer != null) {
        timer.cancel();
    }
}
```

MainActivity.java:-

```
package com.example.servicenotification;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

ServiceLauncher.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    >
    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="@string/appintro"
        />
    <Button
        android:id="@+id/startButton"
        android:text="@string/start"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
    ></Button>
    <Button
        android:id="@+id/stopButton"
        android:text="@string/stop"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
    ></Button>
</LinearLayout>
```

Activity_main.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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />
</RelativeLayout>
```

Manifest file

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

Output :**Example On Audio Media Player1:****AudioPlayerActivity.java:**

```
Java file name: AudioPlayerActivity.class

package com.example.audiomediaplayer1;

import android.app.Activity;
import android.media.MediaPlayer;
import android.net.Uri;
import android.os.Bundle;
import android.view.Menu;

public class AudioPlayerActivity extends Activity
{
```

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

    mp=new MediaPlayer();

    try
    {

        Uri uri=Uri.parse("android.resource://" + this.getPackageName() + "/" + R.raw.panja);
        mp.setDataSource(this,uri);
        mp.prepare();
        mp.start();

    }
    catch(Exception e){e.printStackTrace();}

}public AudioPlayerActivity()
{
    // TODO Auto-generated constructor stub
}
@Override
protected void onDestroy()
{
    // TODO Auto-generated method stub
    super.onDestroy();
    mp.stop();
}

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

Xml file: Activity_main.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"
    tools:context=".AudioPlayerActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="34dp"
        android:text="Playing Audio from SD Card" />

</RelativeLayout>
```

Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.audiomediaplayer1"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="16" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.audiomediaplayer1.AudioPlayerActivity"
            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>
```

Output :



Playing Audio from SD Card

Example on Audio player Example 2:

Java file: AndroidAudioPlayer.class

```
package com.example.audioplayerexample2;
import java.util.HashMap;
import android.app.Activity;
import android.content.Context;
import android.media.AudioManager;
import android.media.SoundPool;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import com.example.audioplayerexample2.R;
public class AndroidAudioPlayer extends Activity {

    SoundPool soundPool;
    HashMap<Integer, Integer> soundPoolMap;
    int soundID = 1;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        soundPool = new SoundPool(4, AudioManager.STREAM_MUSIC, 100);
        soundPoolMap = new HashMap<Integer, Integer>();
        //soundPoolMap.put(soundID, soundPool.load(this, R.raw.midi_sound, 1));
        soundPoolMap.put(soundID, soundPool.load(this, R.raw.fallbackring, 1));

        Button buttonPlay = (Button) findViewById(R.id.play);
        Button buttonPause = (Button) findViewById(R.id.pause);
        buttonPlay.setOnClickListener(buttonPlayOnClickListener);
        buttonPause.setOnClickListener(buttonPauseOnClickListener);
    }

    Button.OnClickListener buttonPlayOnClickListener
    = new Button.OnClickListener(){
        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub
            AudioManager audioManager =
            (AudioManager) getSystemService(Context.AUDIO_SERVICE);
            float curVolume =
            audioManager.getStreamVolume(AudioManager.STREAM_MUSIC);

            float maxVolume = audioManager.getStreamMaxVolume(AudioManager.STREAM_MUSIC);
            float leftVolume = curVolume/maxVolume;
            float rightVolume = curVolume/maxVolume;
            int priority = 1;
            int no_loop = 0;
            float normal_playback_rate = 1f;

            soundPool.play(soundID, leftVolume, rightVolume, priority, no_loop, normal_playback_rate);

            Toast.makeText(AndroidAudioPlayer.this,
            "soundPool.play()", Toast.LENGTH_LONG).show();
        }
    };

    Button.OnClickListener buttonPauseOnClickListener = new Button.OnClickListener(){
        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub
        }
    };
}
```

```
soundPool.pause(soundID);
Toast.makeText(AndroidAudioPlayer.this,
"soundPool.pause()", 
Toast.LENGTH_LONG).show();
}
}
```

Xml file: Main.xml

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

    <Button
        android:id="@+id/play"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="- PLAY -" />

    <Button
        android:id="@+id/pause"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="- PAUSE -" />

</LinearLayout>
```

Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.audioplayerexample2"
    android:versionCode="1"
    android:versionName="1.0" >

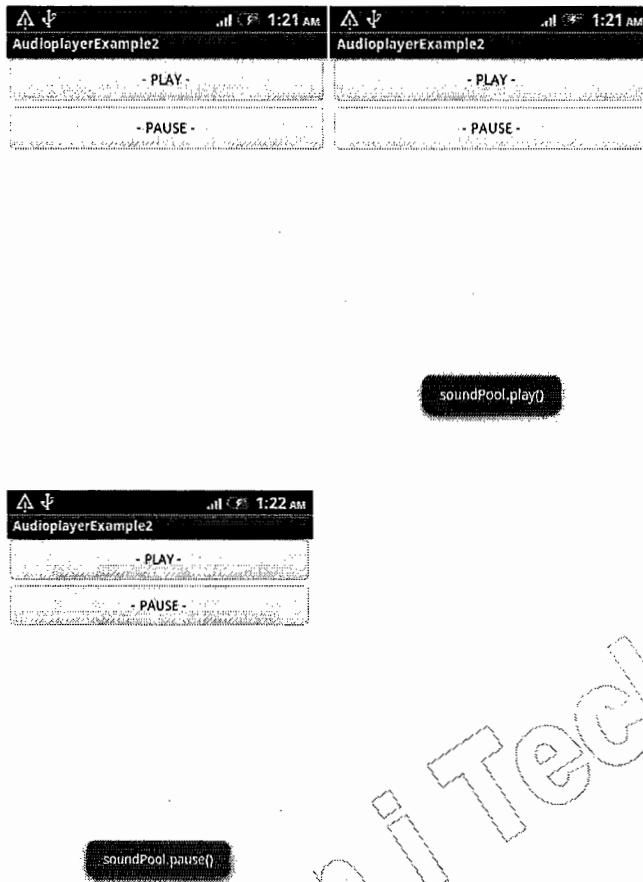
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.audioplayerexample2.AndroidAudioPlayer"
            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>
```

Output :



Example On Audio Player Example 3 :

Java file: **AndroidAudioPlayer.java**

```
package com.example.audioplayerexample3;
import android.app.Activity;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import com.example.audioplayerexample3.R;

public class AndroidAudioPlayer extends Activity {

    MediaPlayer mediaPlayer;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
```

```
MediaPlayer mediaPlayer = MediaPlayer.create(this, R.raw.midi_sound);

Button buttonPlay = (Button) findViewById(R.id.play);
Button buttonPause = (Button) findViewById(R.id.pause);
buttonPlay.setOnClickListener(buttonPlayOnClickListener);
buttonPause.setOnClickListener(buttonPauseOnClickListener);
}

Button.OnClickListener buttonPlayOnClickListener
= new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(!mediaPlayer.isPlaying()){
            mediaPlayer.start();
            Toast.makeText(AndroidAudioPlayer.this,
                    "mediaPlayer.start()", Toast.LENGTH_LONG).show();
        }
    }
};

Button.OnClickListener buttonPauseOnClickListener
= new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(mediaPlayer.isPlaying()){
            mediaPlayer.pause();
            Toast.makeText(AndroidAudioPlayer.this,
                    "mediaPlayer.pause()", Toast.LENGTH_LONG).show();
        }
    }
};

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

    <Button
        android:id="@+id/play"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="- PLAY -" />

    <Button
        android:id="@+id/pause"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="- PAUSE -" />

</LinearLayout>
```

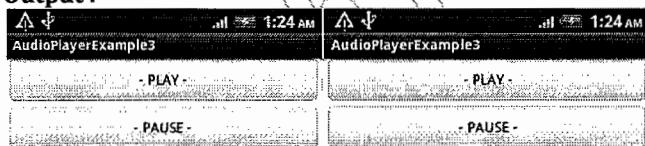
Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.audioexample3"
    android:versionCode="1"
    android:versionName="1.0" >

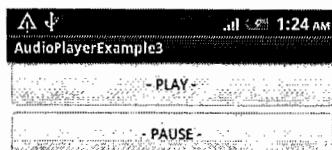
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.audioexample3.AndroidAudioPlayer"
            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>
```

Output :



mediaPlayer.start()



mediaPlayer.pause()

Example On Audio Recorder :**Java file: AndroidAudioRecordActivity.java**

```
package com.example.audiorecorder;

import java.io.BufferedInputStream;
import java.io.BufferedOutputStream;
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStream;
import java.io.OutputStream;

import android.app.Activity;
import android.media.AudioFormat;
import android.media.AudioManager;
import android.media.AudioRecord;
import android.media.AudioTrack;
import android.media.MediaRecorder;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.Toast;

public class AndroidAudioRecordActivity extends Activity {

    Button startRec, stopRec, playBack;

    Boolean recording;

    /** Called when the activity is first created. */
    @Override
```

```
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    startRec = (Button) findViewById(R.id.startrec);
    stopRec = (Button) findViewById(R.id.stoprec);
    playBack = (Button) findViewById(R.id.playback);

    startRec.setOnClickListener(startRecOnClickListener);
    stopRec.setOnClickListener(stopRecOnClickListener);
    playBack.setOnClickListener(playBackOnClickListener);

}

OnClickListener startRecOnClickListener = new OnClickListener() {

    @Override
    public void onClick(View arg0) {
        Toast.makeText(getApplicationContext(), "startRecord", Toast.LENGTH_LONG).show();
        Thread recordThread = new Thread(new Runnable() {

            @Override
            public void run() {
                recording = true;
                startRecord();
            }
        });
        recordThread.start();
    }
};

OnClickListener stopRecOnClickListener = new OnClickListener() {

    @Override
    public void onClick(View arg0) {
        Toast.makeText(getApplicationContext(), "stopRecord",
        Toast.LENGTH_LONG).show();
        recording = false;
    }
};

OnClickListener playBackOnClickListener = new OnClickListener() {

    @Override
    public void onClick(View v) {
        Toast.makeText(getApplicationContext(), "playRecord",
        Toast.LENGTH_LONG).show();
        playRecord();
    }
};

private void startRecord() {

    File file = new File(Environment.getExternalStorageDirectory(),

```

```
"test.pcm");

try {
    file.createNewFile();

    OutputStream outputStream = new FileOutputStream(file);
    BufferedOutputStream bufferedOutputStream = new BufferedOutputStream(
        outputStream);
    DataOutputStream dataOutputStream = new DataOutputStream(
        bufferedOutputStream);

    int minBufferSize = AudioRecord.getMinBufferSize(11025,
        AudioFormat.CHANNEL_CONFIGURATION_MONO,
        AudioFormat.ENCODING_PCM_16BIT);

    short[] audioData = new short[minBufferSize];

    AudioRecord audioRecord = new AudioRecord(
        MediaRecorder.AudioSource.MIC, 11025,
        AudioFormat.CHANNEL_CONFIGURATION_MONO,
        AudioFormat.ENCODING_PCM_16BIT, minBufferSize);

    audioRecord.startRecording();

    while (recording) {
        int numberofShort = audioRecord.read(audioData, 0,
            minBufferSize);
        for (int i = 0; i < numberofShort; i++) {
            dataOutputStream.writeShort(audioData[i]);
        }
    }

    audioRecord.stop();
    dataOutputStream.close();
}

} catch (IOException e) {
    e.printStackTrace();
}

}

void playRecord() {

    File file = new File(Environment.getExternalStorageDirectory(),
        "test.pcm");

    int shortSizeInBytes = Short.SIZE / Byte.SIZE;

    int bufferSizeInBytes = (int) (file.length() / shortSizeInBytes);
    short[] audioData = new short[bufferSizeInBytes];

    try {
        InputStream inputStream = new FileInputStream(file);
        BufferedInputStream bufferedInputStream = new BufferedInputStream(
            inputStream);
        DataInputStream dataInputStream = new DataInputStream(
            bufferedInputStream);
```

```
int i = 0;
while (dataInputStream.available() > 0) {
    audioData[i] = dataInputStream.readShort();
    i++;
}
dataInputStream.close();

AudioTrack audioTrack = new AudioTrack(AudioManager.STREAM_MUSIC,
    11025, AudioFormat.CHANNEL_CONFIGURATION_MONO,
    AudioFormat.ENCODING_PCM_16BIT, bufferSizeInBytes,
    AudioTrack.MODE_STREAM);

audioTrack.play();
audioTrack.write(audioData, 0, bufferSizeInBytes);

} catch (FileNotFoundException e) {
    e.printStackTrace();
} catch (IOException e) {
    e.printStackTrace();
}
}
```

Xml file:Activity_main.xml :

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

    <Button
        android:id="@+id/startrec"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Start Recording" />

    <Button
        android:id="@+id/stoprec"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Stop Recording" />

    <Button
        android:id="@+id/playback"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Play Back" />

</LinearLayout>
```

Manifest file

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

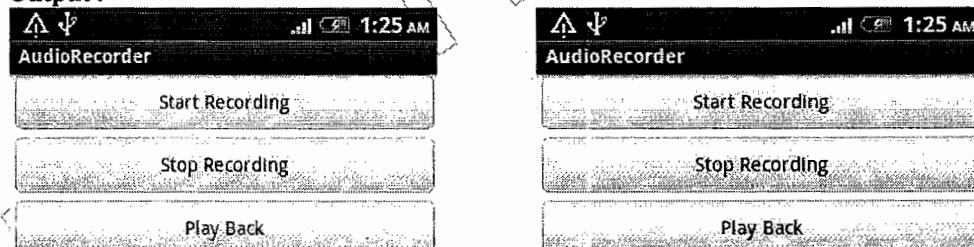
```
package="com.example.audiorecorder"
android:versionCode="1"
android:versionName="1.0"

<uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="18" />

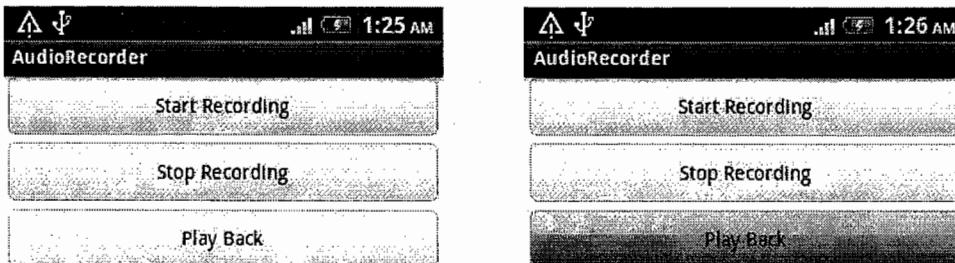
<uses-permission android:name="android.permission.RECORD_AUDIO" />
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.audiorecorder.AndroidAudioRecordActivity"
        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>
```

Output :

startRecord



Example ON Camera Example :

Java file: MainActivity.java

```
package com.example.cameraexample;

import java.io.IOException;
import java.io.InputStream;

import android.app.Activity;
import android.content.Intent;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.Toast;

public class MainActivity extends Activity {

    Button wall,take;
    ImageView pic;
    Intent i;
    int cameraData = 0;
    Bitmap bmp;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        InputStream is = getResources().openRawResource(R.drawable.ic_launcher);
        bmp = BitmapFactory.decodeStream(is);
```

```

wall = (Button) findViewById(R.id.set);
take = (Button) findViewById(R.id.tak);
pic = (ImageView) findViewById(R.id.image);
wall.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        try {
            getApplicationContext().setWallpaper(bmp);
            Toast.makeText(getApplicationContext(), "Wallpaper Set",
Toast.LENGTH_LONG).show();
        }
        catch (IOException e)
        { e.printStackTrace(); }
    }
});
take.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        i = new Intent(android.provider.MediaStore.ACTION_IMAGE_CAPTURE);
        startActivityForResult(i,cameraData);
    }
});
@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data) {
    // TODO Auto-generated method stub
    super.onActivityResult(requestCode, resultCode, data);
    if(resultCode == RESULT_OK)
    {
        Bundle extras = data.getExtras();
        bmp = (Bitmap) extras.get("data");
        pic.setImageBitmap(bmp);
    }
}

@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;
}
}

```

Xml file:Activity_main.xml :

```

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

```

```
    android:id="@+id/image"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_weight="0.81"
    android:src="@drawable/ic_launcher" />

<Button
    android:id="@+id/tak"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_weight="0.24"
    android:text="Take Photo" />

<Button
    android:id="@+id/set"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_weight="0.24"
    android:text="Set as Wallpaper" />

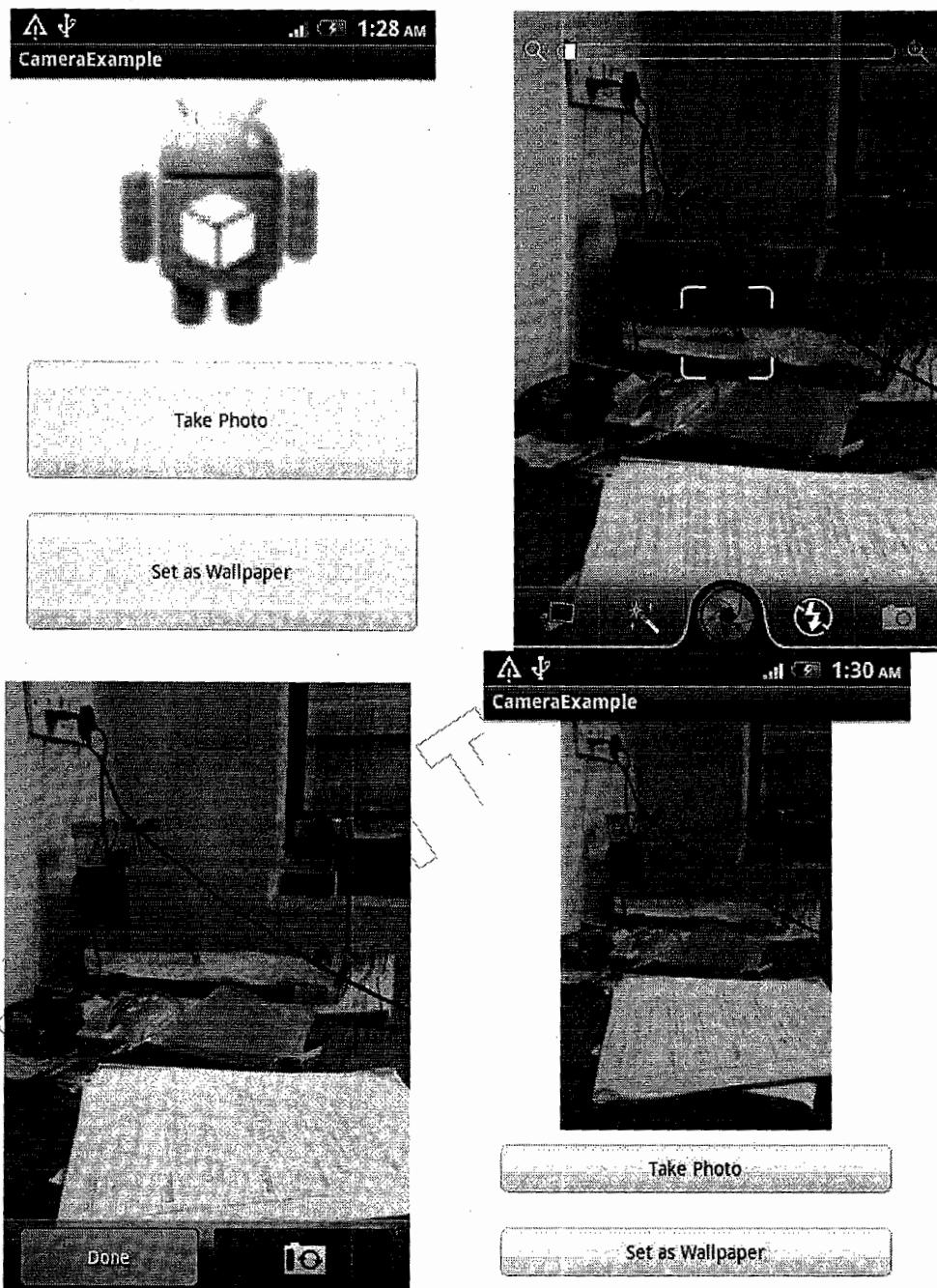
</LinearLayout>
```

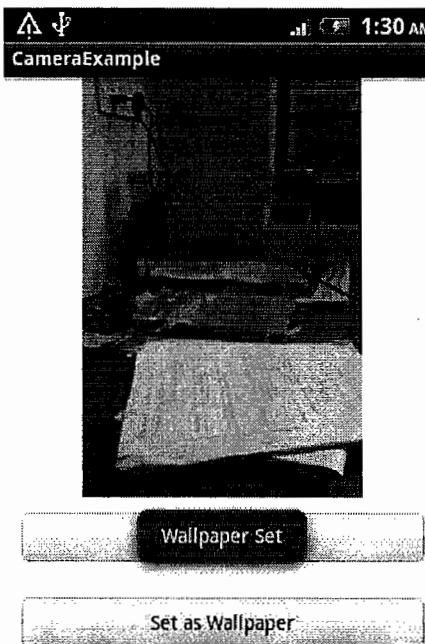
Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.cameraexample"
    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.cameraexample.MainActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output:



**Example on Video Player 1:****Java file: AndroidVideoPlayer.java**

```
package com.example.videoplayer1;
import java.io.IOException;

import android.app.Activity;
import android.graphics.PixelFormat;
import android.media.AudioManager;
import android.media.MediaPlayer;
import android.net.Uri;
import android.os.Bundle;
import android.view.SurfaceHolder;
import android.view.SurfaceView;
import android.view.View;
import android.widget.Button;
import com.example.videoplayer1.R;

public class AndroidVideoPlayer extends Activity implements SurfaceHolder.Callback{

    MediaPlayer mediaPlayer;
    SurfaceView surfaceView;
    SurfaceHolder surfaceHolder;
    boolean pausing = false;

    //String stringPath = "/sdcard/samplevideo.3gp";
    Uri uri;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
```

```
Button buttonPlayVideo = (Button)findViewById(R.id.playvideoplayer);
Button buttonPauseVideo = (Button)findViewById(R.id.pausevideoplayer);
uri=Uri.parse("android.resource://" + this.getPackageName() + "/" + R.raw.samplevideo);
getWindow().setFormat(PixelFormat.UNKNOWN);
surfaceView = (SurfaceView)findViewById(R.id.surfaceview);
surfaceHolder = surfaceView.getHolder();
surfaceHolder.addCallback(this);
surfaceHolder.setFixedSize(176, 144);
surfaceHolder.setType(SurfaceHolder.SURFACE_TYPE_PUSH_BUFFERS);
mediaPlayer = new MediaPlayer();

buttonPlayVideo.setOnClickListener(new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        pausing = false;

        if(mediaPlayer.isPlaying()){
            mediaPlayer.reset();
        }

        mediaPlayer.setAudioStreamType(AudioManager.STREAM_MUSIC);
        mediaPlayer.setDisplay(surfaceHolder);

        try {
            mediaPlayer.setDataSource(v.getContext(),uri);
            mediaPlayer.prepare();
        } catch (IllegalArgumentException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        } catch (IllegalStateException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        } catch (IOException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }

        mediaPlayer.start();
    }
});

buttonPauseVideo.setOnClickListener(new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(pausing){
            pausing = false;
            mediaPlayer.start();
        }
        else{
            pausing = true;
            mediaPlayer.pause();
        }
    }
});
```

```
});  
}  
  
@Override  
public void surfaceChanged(SurfaceHolder holder, int format, int width,  
    int height) {  
    // TODO Auto-generated method stub  
}  
  
@Override  
public void surfaceCreated(SurfaceHolder holder) {  
    // TODO Auto-generated method stub  
}  
  
@Override  
public void surfaceDestroyed(SurfaceHolder holder) {  
    // TODO Auto-generated method stub  
}  
}
```

Xml file:Main.xml :

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
    <Button  
        android:id="@+id/playvideoplayer"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="- PLAY Video -" />  
  
    <Button  
        android:id="@+id/pausevideoplayer"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="- PAUSE Video -" />  
  
    <SurfaceView  
        android:id="@+id/surfaceview"  
        android:layout_width="fill_parent"  
        android:layout_height="300dp" />  
  
</LinearLayout>
```

Manifest file

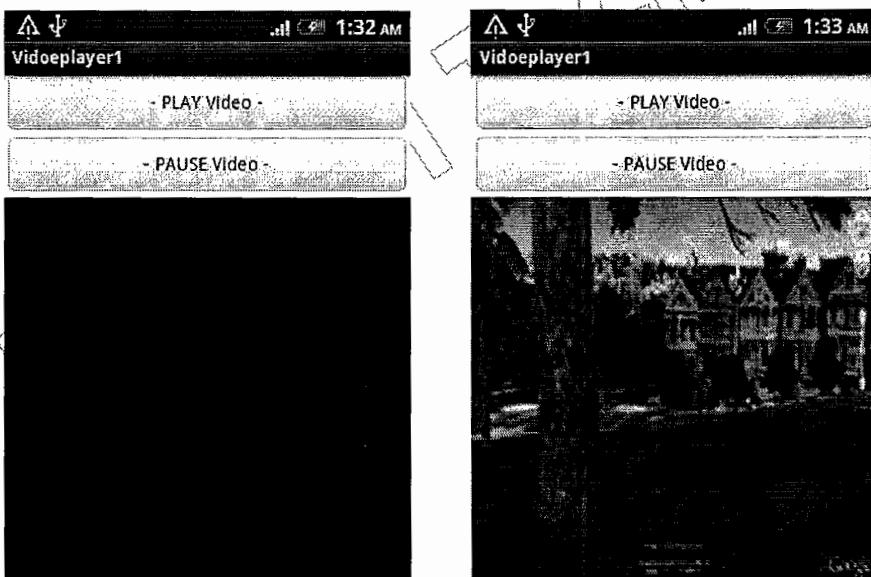
```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.videoeplayer1"  
    android:versionCode="1"
```

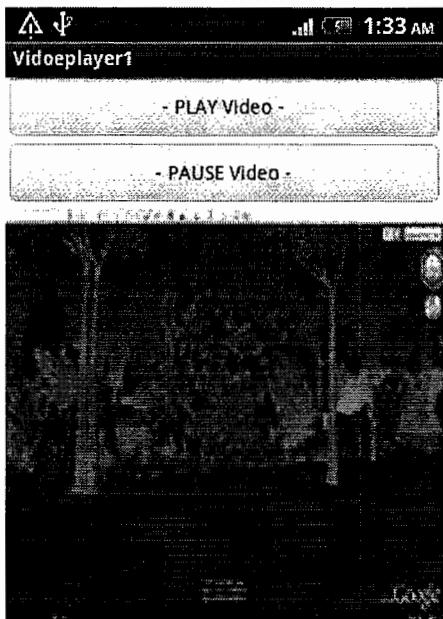
```
android:versionName="1.0" >

<uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="18" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.videoplayer1.AndroidVideoPlayer"
        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>
```

Output :

**Example on Video Player 2 :****Java file: AndroidVideoPlayer.java**

```
package com.example.videoplayer2;

import android.app.Activity;
import android.graphics.PixelFormat;
import android.media.MediaPlayer;
import android.net.Uri;
import android.os.Bundle;
import android.view.SurfaceHolder;
import android.view.SurfaceView;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.VideoView;

//Implement SurfaceHolder interface to Play video
//Implement this interface to receive information about changes to the surface
public class AndroidVideoPlayer extends Activity{

    MediaPlayer mediaPlayer;
    boolean pausing = false;;
    VideoView mVideoView;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        mVideoView = (VideoView)findViewById(R.id.videoview);
        Button buttonPlayVideo = (Button)findViewById(R.id.playvideoplayer);
        Button buttonStopVideo = (Button)findViewById(R.id.stopvideoplayer);
```

```
getWindow().setFormat(PixelFormat.UNKNOWN);
//Displays a video file.

buttonPlayVideo.setOnClickListener(new Button.OnClickListener(){
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub

        // VideoView mVideoView = new VideoView(this);
        String uriPath =
"android.resource://com.android.AndroidVideoPlayer/" + R.raw.k;
        Uri uri = Uri.parse(uriPath);
        mVideoView.setVideoURI(uri);
        mVideoView.requestFocus();
        mVideoView.start();

    });
});

buttonStopVideo.setOnClickListener(new OnClickListener() {
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        mVideoView.stopPlayback();
    }
});
})
```

Xml file:Main.xml :

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

    <Button
        android:id="@+id/playvideoplayer"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="- PLAY Video -" />
    <Button
        android:id="@+id/stopvideoplayer"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Stop Video -" />

    <VideoView
        android:id="@+id/videoview"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />
```

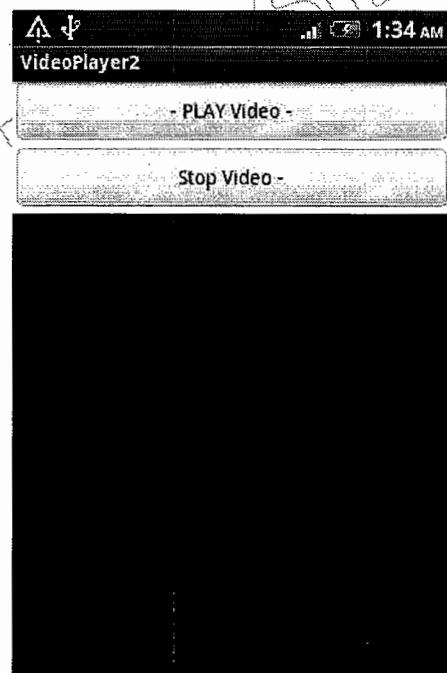
```
</LinearLayout>
```

Manifest file :-

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.videoplayer2"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.videoplayer2.AndroidVideoPlayer"
            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>
```

Output :

Example on Video Recorder Example 1:**Java file: AndroidVideoCapture.java**

```
package com.example.videorecorderexample1;

import java.io.IOException;

import android.app.Activity;
import android.media.CamcorderProfile;
import android.media.MediaRecorder;
import android.os.Bundle;
import android.view.SurfaceHolder;
import android.view.SurfaceView;
import android.view.View;
import android.widget.Button;
import com.example.videorecorderexample1.R;

public class AndroidVideoCapture extends Activity implements
    SurfaceHolder.Callback {

    Button myButton;
    MediaRecorder mediaRecorder;
    SurfaceHolder surfaceHolder;
    boolean recording;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        recording = false;

        mediaRecorder = new MediaRecorder();
        initMediaRecorder();

        setContentView(R.layout.activity_main);

        SurfaceView myVideoView = (SurfaceView) findViewById(R.id.videoview);
        surfaceHolder = myVideoView.getHolder();
        surfaceHolder.addCallback(this);
        surfaceHolder.setType(SurfaceHolder.SURFACE_TYPE_PUSH_BUFFERS);

        myButton = (Button) findViewById(R.id.mybutton);
        myButton.setOnClickListener(myButtonOnClickListener);
    }

    private Button.OnClickListener myButtonOnClickListener = new Button.OnClickListener() {

        @Override
        public void onClick(View arg0) {
            // TODO Auto-generated method stub
            if (recording) {
                mediaRecorder.stop();
                mediaRecorder.release();
                finish();
            }
        }
    };
}
```

```
        } else {
            mediaRecorder.start();
            recording = true;
            myButton.setText("STOP");
        }
    };

@Override
public void surfaceChanged(SurfaceHolder arg0, int arg1, int arg2, int arg3) {
    // TODO Auto-generated method stub
}

@Override
public void surfaceCreated(SurfaceHolder arg0) {
    // TODO Auto-generated method stub
    prepareMediaRecorder();
}

@Override
public void surfaceDestroyed(SurfaceHolder arg0) {
    // TODO Auto-generated method stub
}

private void initMediaRecorder() {
    mediaRecorder.setAudioSource(MediaRecorder.AudioSource.DEFAULT);
    mediaRecorder.setVideoSource(MediaRecorder.VideoSource.DEFAULT);
    CamcorderProfile camcorderProfile_HQ = CamcorderProfile
        .get(CamcorderProfile.QUALITY_HIGH);
    mediaRecorder.setProfile(camcorderProfile_HQ);
    mediaRecorder.setOutputFile("/sdcard/myvideo.mp4");
    mediaRecorder.setMaxDuration(60000); // Set max duration 60 sec.
    mediaRecorder.setMaxFileSize(5000000); // Set max file size 5M
}

private void prepareMediaRecorder() {
    mediaRecorder.setPreviewDisplay(surfaceHolder.getSurface());
    try {
        mediaRecorder.prepare();
    } catch (IllegalStateException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    } catch (IOException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}
```

Xml file:Activity_main.xml :

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

```
    android:orientation="vertical" >

    <RelativeLayout
        android:layout_width="fill_parent"
        android:layout_height="fill_parent" >

        <SurfaceView
            android:id="@+id/videoview"
            android:layout_width="match_parent"
            android:layout_height="match_parent" />

        <Button
            android:id="@+id/mybutton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentRight="true"
            android:text="REC"
            android:textSize="12dp" />
    </RelativeLayout>

</LinearLayout>
```

Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.videorecorderexample1"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

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

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.videorecorderexample1.AndroidVideoCapture"
            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>
```

Output:**Example on Video Recorder 2 :**

Java file: AndroidIntentVideoRecording.java

```
package com.example.videorecorder2;

import android.app.Activity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import android.widget.VideoView;
import com.example.videorecorder2.R;

public class AndroidIntentVideoRecording extends Activity {
    final static int REQUEST_VIDEO_CAPTURED = 1;
```

```

Uri uriVideo = null;
VideoView videoviewPlay;

/** Called when the activity is first created. */
@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Button buttonRecording = (Button) findViewById(R.id.recording);
    Button buttonPlayback = (Button) findViewById(R.id.playback);
    videoviewPlay = (VideoView) findViewById(R.id.videoview);

    buttonRecording.setOnClickListener(new Button.OnClickListener() {

        @Override
        public void onClick(View arg0) {
            // TODO Auto-generated method stub
            Intent intent = new Intent(
                    android.provider.MediaStore.ACTION_VIDEO_CAPTURE);
            startActivityForResult(intent, REQUEST_VIDEO_CAPTURED);
        }
    });
    buttonPlayback.setOnClickListener(new Button.OnClickListener() {

        @Override
        public void onClick(View arg0) {
            // TODO Auto-generated method stub
            if(uriVideo == null) {
                Toast.makeText(AndroidIntentVideoRecording.this,
                        "No Video", Toast.LENGTH_LONG).show();
            } else {
                Toast.makeText(AndroidIntentVideoRecording.this,
                        "Playback: " + uriVideo.getPath(),
                        Toast.LENGTH_LONG).show();
                videoviewPlay.setVideoURI(uriVideo);
                videoviewPlay.start();
            }
        }
    });
}

@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data) {
    // TODO Auto-generated method stub
    if(resultCode == RESULT_OK) {
        if(requestCode == REQUEST_VIDEO_CAPTURED) {
            uriVideo = data.getData();
            Toast.makeText(AndroidIntentVideoRecording.this,
                    uriVideo.getPath(), Toast.LENGTH_LONG).show();
        }
    } else if(resultCode == RESULT_CANCELED) {
        uriVideo = null;
        Toast.makeText(AndroidIntentVideoRecording.this, "Cancelled!",
                    Toast.LENGTH_LONG).show();
    }
}

```

Xml file:Activity_main.xml ;

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

    <Button
        android:id="@+id/recording"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Recording Video using Intent" />

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

    <VideoView
        android:id="@+id/videoview"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />

</LinearLayout>
```

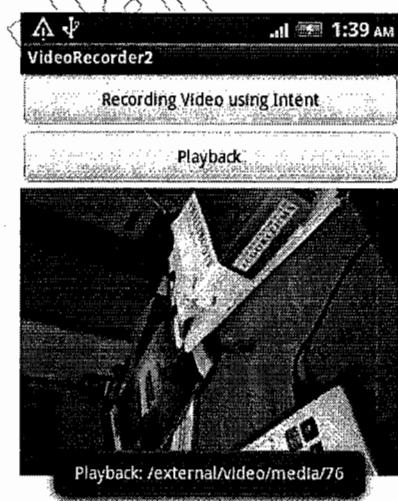
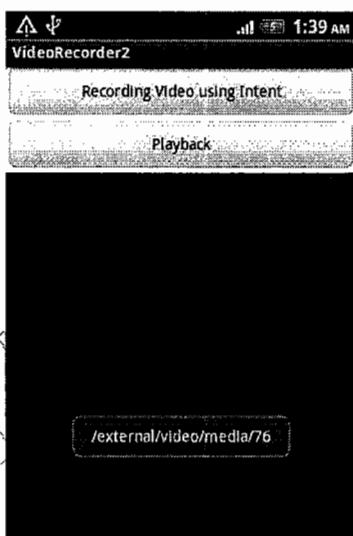
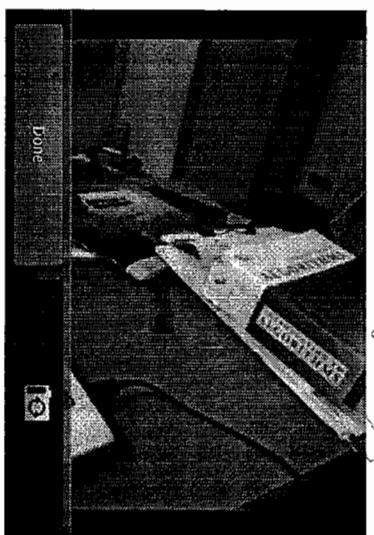
Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.videorecorder2"
    android:versionCode="1"
    android:versionName="1.0" >

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />
    <uses-permission android:name="android.permission.RECORD_AUDIO" />
    <uses-permission android:name="android.permission.CAMERA" />
    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.videorecorder2.AndroidIntentVideoRecording"
            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>
```



Example On Bluetooth:1**MainActivity.java:-**

```
package com.example.bluetooth;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.app.Activity;
import android.bluetooth.BluetoothAdapter;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends Activity
{
private static final int REQUEST_ENABLE_BT = 0;
private static final int REQUEST_DISCOVERABLE_BT = 0;
protected void onCreate(Bundle savedInstanceState)
{
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
final TextView out=(TextView) findViewById(R.id.out);
final Button button1 = (Button) findViewById(R.id.button1);
final Button button2 = (Button) findViewById(R.id.button2);
final Button button3 = (Button) findViewById(R.id.button3);
final BluetoothAdapter mBluetoothAdapter = BluetoothAdapter.getDefaultAdapter();
if (mBluetoothAdapter == null)
{
out.append("device not supported");
}
button1.setOnClickListener(new View.OnClickListener() {
public void onClick(View v) {
if (!mBluetoothAdapter.isEnabled())
{
Intent enableBtIntent = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
startActivityForResult(enableBtIntent, REQUEST_ENABLE_BT);
}
}
});
button2.setOnClickListener(new View.OnClickListener()
{
public void onClick(View arg0) {
if (!mBluetoothAdapter.isDiscovering())
{
// out.append("MAKING YOUR DEVICE DISCOVERABLE");
Context context = getApplicationContext();
CharSequence text = "MAKING YOUR DEVICE DISCOVERABLE";
int duration = Toast.LENGTH_SHORT;
Toast toast = Toast.makeText(context, text, duration);
}
}
});
```

```
toast.show();
Intent enableBtIntent = new Intent(BluetoothAdapter.ACTION_REQUEST_DISCOVERABLE);
startActivityForResult(enableBtIntent, REQUEST_DISCOVERABLE_BT);
}
}
});
button3.setOnClickListener(new View.OnClickListener()
{
public void onClick(View arg0)
{
mBluetoothAdapter.disable();
//    out.append("TURN_OFF BLUETOOTH");
Context context = getApplicationContext();
CharSequence text = "TURNING_OFF BLUETOOTH";
int duration = Toast.LENGTH_LONG;
Toast toast = Toast.makeText(context, text, 15);
toast.show();
}
});
}
}
}
```

Activity_main.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"
tools:context=".MainActivity" >

<TextView
    android:text=""
    android:id="@+id/out"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
</TextView>

<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginLeft="30dp"
    android:layout_marginTop="49dp"

    android:text="TURN_ON"
    android:textStyle="italic"
/>

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

```
    android:layout_marginTop="27dp"
    android:text="DISCOVERABLE"
    android:textStyle="italic"
  />

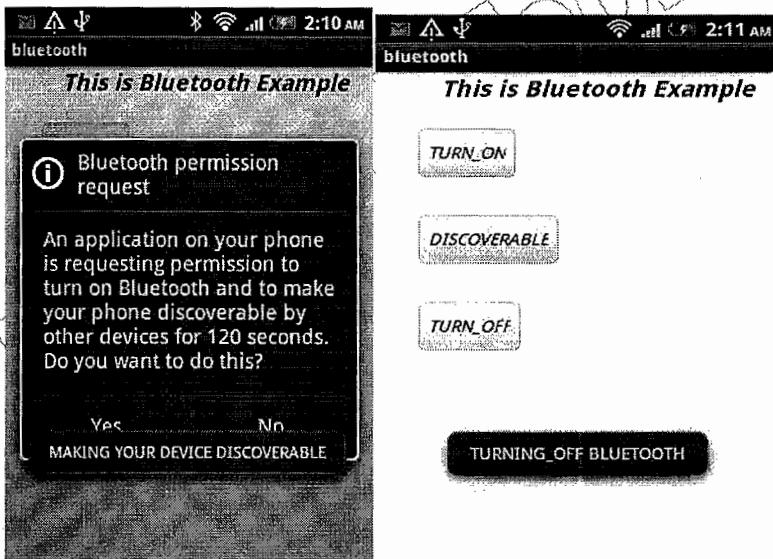
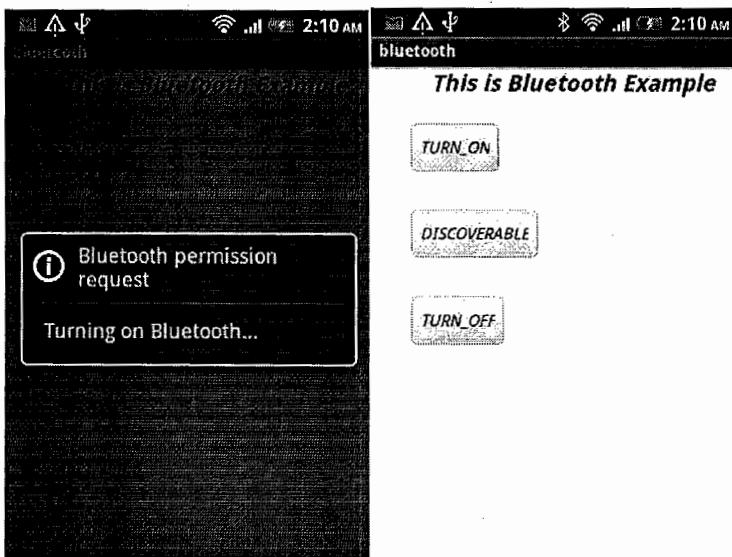
  <Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button2"
    android:layout_below="@+id/button2"
    android:layout_marginTop="28dp"
    android:text="TURN_OFF"
    android:textStyle="italic"
  />
  <TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button1"
    android:layout_alignParentTop="true"
    android:layout_marginLeft="21dp"
    android:textStyle="bold|italic"
    android:text="This is Bluetooth Example "
    android:textSize="20sp"
  />
</RelativeLayout>
```

Manifest file :

```
<?xml version="1.0" encoding="utf-8"?>
<manifest
  xmlns:android="http://schemas.android.com/apk/res/android"
  package="com.example.bluetooth"
  android:versionCode="1"
  android:versionName="1.0" >
  <uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="16" />
  <uses-permission android:name="android.permission.BLUETOOTH" />
  <uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />

  <application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
      android:name="com.example.bluetooth.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>
```

Bluetooth Output:**Example Bluetooth Show Paired****MainActivity.java**

```
Java file name: MainActivity
package com.example.bluetoothshowpaired;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import java.util.Set;
import android.bluetooth.BluetoothAdapter;
```

```
import android.bluetooth.BluetoothDevice;
import android.content.Intent;
import android.widget.TextView;

public class MainActivity extends Activity
{
    TextView textview1;
    private static final int REQUEST_ENABLE_BT = 1;
    BluetoothAdapter btAdapter;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        textview1 = (TextView) findViewById(R.id.textView1);
        // Getting the Bluetooth adapter
        btAdapter = BluetoothAdapter.getDefaultAdapter();
        textview1.append("\nAdapter: " + btAdapter);
        CheckBluetoothState();
    }

    /* It is called when an activity completes.*/
    protected void onActivityResult(int requestCode, int resultCode, Intent data)
    {
        super.onActivityResult(requestCode, resultCode, data);
        if (requestCode == REQUEST_ENABLE_BT) {
            CheckBluetoothState();
        }
    }

    protected void onDestroy()
    {
        super.onDestroy();
    }

    private void CheckBluetoothState()
    {
        // Checks for the Bluetooth support and then makes sure it is turned on
        // If it isn't turned on, request to turn it on
        // List paired devices
        if(btAdapter==null)
        {
            textview1.append("\nBluetooth NOT supported. Aborting.");
            return;
        }
        Else
        {
            if (btAdapter.isEnabled())
            {
                textview1.append("\nBluetooth is enabled...");

                // Listing paired devices
                textview1.append("\nPaired Devices are:");

                Set<BluetoothDevice> devices = btAdapter.getBondedDevices();
                for (BluetoothDevice device : devices) {

```

```
textview1.append("\n Device: " + device.getName() + ", " + device);
}
}
else
{
//Prompt user to turn on Bluetooth
Intent enableBtIntent = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
startActivityForResult(enableBtIntent, REQUEST_ENABLE_BT);
}
}
}
```

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

Activity_main.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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="18dp"
        android:layout_marginTop="61dp"
        android:text="Showing Paired Devices:" />
</RelativeLayout>
```

Manifest file:

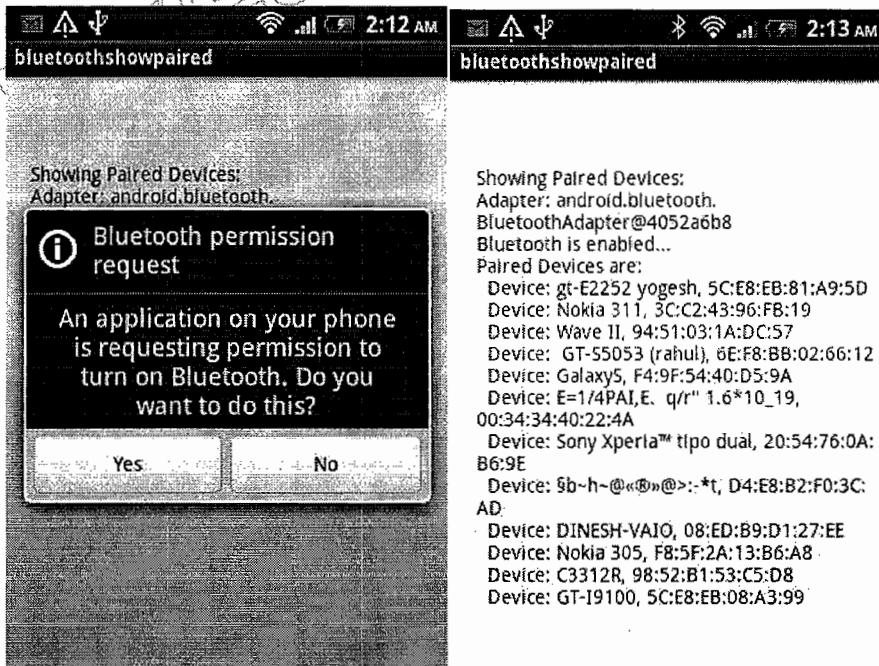
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.bluetoothshowpaired"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />
    <uses-permission android:name="android.permission.BLUETOOTH" />
    <uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
```

```

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

```

Bluetooth Show Paired Output:



Example On WI-FI:**Java file name: MainActivity**

```
package com.example.wifi;
import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.app.Activity;
import android.content.Context;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends Activity
{
    Button enableButton, disableButton;
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        enableButton = (Button) findViewById(R.id.button1);
        disableButton = (Button) findViewById(R.id.button2);
        enableButton.setOnClickListener(new OnClickListener()
        {
            public void onClick(View v)
            {
                WifiManager wifi = (WifiManager) getSystemService(Context.WIFI_SERVICE);
                wifi.setWifiEnabled(true);
            }
        });
        disableButton.setOnClickListener(new OnClickListener()
        {
            public void onClick(View v)
            {
                WifiManager wifi = (WifiManager) getSystemService(Context.WIFI_SERVICE);
                wifi.setWifiEnabled(false);
            }
        });
    }
}
```

WI-FI Xml:Activity_main.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"
    tools:context=".MainActivity" >

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="76dp"
        android:layout_marginTop="67dp"
        android:text="Enable Wifi" />
```

```
<Button  
    android:id="@+id/button2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignLeft="@+id/button1"  
    android:layout_below="@+id/button1"  
    android:layout_marginTop="44dp"  
    android:text="Disable Wifi" />  
</RelativeLayout>
```

Manifest file:

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.wifi"  
    android:versionCode="1"  
    android:versionName="1.0" >  
    <uses-sdk  
        android:minSdkVersion="8"  
        android:targetSdkVersion="16" />  
    <uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />  
    <uses-permission android:name="android.permission.INTERNET" />  
    <uses-permission android:name="android.permission.CHANGE_WIFI_STATE" />  
  
    <application  
        android:allowBackup="true"  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name"  
        android:theme="@style/AppTheme" >  
        <activity  
            android:name="com.example.wifi.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>
```

WI-FI Output:



Enable Wifi

Disable Wifi

WIFI fig:1

Example WI-FI Connection List:**Java file :- WifiConnections.java**

```
package com.androidexample.wificonnections;
import java.util.List;
import android.app.Activity;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.content.IntentFilter;
import android.net.wifi.ScanResult;
import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.TextView;
import android.widget.Toast;
public class WifiConnections extends Activity
{
    TextView mainText;
    WifiManager mainWifi;
    WifiReceiver receiverWifi;
    List<ScanResult> wifiList;
    StringBuilder sb = new StringBuilder();

    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_wifi_connections);
        mainText = (TextView) findViewById(R.id.mainText);
        // Initiate wifi service manager
        mainWifi = (WifiManager) getSystemService(Context.WIFI_SERVICE);
        // Check for wifi is disabled
        if (mainWifi.isWifiEnabled() == false)
        {
            //If wifi disabled then enable it
            Toast.makeText(getApplicationContext(), "wifi is disabled..making it enabled", Toast.LENGTH_LONG).show();
            mainWifi.setWifiEnabled(true);
        }

        // wifi scanned value broadcast receiver
        receiverWifi = new WifiReceiver();

        // Register broadcast receiver
        // Broadcast receiver will automatically call when number of wifi connections changed
        registerReceiver(receiverWifi, new IntentFilter(WifiManager.SCAN_RESULTS_AVAILABLE_ACTION));
        mainWifi.startScan();
        mainText.setText("Starting Scan...");
    }

    public boolean onCreateOptionsMenu(Menu menu) {
        menu.add(0, 0, 0, "Refresh");
        return super.onCreateOptionsMenu(menu);
    }
```

```
public boolean onMenuItemSelected(int featureId, MenuItem item)
{
    mainWifi.startScan();
    mainText.setText("Starting Scan");
    return super.onMenuItemSelected(featureId, item);
}

protected void onPause()
{
    unregisterReceiver(receiverWifi);
    super.onPause();
}

protected void onResume()
{
    registerReceiver(receiverWifi, new IntentFilter(WifiManager.SCAN_RESULTS_AVAILABLE_ACTION));
    super.onResume();
}

// Broadcast receiver class called its receive method
// when number of wifi connections changed

class WifiReceiver extends BroadcastReceiver
{
    // This method call when number of wifi connections changed
    public void onReceive(Context c, Intent intent)
    {
        sb = new StringBuilder();
        wifiList = mainWifi.getScanResults();
        sb.append("\n    Number Of Wifi connections :" + wifiList.size() + "\n\n");
        for(int i = 0; i < wifiList.size(); i++){
            sb.append(new Integer(i+1).toString() + ". ");
            sb.append((wifiList.get(i)).toString());
            sb.append("\n\n");
        }
        mainText.setText(sb);
    }
}
```

Activity_wifi_connections.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"
    tools:context=".WifiConnections" >

    <TextView
        android:id="@+id/mainText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:text="@string/hello_world" />
</RelativeLayout>
```

Manifest file:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.androidexample.wificonnections"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk
        android:minSdkVersion="8"/>
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.androidexample.wificonnections.WifiConnections"
            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>
    <uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
    <uses-permission android:name="android.permission.CHANGE_WIFI_STATE" />
</manifest>
```

WIFI Connection List Output:

Number Of Wifi connections :2

1. SSID: vimal, BSSID: 56:17:31:f0:8c:ed, capabilities: [WPA2-PSK-CCMP], level: -68, frequency: 2412
2. SSID: Connectify-hello, BSSID: 2a:ed:b9:d1:27:ed, capabilities: [WPA2-PSK-CCMP], level: -50, frequency: 2462.

Example Android Detect Internet Connection**Java file: ConnectionDetector.java**

```
package com.example.detectinternetconnection;

import android.content.Context;
import android.net.ConnectivityManager;
import android.net.NetworkInfo;

public class ConnectionDetector {

    private Context _context;

    public ConnectionDetector(Context context){
        this._context = context;
    }

    public boolean isConnectingToInternet(){
        ConnectivityManager connectivity = (ConnectivityManager)
        _context.getSystemService(Context.CONNECTIVITY_SERVICE);
        if (connectivity != null)
        {
            NetworkInfo[] info = connectivity.getAllNetworkInfo();
            if (info != null)
                for (int i = 0; i < info.length; i++)
                    if (info[i].getState() == NetworkInfo.State.CONNECTED)
                {
                    return true;
                }
        }
        return false;
    }
}
```

AndroidDetectInternetConnectionActivity.java

```
package com.example.detectinternetconnection;

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.widget.Button;

public class AndroidDetectInternetConnectionActivity extends Activity {

    // flag for Internet connection status
    Boolean isInternetPresent = false;

    // Connection detector class
    ConnectionDetector cd;
```

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

    Button btnStatus = (Button) findViewById(R.id.btn_check);

    // creating connection detector class instance
    cd = new ConnectionDetector(getApplicationContext());

    /**
     * Check Internet status button click event
     */
    btnStatus.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {

            // get Internet status
            isInternetPresent = cd.isConnectingToInternet();

            // check for Internet status
            if (isInternetPresent) {
                // Internet Connection is Present
                // make HTTP requests
                showAlertDialog(AndroidDetectInternetConnectionActivity.this,
                    "Internet Connection",
                    "You have internet connection", true);
            } else {
                // Internet connection is not present
                // Ask user to connect to Internet
                showAlertDialog(AndroidDetectInternetConnectionActivity.this,
                    "No Internet Connection",
                    "You don't have internet connection.", false);
            }
        }
    });

    /**
     * Function to display simple Alert Dialog
     * @param context - application context
     * @param title - alert dialog title
     * @param message - alert message
     * @param status - success/failure (used to set icon)
     */
    public void showAlertDialog(Context context, String title, String message, Boolean status) {
        AlertDialog alertDialog = new AlertDialog.Builder(context).create();

        // Setting Dialog Title
        alertDialog.setTitle(title);

        // Setting Dialog Message
        alertDialog.setMessage(message);
```

```
// Setting alert dialog icon  
alertDialog.setIcon((status) ? R.drawable.success : R.drawable.fail);  
  
// Setting OK Button  
alertDialog.setButton("OK", new DialogInterface.OnClickListener() {  
    public void onClick(DialogInterface dialog, int which) {  
    }  
});  
  
// Showing Alert Message  
alertDialog.show();  
}  
}
```

Xml file:Main.xml :

```
<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
<TextView  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:text="Detect Internet Status" />  
  
<Button android:id="@+id/btn_check"  
    android:layout_height="wrap_content"  
    android:layout_width="wrap_content"  
    android:text="Check Internet Status"  
    android:layout_centerInParent="true"/>  
  
</RelativeLayout>
```

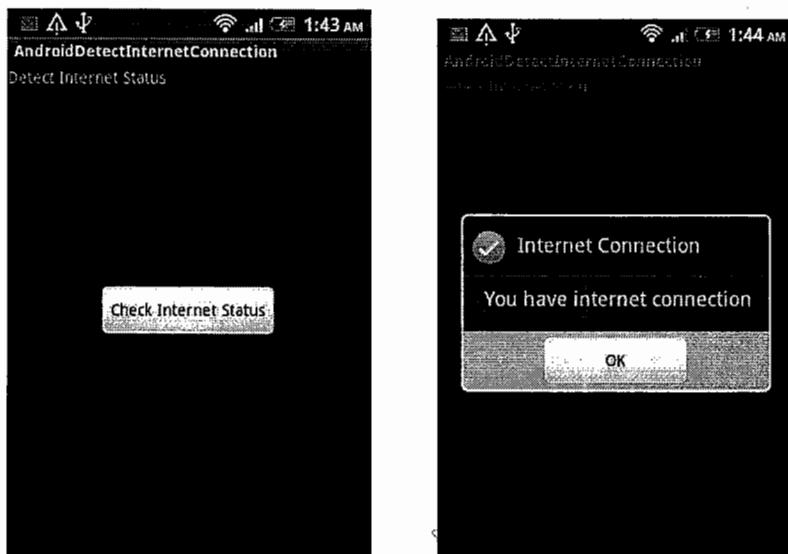
Manifest file

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.detectinternetconnection"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk android:minSdkVersion="8" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:name=".AndroidDetectInternetConnectionActivity"  
            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>

<!-- Internet Permissions -->
<uses-permission android:name="android.permission.INTERNET" />
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />

</manifest>
```

Output :**Example ON Telephony Manager :****Java file: MainActivity.java:-**

```
package com.example.telephonymanager;

import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.telephony.TelephonyManager;
import android.widget.TextView;

public class MainActivity extends Activity {
    TextView textView1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        textView1=(TextView)findViewById(R.id.textView1);

        TelephonyManager tm=(TelephonyManager) getSystemService(Context.TELEPHONY_SERVICE);
        String IMENumber=tm.getDeviceId();
        String subscriberID=tm.getDeviceId();
        String SIMSerialNumber=tm.getSimSerialNumber();
        String networkCountryISO=tm.getNetworkCountryIso();
        String SIMCountryISO=tm.getSimCountryIso();
```

```
String softwareVersion=tm.getDeviceSoftwareVersion();
String voiceMailNumber=tm.getVoiceMailNumber();

//Get the phone type
String strPhoneType="";

int phoneType=tm.getPhoneType();

switch (phoneType)
{
    case (TelephonyManager.PHONE_TYPE_CDMA):
        strPhoneType="CDMA";
        break;
    case (TelephonyManager.PHONE_TYPE_GSM):
        strPhoneType="GSM";
        break;
    case (TelephonyManager.PHONE_TYPE_NONE):
        strPhoneType="NONE";
        break;
}

//getting information if phone is in roaming
boolean isRoaming=tm.isNetworkRoaming();

String info="Phone Details:\n";
info+="\n IMEI Number:"+IMEINumber;
info+="\n SubscriberID:"+subscriberID;
info+="\n Sim Serial Number:"+SIMSerialNumber;
info+="\n Network Country ISO:"+networkCountryISO;
info+="\n SIM Country ISO:"+SIMCountryISO;
info+="\n Software Version:"+softwareVersion;
info+="\n Voice Mail Number:"+voiceMailNumber;
info+="\n Phone Network Type:"+strPhoneType;
info+="\n In Roaming?:"+isRoaming;

textView1.setText(info);
}
```

Xml file:Activity_main.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:layout_alignParentLeft="true"
```

```
    android:layout_alignParentTop="true"
    android:layout_marginLeft="38dp"
    android:layout_marginTop="30dp"
    android:text="Phone Details:" />

</RelativeLayout>
```

Manifest file

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

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

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

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.telephonymanager.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>
```

Output :



Phone Details:

IMEI Number:35914404895000
SubscriberID:35914404895000
SIM Serial
Number:89917320511173440189
Network Country ISO:in
SIM Country ISO:in
Software Version:01
Voice Mail Number:null
Phone Network Type:GSM
In Roaming? :false

Example on Call state

Java file:- MainActivity.java

```
package com.example.callstates;

import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.telephony.PhoneStateListener;
import android.telephony.TelephonyManager;
import android.view.Menu;
import android.widget.Toast;

public class MainActivity extends Activity {

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

        TelephonyManager telephonyManager =
                (TelephonyManager) getSystemService(Context.TELEPHONY_SERVICE);

        PhoneStateListener callStateListener = new PhoneStateListener() {
            public void onCallStateChanged(int state, String incomingNumber)
            {
                if(state==TelephonyManager.CALL_STATE_RINGING)
                {
                    Toast.makeText(getApplicationContext(),"Phone Is Riving",Toast.LENGTH_LONG).show();
                }
                if(state==TelephonyManager.CALL_STATE_OFFHOOK)
                {
                    Toast.makeText(getApplicationContext(),"Phone is Currently in A call",
                            Toast.LENGTH_LONG).show();
                }
                if(state==TelephonyManager.CALL_STATE_IDLE)
                {
                    Toast.makeText(getApplicationContext(),"phone is neither ringing nor in a call",
                            Toast.LENGTH_LONG).show();
                }
            };
            telephonyManager.listen(callStateListener,PhoneStateListener.LISTEN_CALL_STATE);
        }
    }

    @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;
    }
}
```

Xml file: activity_main.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" >

</RelativeLayout>
```

Manifest file

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

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

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

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.callstates.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>
```

Output :**Example on Call State Broadcast Receiver:****Java file: IncomingCallReceiver.java**

```
package com.example.callstatebroadcastreceiver;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.telephony.TelephonyManager;
import android.widget.Toast;

public class IncomingCallReceiver extends BroadcastReceiver{
    Context context;

    @Override
    public void onReceive(Context context, Intent intent){
        try{
            String state = intent.getStringExtra(TelephonyManager.EXTRA_STATE);

            if(state.equals(TelephonyManager.EXTRA_STATE_RINGING)){
                Toast.makeText(context, "Phone Is Ringing", Toast.LENGTH_LONG).show();
            }

            if(state.equals(TelephonyManager.EXTRA_STATE_OFFHOOK)){
                Toast.makeText(context, "Call Received", Toast.LENGTH_LONG).show();
            }

            if (state.equals(TelephonyManager.EXTRA_STATE_IDLE)){
                Toast.makeText(context, "Phone Is Idle", Toast.LENGTH_LONG).show();
            }
        } catch(Exception e){e.printStackTrace();}
    }
}
```

MainActivity.java:-

```
package com.example.callstatebroadcastreceiver;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

Xml file:Activity_main.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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />

</RelativeLayout>
```

Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.callstatebroadcastreceiver"
    android:versionCode="1"
    android:versionName="1.0" >
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

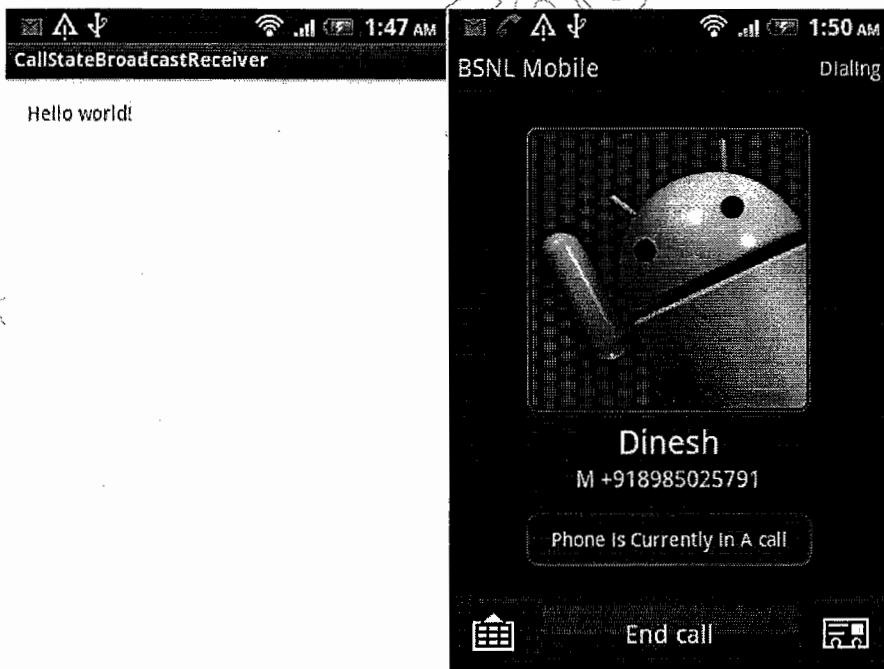
    <uses-permission android:name="android.permission.READ_PHONE_STATE" />
```

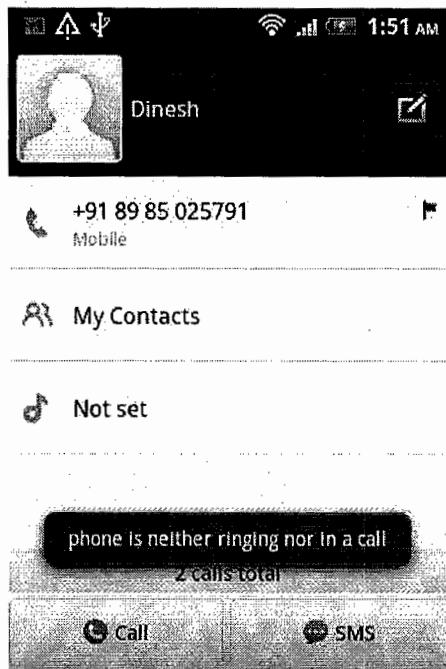
```
<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.callstatebroadcastreceiver.MainActivity"
        android:label="@string/app_name" >
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

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

    <receiver android:name=".IncommingCallReceiver" android:enabled="true">
        <intent-filter>
            <action android:name="android.intent.action.PHONE_STATE" />
        </intent-filter>
    </receiver>
</application>
</manifest>
```

Output :





Example on Accelerometer Example 1

Java file :- MainActivity.java

```
package com.example.sensor;

import android.app.Activity;
import android.graphics.Color;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.view.View;
import android.view.Window;
import android.view.WindowManager;
import android.widget.Toast;

public class MainActivity extends Activity implements SensorEventListener{
    private SensorManager sensorManager;
    private boolean color = false;
    private View view;
    private long lastUpdate;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        requestWindowFeature(Window.FEATURE_NO_TITLE);
        getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,
            WindowManager.LayoutParams.FLAG_FULLSCREEN);

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        view = findViewById(R.id.textView);
        view.setBackgroundColor(Color.GREEN);
    }
}
```

```
sensorManager = (SensorManager) getSystemService(SENSOR_SERVICE);
lastUpdate = System.currentTimeMillis();
}

@Override
public void onSensorChanged(SensorEvent event) {
    if (event.sensor.getType() == Sensor.TYPE_ACCELEROMETER) {
        getAccelerometer(event);
    }
}

private void getAccelerometer(SensorEvent event) {
    float[] values = event.values;
    // Movement
    float x = values[0];
    float y = values[1];
    float z = values[2];

    float accelerationSquareRoot = (x * x + y * y + z * z)
        / (SensorManager.GRAVITY_EARTH * SensorManager.GRAVITY_EARTH);

    long actualTime = System.currentTimeMillis();
    Toast.makeText(getApplicationContext(), String.valueOf(accelerationSquareRoot) +
        "+SensorManager.GRAVITY_EARTH, Toast.LENGTH_SHORT).show();

    if (accelerationSquareRoot >= 2) //it will be executed if you shuffle
    {
        if (actualTime - lastUpdate < 200){
            return;
        }
        lastUpdate = actualTime;
        if (color){
            view.setBackgroundColor(Color.GREEN);
        } else {
            view.setBackgroundColor(Color.RED);
        }
        color = !color;
    }
}

@Override
public void onAccuracyChanged(Sensor sensor, int accuracy) {
}
@Override
protected void onResume() {
    super.onResume();
    // register this class as a listener for the orientation and
    // accelerometer sensors
    sensorManager.registerListener(this,
        sensorManager.getDefaultSensor(Sensor.TYPE_ACCELEROMETER),
        SensorManager.SENSOR_DELAY_NORMAL);
}
```

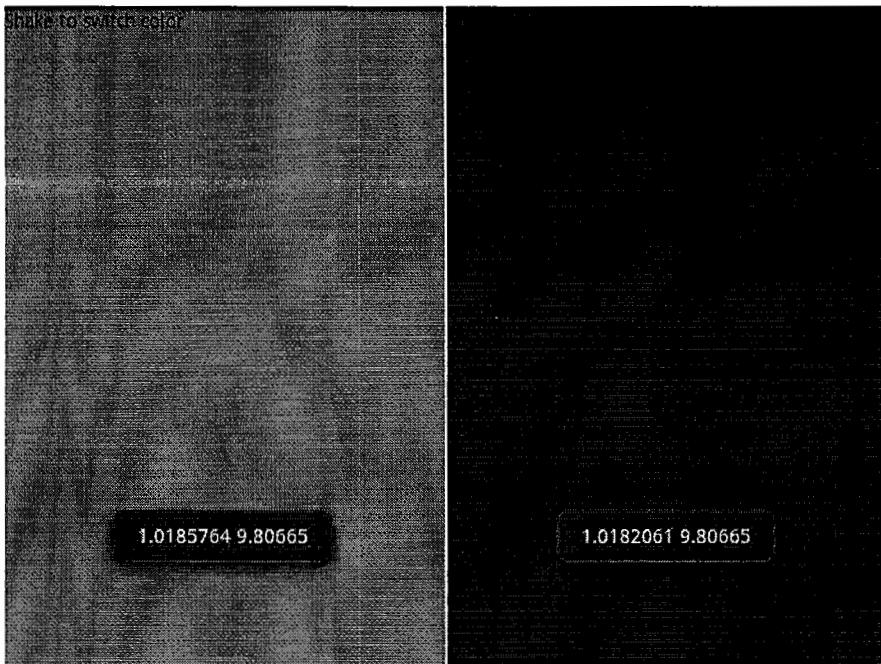
```
@Override  
protected void onPause() {  
    // unregister listener  
    super.onPause();  
    sensorManager.unregisterListener(this);  
}  
}
```

Xml :Activity_main.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"  
    tools:context=".MainActivity" >  
  
    <TextView  
        android:id="@+id/textView"  
        android:layout_width="match_parent"  
        android:layout_height="match_parent"  
        android:text="Shake to switch color" />  
  
</RelativeLayout>
```

Manifest file

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.sensor"  
    android:versionCode="1"  
    android:versionName="1.0">  
  
    <uses-sdk  
        android:minSdkVersion="8"  
        android:targetSdkVersion="16" />  
  
    <application  
        android:allowBackup="true"  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name"  
        android:theme="@style/AppTheme" >  
        <activity  
            android:name="com.example.sensor.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>
```

Output**Example ON Accelerometer Example 2****Java file :- MainAccelerometer.java**

```
package com.androidexample.accelerometerexample;
public interface AccelerometerListener {
    public void onAccelerationChanged(float x, float y, float z);
    public void onShake(float force);
}
package com.androidexample.accelerometerexample;

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

public class MainAccelerometer extends Activity implements AccelerometerListener{

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

        // Check onResume Method to start accelerometer listener
    }

    public void onAccelerationChanged(float x, float y, float z) {

    }
    public void onShake(float force) {
```

```
        Toast.makeText(getApplicationContext(), "Motion detected",
        Toast.LENGTH_LONG).show();

    }

    @Override
    public void onResume() {
        super.onResume();
        Toast.makeText(getApplicationContext(), "onResume Accelerometer Started",
                Toast.LENGTH_LONG).show();

        //Check device supported Accelerometer senssor or not
        if (AccelerometerManager.isSupported(this)) {

            //Start Accelerometer Listening
            AccelerometerManager.startListening(this);
        }
    }

    @Override
    public void onStop() {
        super.onStop();

        //Check device supported Accelerometer senssor or not
        if (AccelerometerManager.isListening()) {

            //Start Accelerometer Listening
            AccelerometerManager.stopListening();

            Toast.makeText(getApplicationContext(), "onStop Accelerometer Stoped",
                    Toast.LENGTH_LONG).show();
        }
    }

    @Override
    public void onDestroy() {
        super.onDestroy();
        Log.i("Sensor", "Service distroy");

        //Check device supported Accelerometer senssor or not
        if (AccelerometerManager.isListening()) {

            //Start Accelerometer Listening
            AccelerometerManager.stopListening();

            Toast.makeText(getApplicationContext(), "onDestroy Accelerometer Stoped",
                    Toast.LENGTH_LONG).show();
        }
    }
}
```

AccelerometerManager.java

```
package com.androidexample.accelerometerexample;

import java.util.List;
import android.content.Context;
import android.hardware.Sensor;
import android.hardware.SensorEvent;
import android.hardware.SensorEventListener;
import android.hardware.SensorManager;
import android.widget.Toast;

public class AccelerometerManager {

    private static Context aContext=null;

    /** Accuracy configuration */
    private static float threshold = 15.0f;
    private static int interval = 200;

    private static Sensor sensor;
    private static SensorManager sensorManager;
    // you could use an OrientationListener array instead
    // if you plans to use more than one listener
    private static AccelerometerListener listener;

    /** indicates whether or not Accelerometer Sensor is supported */
    private static Boolean supported;
    /** indicates whether or not Accelerometer Sensor is running */
    private static boolean running = false;

    /**
     * Returns true if the manager is listening to orientation changes
     */
    public static boolean isListening() {
        return running;
    }

    /**
     * Unregisters listeners
     */
    public static void stopListening() {
        running = false;
        try {
            if (sensorManager != null && sensorEventListener != null) {
                sensorManager.unregisterListener(sensorEventListener);
            }
        } catch (Exception e) {}
    }

    /**
     * Returns true if at least one Accelerometer sensor is available
     */
    public static boolean isSupported(Context context) {
        aContext = context;
        if (supported == null) {
```

```
if (aContext != null) {  
  
    sensorManager = (SensorManager) aContext.  
        getSystemService(Context.SENSOR_SERVICE);  
  
    // Get all sensors in device  
    List<Sensor> sensors = sensorManager.getSensorList(  
        Sensor.TYPE_ACCELEROMETER);  
  
    supported = new Boolean(sensors.size() > 0);  
  
}  
  
} else {  
    supported = Boolean.FALSE;  
}  
}  
}  
return supported;  
}  
  
/**  
 * Configure the listener for shaking  
 * @param threshold  
 *      minimum acceleration variation for considering shaking  
 * @param interval  
 *      minimum interval between to shake events  
 */  
public static void configure(int threshold, int interval) {  
    AccelerometerManager.threshold = threshold;  
    AccelerometerManager.interval = interval;  
}  
  
/**  
 * Registers a listener and start listening  
 * @param accelerometerListener  
 *      callback for accelerometer events  
 */  
public static void startListening( AccelerometerListener accelerometerListener )  
{  
  
    sensorManager = (SensorManager) aContext.  
        getSystemService(Context.SENSOR_SERVICE);  
  
    // Take all sensors in device  
    List<Sensor> sensors = sensorManager.getSensorList(  
        Sensor.TYPE_ACCELEROMETER);  
  
    if (sensors.size() > 0) {  
  
        sensor = sensors.get(0);  
  
        // Register Accelerometer Listener  
        running = sensorManager.registerListener(  
            sensorEventListener, sensor,  
            SensorManager.SENSOR_DELAY_GAME);  
    }  
}
```

```
        listener = accelerometerListener;
    }

}

/***
 * Configures threshold and interval
 * And registers a listener and start listening
 * @param accelerometerListener
 *      callback for accelerometer events
 * @param threshold
 *      minimum acceleration variation for considering shaking
 * @param interval
 *      minimum interval between to shake events
 */
public static void startListening(
    AccelerometerListener accelerometerListener,
    int threshold, int interval) {
    configure(threshold, interval);
    startListening(accelerometerListener);
}

/***
 * The listener that listen to events from the accelerometer.listener
 */
private static SensorEventListener sensorEventListener =
    new SensorEventListener() {

    private long now = 0;
    private long timeDiff = 0;
    private long lastUpdate = 0;
    private long lastShake = 0;

    private float x = 0;
    private float y = 0;
    private float z = 0;
    private float lastX = 0;
    private float lastY = 0;
    private float lastZ = 0;
    private float force = 0;

    public void onAccuracyChanged(Sensor sensor, int accuracy) {}

    public void onSensorChanged(SensorEvent event) {
        // use the event timestamp as reference
        // so the manager precision won't depends
        // on the AccelerometerListener implementation
        // processing time
        now = event.timestamp;

        x = event.values[0];
        y = event.values[1];
        z = event.values[2];

        // if not interesting in shake events
        // just remove the whole if then else block
    }
}
```

```
if (lastUpdate == 0) {
    lastUpdate = now;
    lastShake = now;
    lastX = x;
    lastY = y;
    lastZ = z;
    Toast.makeText(getApplicationContext(),"No Motion detected",Toast.LENGTH_SHORT).show();
}

} else {
    timeDiff = now - lastUpdate;

    if (timeDiff > 0) {

        /*force = Math.abs(x + y + z - lastX - lastY - lastZ)
         / timeDiff;*/
        force = Math.abs(x + y + z - lastX - lastY - lastZ);

        if (Float.compare(force, threshold) > 0 ) {
            //Toast.makeText(getApplicationContext(), (now-lastShake)+" >= "+interval,
            1000).show();
            if (now - lastShake >= interval) {

                // trigger shake event
                listener.onShake(force);
            }
            else
            {
                Toast.makeText(getApplicationContext(),"No Motion detected",Toast.LENGTH_SHORT).show();
            }
            lastShake = now;
        }
        lastX = x;
        lastY = y;
        lastZ = z;
        lastUpdate = now;
    }
    else
    {
        Toast.makeText(getApplicationContext(),"No Motion detected",Toast.LENGTH_SHORT).show();
    }
}
// trigger change event
listener.onAccelerationChanged(x, y, z);
};

}
```

Xml :-Accelerometer_example_main.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"
```

```
tools:context=".MainAccelerometer" >

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_centerVertical="true"
    android:text="Shake / Tilt Your Phone To Get Accelerometer Motion Alerts" />

</RelativeLayout>
```

Manifest file

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

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="10" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.androidexample.accelerometerexample.MainAccelerometer"
            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>
    <uses-permission android:name="android.permission.READ_PHONE_STATE"></uses-permission>
</manifest>
```

Output



Example On Sensors simple

Java file :- MainActivity.java

```
package com.example.sensorsimple;
import android.app.Activity;
import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;
import android.hardware.SensorManager;
import android.hardware.SensorEventListener;
import android.hardware.SensorEvent;
import android.hardware.Sensor;
import java.util.List;
public class MainActivity extends Activity {
    SensorManager sm = null;
    TextView accText = null;
    List list;
    /* This responds to sensor events */
    SensorEventListener sel = new SensorEventListener(){
        public void onAccuracyChanged(Sensor sensor, int accuracy) {
            /* Isn't required for this example */
        }
        public void onSensorChanged(SensorEvent event) {
            /* Write the accelerometer values to the TextView */
            float[] values = event.values;
            accText.setText("x: "+values[0]+"\ny: "+values[1]+"\nz: "+values[2]);
        }
    };
    /* Called when the activity is first created.*/
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
    }
}
```

```
setContentView(R.layout.activity_main);

/* Get a SensorManager instance */
sm = (SensorManager) getSystemService(SENSOR_SERVICE);

/* This corresponds to a TextView element in main.xml with android:id="@+id/accText" */
accText = (TextView) findViewById(R.id.textView1);

/* Get list of accelerometers */
list = sm.getSensorList(Sensor.TYPE_ACCELEROMETER);

/* If there are any accelerometers register a listener to the first else
   print a little error message */
if(list.size()>0){
    sm.registerListener(sel, (Sensor) list.get(0), SensorManager.SENSOR_DELAY_NORMAL);
} else{
    Toast.makeText(getApplicationContext(), "Error: No Accelerometer.", Toast.LENGTH_LONG);
}

@Override
protected void onStop() {
    /* Always a good idea to unregister, disconnect, close, etc things */
    if(list.size()>0){
        /* This actually unregisters a listener for all sensors, but it can be done
           on a sensor by sensor basis */
        sm.unregisterListener(sel);
    }
    super.onStop();
}

}
```

Xml :-Activity_main.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"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="92dp"
        android:layout_marginTop="114dp"
        android:text="TextView" />

</RelativeLayout>
```

Manifest file

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

```
package="com.example.sensorsimple"
android:versionCode="1"
android:versionName="1.0" >

<uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="16" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.example.sensorsimple.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>
```

Output :**Example on Noise alert****Java file :- NoiseAlert.java**

```
package com.androidexample.noisealert;

import com.androidexample.noisealert.R;
import android.app.Activity;
import android.content.Context;
import android.os.Bundle;
import android.os.Handler;
```

```
import android.os.PowerManager;
import android.util.Log;
import android.widget.TextView;
import android.widget.Toast;

public class NoiseAlert extends Activity {
    /* constants */
    private static final int POLL_INTERVAL = 300;

    /** running state */
    private boolean mRunning = false;

    /** config state */
    private int mThreshold;

    private PowerManager.WakeLock mWakeLock;

    private Handler mHandler = new Handler();

    /* References to view elements */
    private TextView mStatusView;
    private SoundLevelView mDisplay;

    /* sound data source */
    private SoundMeter mSensor;

    //***** Define runnable thread again and again detect noise *****

    private Runnable mSleepTask = new Runnable() {
        public void run() {
            //Log.i("Noise", "Runnable mSleepTask");
            start();
        }
    };

    //Create runnable thread to Monitor Voice
    private Runnable mPollTask = new Runnable() {
        public void run() {
            double amp = mSensor.getAmplitude();
            //Log.i("Noise", "Runnable mPollTask");
            updateDisplay("Monitoring Voice...", amp);

            if ((amp > mThreshold)) {
                callForHelp();
                //Log.i("Noise", "===== onCreate =====");
            }

            // Runnable(mPollTask) will again execute after POLL_INTERVAL
            mHandler.postDelayed(mPollTask, POLL_INTERVAL);
        }
    };
}
```

```

/** Called when the activity is first created. */
@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);

    // Defined SoundLevelView in main.xml file
    setContentView(R.layout.main);
    mStatusView = (TextView) findViewById(R.id.status);

    // Used to record voice
    mSensor = new SoundMeter();
    mDisplay = (SoundLevelView) findViewById(R.id.volume);

    PowerManager pm = (PowerManager) getSystemService(Context.POWER_SERVICE);
    mWakeLock = pm.newWakeLock(PowerManager.SCREEN_DIM_WAKE_LOCK, "NoiseAlert");
}

@Override
public void onResume() {
    super.onResume();
    //Log.i("Noise", "===== onResume =====");

    initializeApplicationConstants();
    mDisplay.setLevel(0, mThreshold);

    if (!mRunning) {
        mRunning = true;
        start();
    }
}

@Override
public void onStop() {
    super.onStop();
    // Log.i("Noise", "===== onStop =====");

    //Stop noise monitoring
    stop();
}

private void start() {
    //Log.i("Noise", "===== start =====");

    mSensor.start();
    if (!mWakeLock.isHeld()) {
        mWakeLock.acquire();
    }

    //Noise monitoring start
    // Runnable(mPollTask) will execute after POLL_INTERVAL
    mHandler.postDelayed(mPollTask, POLL_INTERVAL);
}

private void stop() {
    Log.i("Noise", "===== Stop Noise Monitoring=====");
    if (mWakeLock.isHeld()) {
}

```

```
mWakeLock.release();
}
mHandler.removeCallbacks(mSleepTask);
mHandler.removeCallbacks(mPollTask);
mSensor.stop();
mDisplay.setLevel(0,0);
updateDisplay("stopped...", 0.0);
mRunning = false;

}

private void initializeApplicationConstants() {
    // Set Noise Threshold
    mThreshold = 8;
}

private void updateDisplay(String status, double signalEMA) {
    mStatusView.setText(status);
    //
    mDisplay.setLevel((int)signalEMA, mThreshold);
}

private void callForHelp() {
    //stop();
    // Show alert when noise thersold crossed
    Toast.makeText(getApplicationContext(), "Noise Thersold Crossed, do here your stuff.",
        Toast.LENGTH_LONG).show();
}

};


```

SoundMeter.java

```
package com.androidexample.noisealert;

import java.io.IOException;
import android.media.MediaRecorder;

public class SoundMeter {
    // This file is used to record voice
    static final private double EMA_FILTER = 0.6;

    private MediaRecorder mRecorder = null;
    private double mEMA = 0.0;

    public void start() {
        if (mRecorder == null) {
            mRecorder = new MediaRecorder();
            mRecorder.set AudioSource(MediaRecorder.AudioSource.MIC);
```

```

mRecorder.setOutputFormat(MediaRecorder.OutputFormat.THREE_GPP);
mRecorder.setAudioEncoder(MediaRecorder.AudioEncoder.AMR_NB);
mRecorder.setOutputFile("/dev/null");

try {
    mRecorder.prepare();
} catch (IllegalStateException e) {
    // TODO Auto-generated catch block
    e.printStackTrace();
} catch (IOException e) {
    // TODO Auto-generated catch block
    e.printStackTrace();
}

mRecorder.start();
mEMA = 0.0;
}

}

public void stop() {
    if (mRecorder != null) {
        mRecorder.stop();
        mRecorder.release();
        mRecorder = null;
    }
}

public double getAmplitude() {
    if (mRecorder != null)
        return (mRecorder.getMaxAmplitude()/2700.0);
    else
        return 0;
}

public double getAmplitudeEMA() {
    double amp = getAmplitude();
    mEMA = EMA_FILTER * amp + (1.0 - EMA_FILTER) * mEMA;
    return mEMA;
}
}

```

SoundLevelView.java

```

package com.androidexample.noisealert;

import com.androidexample.noisealert.R;

import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.drawable.Drawable;
import android.util.AttributeSet;
import android.util.Log;
import android.view.View;

```

```
class SoundLevelView extends View {  
    private Drawable mGreen;  
    private Drawable mRed;  
    private Paint mBackgroundPaint;  
  
    private int mHeight;  
    private int mWidth;  
  
    private int mThreshold = 0;  
    private int mVol = 0;  
  
    public SoundLevelView(Context context, AttributeSet attrs) {  
        super(context, attrs);  
  
        mGreen = context.getResources().getDrawable(  
            R.drawable.greenbar);  
        mRed = context.getResources().getDrawable(  
            R.drawable.redbar);  
  
        mWidth = mGreen.getIntrinsicWidth();  
        setMinimumWidth(mWidth*10);  
  
        mHeight = mGreen.getIntrinsicHeight();  
        setMinimumHeight(mHeight);  
  
        //Used to paint canvas background color  
        mBackgroundPaint = new Paint();  
        mBackgroundPaint.setColor(Color.BLACK);  
    }  
  
    public void setLevel(int volume, int threshold) {  
        if (volume == mVol && threshold == mThreshold) return;  
        mVol = volume;  
        mThreshold = threshold;  
  
        // invalidate Call onDraw method and draw voice points  
        invalidate();  
    }  
  
    @Override  
    public void onDraw(Canvas canvas) {  
  
        canvas.drawPaint(mBackgroundPaint);  
  
        for (int i=0; i<= mVol; i++) {  
            Drawable bar;  
            if (i<mThreshold)  
                bar = mGreen;  
            else  
                bar = mRed;  
  
            bar.setBounds((10-i)*mWidth, 0, (10-i+1)*mWidth, mHeight); //  
            bar.draw(canvas);  
        }  
    }  
}
```

Xml :- Main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical"
    >
    <TextView
        android:id="@+id/status"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:textSize="25sp"
        android:textStyle="bold"
        android:text="@string/stopped"
    />
    <RelativeLayout
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
    >
        <LinearLayout
            android:orientation="vertical"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_centerInParent="true"
        >
            <com.androidexample.noisealert.SoundLevelView
                android:id="@+id/volume"
                android:layout_width="230sp"
                android:layout_height="60sp"
            />
        </LinearLayout>
    </RelativeLayout>
</LinearLayout>
```

Manifest file

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.androidexample.noisealert"
    android:versionCode="1"
    android:versionName="1.0.0">

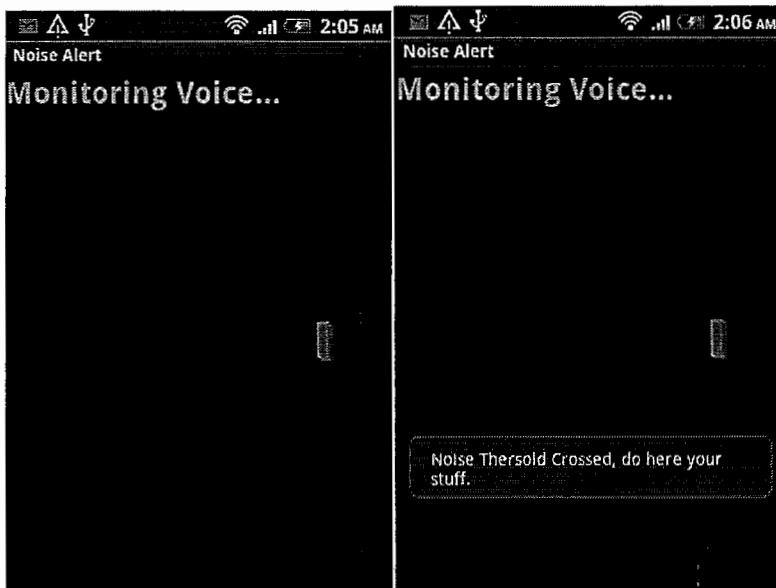
    <uses-permission android:name="android.permission.RECORD_AUDIO" />
    <uses-permission android:name="android.permission.WAKE_LOCK" />

    <application android:icon="@drawable/icon" android:label="@string/app_name">
        <activity android:name="com.androidexample.noisealert.NoiseAlert"
            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>
```

```
<!-- activity android:name="com.androidexample.noisealert.Preferences" />-->
</application>

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

</manifest>
```

Output**Example on Light Sensor :****Java file : .AndroidLightSensor.java**

```
package com.example.lightsensor;

import android.app.Activity;
import android.content.Context;
import android.hardware.Sensor;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.widget.TextView;
import com.example.lightsensor.R;

public class AndroidLightSensor extends Activity {

    SensorManager mySensorManager;
    Sensor myLightSensor;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
```

```
TextView textLightSensor = (TextView) findViewById(R.id.lightsensor);

mySensorManager = (SensorManager) getSystemService(Context.SENSOR_SERVICE);
myLightSensor = mySensorManager.getDefaultSensor(Sensor.TYPE_LIGHT);

if (myLightSensor == null){
    textLightSensor.setText("No Light Sensor!");
} else{
    textLightSensor.setText(myLightSensor.getName());
}
}
```

Xml ; main.xml:-

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

    <TextView
        android:id="@+id/lightsensor"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content" />

</LinearLayout>
```

Manifest file

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

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.lightsensor.AndroidLightSensor"
            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>
```

Output :



Example on Shared Preference

Example 1:-

First.Java:-

```
package com.database;

import android.app.Activity;
import android.content.Intent;
import android.content.SharedPreferences;
import android.content.SharedPreferences.Editor;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class First extends Activity {
    Button bt;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        //create the data base
        SharedPreferences shared=getSharedPreferences("shared", MODE_WORLD_WRITEABLE);

        //edit the data base
        Editor e=shared.edit();

        //store the data
        e.putString("key1", "welcome");
        e.putInt("key2", 10);
        e.putBoolean("key3", true);
        e.putFloat("key4", 10.1f);
        e.putLong("key5", 10000);

        //commit the data
        e.commit();
    }
}
```

```
bt=(Button)findViewById(R.id.bt);
bt.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        Intent intent=new Intent(First.this, Second.class);
        startActivity(intent);
    }
});
```

}

Second.java:-

```
package com.database;

import java.util.ArrayList;

import android.app.ListActivity;
import android.content.SharedPreferences;
import android.content.SharedPreferences.Editor;
import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.Button;

public class Second extends ListActivity {
    ArrayList list;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        list=new ArrayList();
        SharedPreferences shared=getSharedPreferences("shared", MODE_WORLD_READABLE);
        list.add(shared.getString("key1", "Nothing1"));
        list.add(shared.getInt("key2", 0));
        list.add(shared.getBoolean("key3", false));
        list.add(shared.getFloat("key4", 0));
        list.add(shared.getLong("key5", 0));
        list.add(shared.getString("key6", "NOTHING"));
        setListAdapter(new ArrayAdapter(this, android.R.layout.simple_list_item_1, list));
    }
}
```

Main.xml:-

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

```
<TextView  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:text="Shared Preferences Demo"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:textStyle="bold"  
/>  
  
<Button android:id="@+id/bt"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:text="Second"  
    android:textColor="#aa0000"  
    android:gravity="center"  
    android:textSize="20dp"  
    android:layout_gravity="center"  
    android:layout_marginTop="30dp"/>  
  
</LinearLayout>
```

AndroidManifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.database"  
    android:versionCode="1"  
    android:versionName="1.0">  
  
    <uses-sdk android:minSdkVersion="10" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name">  
        <activity android:name=".Second" />  
        <activity  
            android:name=".First"  
            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>
```

OutPut:-**Example 2:-****Example On Internal Storage Of Device****DataBaseDemo2.java**

```
package com.database;

import java.io.BufferedReader;
import java.io.BufferedWriter;
import java.io.InputStreamReader;
import java.io.OutputStreamWriter;

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

public class DataBaseDemo2 extends Activity {
    String line;
    StringBuffer sb;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        sb=new StringBuffer();

        try {
            //BufferedWriter is a character streams class to handle the character data. you can just write the
            strings, arrays or characters data directly to file.
            //An OutputStreamWriter is a bridge from character streams to byte stream
            //openFileOutput :- Creates the file if it doesn't already exist.
            BufferedWriter writer=new BufferedWriter(new
OutputStreamWriter(openFileOutput("myfile",MODE_WORLD_WRITEABLE)));
            writer.write("Android1"+'\n');
        }
    }
}
```

```
writer.write("Android2"+"\n");
writer.write("Android3"+"\n");
writer.write("Android4"+"\n");
writer.write("Android5"+"\n");
writer.close();

//reading the file
BufferedReader reader=new BufferedReader(new
InputStreamReader(openFileInput("myfile")));
while ((line=reader.readLine())!=null) {
    sb.append(line+"\n");
}

TextView tv=(TextView)findViewById(R.id.text);
tv.setText(sb.toString());
} catch (Exception e) {
    // TODO: handle exception
    e.printStackTrace();
}
}
```

main.xml:-

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:id="@+id/text"
        android:textColor="#0000EE"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />
</LinearLayout>
```

AndroidManifest.xml:-

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
```

```
    android:name=".DataBaseDemo2">
<intent-filter>
    <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

Output:-



Example On Sqlite Database

DataBaseDemo3.java:-

```
package com.daatabase;
import java.util.ArrayList;
import android.app.ListActivity;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.widget.ArrayAdapter;

public class DataBaseDemo3 extends ListActivity {
    ArrayList list;
    SQLiteDatabase db;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        list=new ArrayList();
```

```

try {
    db=openOrCreateDatabase("empdb", MODE_WORLD_WRITEABLE, null);

    //create the taable
    db.execSQL("create table emp(eno number(10),ename varchar2(20),esal
number(10))");

    //insert the data
    db.execSQL("insert into emp values(101,'Sri',5000)");
    db.execSQL("insert into emp values(102,'Rakesh',6000)");
    db.execSQL("insert into emp values(103,'Hari',7000)");
    db.execSQL("insert into emp values(104,'Rajesh',8000)");
    db.execSQL("insert into emp values(105,'Priya',9000)");
    db.execSQL("insert into emp values(106,'Deepthi',10000)");

    //update the data
    db.execSQL("update emp set esal=esal+500 where esal<10000");

    //delete the data
    db.execSQL("delete from emp where esal=10000");

    //retive the data
    // rawQuery :- Runs the provided SQL and returns a Cursor over the result set.
    Cursor c=db.rawQuery("select * from emp", null);
    while (c.moveToNext()) {
        list.add(c.getInt(0)+":"+c.getString(1)+":"+c.getInt(2));
    }
}

setListAdapter(new ArrayAdapter(this, android.R.layout.simple_list_item_1, list));

} catch (Exception e) {
    // TODO: handle exception
    e.printStackTrace();
}

```

main.xml:-

```

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

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Auto Complete Text View Demo"
        android:textColor="#aa0000"
        android:gravity="center"
        android:textSize="20dp"
        android:textStyle="bold" />

    <AutoCompleteTextView android:id="@+id/auto"
        android:layout_width="fill_parent"

```

```
    android:layout_height="wrap_content"
    android:completionThreshold="1"/>
</LinearLayout>
```

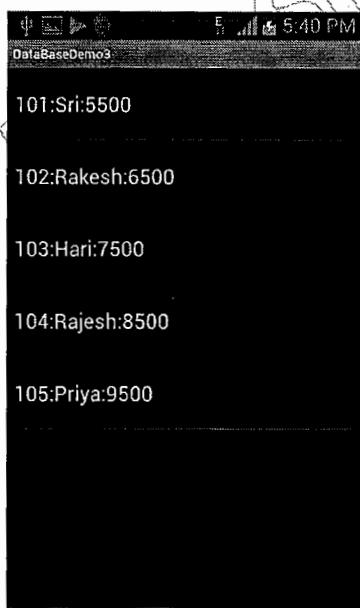
AndroidManifest.xml:-

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

    <uses-sdk android:minSdkVersion="10" />

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name">
        <activity
            android:label="@string/app_name"
            android:name=".DataBaseDemo3">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Output:-



Example on Image Saving SD card:-

MainActivity.java:

```
package com.example.imagesdcard;

import java.io.File;
import java.io.FileOutputStream;
import java.util.Random;

import android.app.Activity;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.os.Bundle;
import android.os.Environment;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.Toast;

public class MainActivity extends Activity {
    Button saveImage, showImage;
    ImageView image;
    Bitmap largelIcon;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        saveImage = (Button) findViewById(R.id.button1);

        showImage = (Button) findViewById(R.id.button2);
        image = (ImageView) findViewById(R.id.imageView2);
        largelIcon = BitmapFactory.decodeResource(getResources(), R.drawable.light);
        saveImage.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                saveAndCompressImage(largelIcon);
            }
        });
        showImage.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                readTheImage();
            }
        });
    }

    protected void readTheImage() {
        // TODO Auto-generated method stub
        String imageInSD = Environment.
            getExternalStorageDirectory().
```

```
getAbsolutePath() +"/saved_images/Image-1.jpg";
//take file and convert to image
    Bitmap bitmap = BitmapFactory.decodeFile(imageInSD);
    //setting bitmap to imageview
    image.setImageBitmap(bitmap);
}

protected void saveAndCompressImage(Bitmap finalBitmap){
    String root = Environment.getExternalStorageDirectory()
        .toString();
    File myDir = new File(root + "/saved_images");
    myDir.mkdirs();
    //creating image name
    String fname = "Image-" + 1 + ".jpg";
    //creating image file
    File file = new File (myDir, fname);
    //taking path of image
    String filePath = file.getAbsolutePath();
    //checking image exist or not
    if (file.exists ()) file.delete ();
    try {
        FileOutputStream out = new FileOutputStream(file);
        finalBitmap.compress(Bitmap.CompressFormat.JPEG,
            90, out);
        out.flush();
        out.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
    Toast.makeText(getApplicationContext(),
        "Image saved" + filePath, Toast.LENGTH_LONG).show();
    //return filePath;
}
```

Main.xml:-

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:layout_margin="20dp">

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="fill_parent"
        android:layout_height="200dp"
        android:src="@drawable/light"
        android:layout_marginBottom="10dp"/>

    <Button
        android:id="@+id/button1"
        android:layout_width="150dp"
        android:layout_height="wrap_content"
        android:layout_below="@+id/imageView1"
        android:text="SaveImage" />
```

```
<Button  
    android:id="@+id/button2"  
    android:layout_width="150dp"  
    android:layout_height="wrap_content"  
    android:layout_below="@+id/imageView1"  
    android:layout_toRightOf="@+id/button1"  
    android:text="ShowImage" />  
<ImageView  
    android:id="@+id/imageView2"  
    android:layout_width="fill_parent"  
    android:layout_height="200dp"  
    android:layout_marginTop="10dp"  
    android:layout_below="@+id/button1"  
    />  
</RelativeLayout>
```

AndroidManifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.imagesdcard"  
    android:versionCode="1"  
    android:versionName="1.0">  
  
    <uses-sdk  
        android:minSdkVersion="8"  
        android:targetSdkVersion="18" />  
    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>  
    <application  
        android:allowBackup="true"  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name"  
        android:theme="@style/AppTheme" >  
        <activity  
            android:name="com.example.imagesdcard.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>
```



Example On Sqlite Operation

MainActivity.java:-

```
package com.hmkcode.android;

import java.util.List;

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

//http://hmkcode.com/android-simple-sqlite-database-tutorial/
public class MainActivity extends Activity {

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

        MySQLiteHelper db = new MySQLiteHelper(this);

        /**
         * CRUD Operations
         */
        // add Books
        db.addBook(new Book("Android Application Development Cookbook", "Wei Meng Lee"));
        db.addBook(new Book("Android Programming: The Big Nerd Ranch Guide", "Bill Phillips and Brian
Hardy"));
        db.addBook(new Book("Learn Android App Development", "Wallace Jackson"));

        // get all books
        List<Book> list = db.getAllBooks();

        // delete one book
        db.deleteBook(list.get(0));

        // get all books
    }
}
```

```
        db.getAllBooks();  
  
    }  
}
```

MySQLiteHelper.java

```
package com.hmkcode.android;  
  
import java.util.LinkedList;  
import java.util.List;  
  
import android.content.ContentValues;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
import android.util.Log;  
  
public class MySQLiteHelper extends SQLiteOpenHelper {  
  
    // Database Version  
    private static final int DATABASE_VERSION = 1;  
    // Database Name  
    private static final String DATABASE_NAME = "BookDB";  
  
    public MySQLiteHelper(Context context) {  
        super(context, DATABASE_NAME, null, DATABASE_VERSION);  
    }  
  
    @Override  
    public void onCreate(SQLiteDatabase db) {  
        // SQL statement to create book table  
        String CREATE_BOOK_TABLE = "CREATE TABLE books (" +  
                "id INTEGER PRIMARY KEY AUTOINCREMENT, "+  
                "title TEXT, "+  
                "author TEXT )";  
  
        // create books table  
        db.execSQL(CREATE_BOOK_TABLE);  
    }  
  
    @Override  
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {  
        // Drop older books table if existed  
        db.execSQL("DROP TABLE IF EXISTS books");  
  
        // create fresh books table  
        this.onCreate(db);  
    }  
    //-----  
  
    /**  
     * CRUD operations (create "add", read "get", update, delete) book + get all books + delete all books  
     */
```

```

// Books table name
private static final String TABLE_BOOKS = "books";

// Books Table Columns names
private static final String KEY_ID = "id";
private static final String KEY_TITLE = "title";
private static final String KEY_AUTHOR = "author";

private static final String[] COLUMNS = {KEY_ID,KEY_TITLE,KEY_AUTHOR};

public void addBook(Book book){
    Log.d("addBook", book.toString());
    // 1. get reference to writable DB
    SQLiteDatabase db = this.getWritableDatabase();

    // 2. create ContentValues to add key "column"/value
    ContentValues values = new ContentValues();
    values.put(KEY_TITLE, book.getTitle()); // get title
    values.put(KEY_AUTHOR, book.getAuthor()); // get author

    // 3. insert
    db.insert(TABLE_BOOKS, // table
              null, //nullColumnHack
              values); // key/value -> keys = column names / values = column values

    // 4. close
    db.close();
}

public Book getBook(int id){

    // 1. get reference to readable DB
    SQLiteDatabase db = this.getReadableDatabase();

    // 2. build query
    Cursor cursor =
        db.query(TABLE_BOOKS, // a. table
                 COLUMNS, // b. column names
                 " id = ? ", // c. selections
                 new String[] { String.valueOf(id) }, // d. selections args
                 null, // e. group by
                 null, // f. having
                 null, // g. order by
                 null); // h. limit

    // 3. if we got results get the first one
    if (cursor != null)
        cursor.moveToFirst();

    // 4. build book object
    Book book = new Book();
    book.setId(Integer.parseInt(cursor.getString(0)));
    book.setTitle(cursor.getString(1));
    book.setAuthor(cursor.getString(2));

    Log.d("getBook("+id+")", book.toString());
}

```

```
// 5. return book
return book;
}

// Get All Books
public List<Book> getAllBooks() {
List<Book> books = new LinkedList<Book>();

// 1. build the query
String query = "SELECT * FROM " + TABLE_BOOKS;

// 2. get reference to writable DB
SQLiteDatabase db = this.getWritableDatabase();
Cursor cursor = db.rawQuery(query, null);

// 3. go over each row, build book and add it to list
Book book = null;
if(cursor.moveToFirst()) {
do {
book = new Book();
book.setId(Integer.parseInt(cursor.getString(0)));
book.setTitle(cursor.getString(1));
book.setAuthor(cursor.getString(2));

// Add book to books
books.add(book);
} while (cursor.moveToNext());
}

Log.d("getAllBooks()", books.toString());

// return books
return books;
}

// Updating single book
public int updateBook(Book book) {
// 1. get reference to writable DB
SQLiteDatabase db = this.getWritableDatabase();

// 2. create ContentValues to add key "column"/value
ContentValues values = new ContentValues();
values.put("title", book.getTitle()); // get title
values.put("author", book.getAuthor()); // get author

// 3. updating row
int i = db.update(TABLE_BOOKS, //table
values, // column/value
KEY_ID+" = ?", // selections
new String[] { String.valueOf(book.getId()) }); //selection args

// 4. close
db.close();

return i;
}
```

```
}

// Deleting single book
public void deleteBook(Book book) {

    // 1. get reference to writable DB
    SQLiteDatabase db = this.getWritableDatabase();

    // 2. delete
    db.delete(TABLE_BOOKS,
              KEY_ID + " = ?",
              new String[] { String.valueOf(book.getId()) });

    // 3. close
    db.close();

    Log.d("deleteBook", book.toString());
}

}
```

Book.java:-

```
package com.hmkcode.android;

public class Book {

    private int id;
    private String title;
    private String author;

    public Book() {
    }

    public Book(String title, String author) {
        super();
        this.title = title;
        this.author = author;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public String getTitle() {
        return title;
    }

    public void setTitle(String title) {
        this.title = title;
    }

    public String getAuthor() {
        return author;
    }
}
```

```
public void setAuthor(String author) {  
    this.author = author;  
}  
  
@Override  
public String toString() {  
    return "Book [id=" + id + ", title=" + title + ", author=" + author  
           + "]";  
}  
  
}  
}
```

Main.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:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="@string/hello_world" />  
  
</RelativeLayout>
```

AndroidManifest.xml:-

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

Output:-**Example On Cursor Adapter:-****MainActivity.java:-**

```
package com.example.cursoradapter;  
  
import android.app.Activity;  
import android.content.Intent;  
import android.os.Bundle;  
import android.os.Handler;  
import android.util.Log;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.AdapterView.OnItemClickListener;  
import android.widget.ListView;  
  
public class MainActivity extends Activity {  
  
    private CustomCursorAdapter customAdapter;  
    private PersonDatabaseHelper databaseHelper;  
    private static final int ENTER_DATA_REQUEST_CODE = 1;  
    private ListView listView;  
  
    private static final String TAG = MainActivity.class.getSimpleName();  
  
    /**  
     * Called when the activity is first created.  
     */  
    @Override  
    public void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);
```

```
setContentView(R.layout.activity_main);

databaseHelper = new PersonDatabaseHelper(this);

listView = (ListView) findViewById(R.id.list_data);
listView.setOnItemClickListener(new OnItemClickListener() {

    @Override
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
        Log.d(TAG, "clicked on item: " + position);
    }
});

// Database query can be a time consuming task..
// so its safe to call database query in another thread
// Handler, will handle this stuff for you  class="wp-smiley">

new Handler().post(new Runnable() {
    @Override
    public void run() {
        customAdapter = new CustomCursorAdapter(MainActivity.this, databaseHelper.getAllData());
        listView.setAdapter(customAdapter);
    }
});
}

public void onClickEnterData(View btnAdd) {
    startActivityForResult(new Intent(this, EnterDataActivity.class), ENTER_DATA_REQUEST_CODE);
}

@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if(requestCode == ENTER_DATA_REQUEST_CODE && resultCode == RESULT_OK) {
        databaseHelper.insertData(data.getExtras().getString("tag_person_name"),
        data.getExtras().getString("tag_person_pin"));

        customAdapter.changeCursor(databaseHelper.getAllData());
    }
}
}
```

EnterDataActivity.java:-

```
package com.example.cursoradapter;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
```

```
public class EnterDataActivity extends Activity {  
  
    EditText editTextPersonName;  
    EditText editTextPersonPIN;  
  
    /**  
     * Called when the activity is first created.  
     */  
    @Override  
    public void onCreate(Bundle savedInstanceState) {  
  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.enter_data);  
  
        editTextPersonName = (EditText) findViewById(R.id.et_person_name);  
        editTextPersonPIN = (EditText) findViewById(R.id.et_person_pin);  
    }  
  
    public void onClickAdd (View btnAdd) {  
  
        String personName = editTextPersonName.getText().toString();  
        String personPIN = editTextPersonPIN.getText().toString();  
  
        if ( personName.length() != 0 && personPIN.length() != 0 ) {  
  
            Intent newIntent = getIntent();  
            newIntent.putExtra("tag_person_name", personName);  
            newIntent.putExtra("tag_person_pin", personPIN);  
  
            this.setResult(RESULT_OK, newIntent);  
  
            finish();  
        }  
    }  
}
```

PersonDatabaseHelper.java:-

```
package com.example.cursoradapter;  
  
import android.content.ContentValues;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
import android.util.Log;  
  
public class PersonDatabaseHelper {  
  
    private static final String TAG = PersonDatabaseHelper.class.getSimpleName();  
  
    // database configuration  
    // if you want the onUpgrade to run then change the database_version  
    private static final int DATABASE_VERSION = 1;  
    private static final String DATABASE_NAME = "mydatabase.db";  
  
    // table configuration
```

```
private static final String TABLE_NAME = "person_table";      // Table name
private static final String PERSON_TABLE_COLUMN_ID = "_id";   // a column named "_id" is required for
cursor
private static final String PERSON_TABLE_COLUMN_NAME = "person_name";
private static final String PERSON_TABLE_COLUMN_PIN = "person_pin";

private DatabaseOpenHelper openHelper;
private SQLiteDatabase database;

// this is a wrapper class. that means, from outside world, anyone will communicate with
PersonDatabaseHelper,
// but under the hood actually DatabaseOpenHelper class will perform database CRUD operations
public PersonDatabaseHelper(Context aContext) {

    openHelper = new DatabaseOpenHelper(aContext);
    database = openHelper.getWritableDatabase();
}

public void insertData (String aPersonName, String aPersonPin) {

    // we are using ContentValues to avoid sql format errors

    ContentValues contentValues = new ContentValues();

    contentValues.put(PERSON_TABLE_COLUMN_NAME,aPersonName);
    contentValues.put(PERSON_TABLE_COLUMN_PIN,aPersonPin);

    database.insert(TABLE_NAME, null, contentValues);
}

public Cursor getAllData () {

    String buildSQL = "SELECT * FROM " + TABLE_NAME;

    Log.d(TAG, "getAHDData SQL: " + buildSQL);

    return database.rawQuery(buildSQL, null);
}

// this DatabaseOpenHelper class will actually be used to perform database related operation

private class DatabaseOpenHelper extends SQLiteOpenHelper {

    public DatabaseOpenHelper(Context aContext) {
        super(aContext, DATABASE_NAME, null, DATABASE_VERSION);
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
        // Create your tables here

        String buildSQL = "CREATE TABLE " + TABLE_NAME + "(" + PERSON_TABLE_COLUMN_ID + " INTEGER
PRIMARY KEY, " +
                PERSON_TABLE_COLUMN_NAME + " TEXT, " + PERSON_TABLE_COLUMN_PIN + " TEXT )";

        Log.d(TAG, "onCreate SQL: " + buildSQL);
    }
}
```

```
        sqLiteDatabase.execSQL(buildSQL);
    }

    @Override
    public void onUpgrade(SQLiteDatabase sqLiteDatabase, int oldVersion, int newVersion) {
        // Database schema upgrade code goes here

        String buildSQL = "DROP TABLE IF EXISTS " + TABLE_NAME;

        Log.d(TAG, "onUpgrade SQL: " + buildSQL);

        sqLiteDatabase.execSQL(buildSQL);      // drop previous table

        onCreate(sqLiteDatabase);           // create the table from the beginning
    }
}
```

CustomCursorAdapter.java:-

```
package com.example.cursoradapter;

import android.content.Context;
import android.database.Cursor;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.CursorAdapter;
import android.widget.TextView;

public class CustomCursorAdapter extends CursorAdapter {

    public CustomCursorAdapter(Context context, Cursor c) {
        super(context, c);
        // TODO Auto-generated constructor stub
    }

    @Override
    public void bindView(View view, Context context, Cursor cursor) {
        // TODO Auto-generated method stub
        // here we are setting our data
        // that means, take the data from the cursor and put it in views

        TextView textViewPersonName = (TextView) view
                .findViewById(R.id.tv_person_name);
        textViewPersonName.setText(cursor.getString(cursor
                .getColumnIndex(cursor.getColumnName(1))));

        TextView textViewPersonPIN = (TextView) view
                .findViewById(R.id.tv_person_pin);
        textViewPersonPIN.setText(cursor.getString(cursor
                .getColumnIndex(cursor
                .getColumnName(2))));

    }

    @Override
    public View newView(Context context, Cursor cursor,
```

```
    ViewGroup parent) {
        // TODO Auto-generated method stub
        // when the view will be created for first time,
        // we need to tell the adapters, how each item will look
        LayoutInflater inflater = LayoutInflater.
            from(parent.getContext());
        View retView = inflater
            .inflate(R.layout.single_row_item,
                    parent, false);

        return retView;
    }
}
```

Activity_main.xml:-

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

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

    <ListView android:id="@+id/list_data"
        android:layout_height="match_parent"
        android:layout_width="match_parent"
        android:layout_weight="1"/>

    <Button android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="0"
        android:layout_marginTop="5dp"
        android:text="Enter Data"
        android:onClick="onClickEnterData"/>

</LinearLayout>
```

Enter_data.xml:-

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

    <EditText android:id="@+id/et_person_name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="5dp"
        android:singleLine="true"
        android:hint="Enter Name"
        android:inputType="textPersonName"
        android:imeOptions="actionNext"/>

    <EditText android:id="@+id/et_person_pin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```
    android:layout_marginTop="5dip"
    android:singleLine="true"
    android:hint="Enter PIN"
    android:inputType="numberDecimal"
    android:imeOptions="actionDone"/>

<Button android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="5dp"
        android:text="Add"
        android:onClick="onClickAdd"/>

</LinearLayout>
```

Single_row_item.xml:-

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

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

    <TextView android:id="@+id/tv_person_name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Sample Data"
        android:textSize="15sp"
        android:paddingBottom="5dp" />

    <TextView android:id="@+id/tv_person_pin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Sample Data 2"
        android:textSize="15sp"
        android:paddingBottom="5dp" />

</LinearLayout>
```

AndroidManifest.xml:-

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

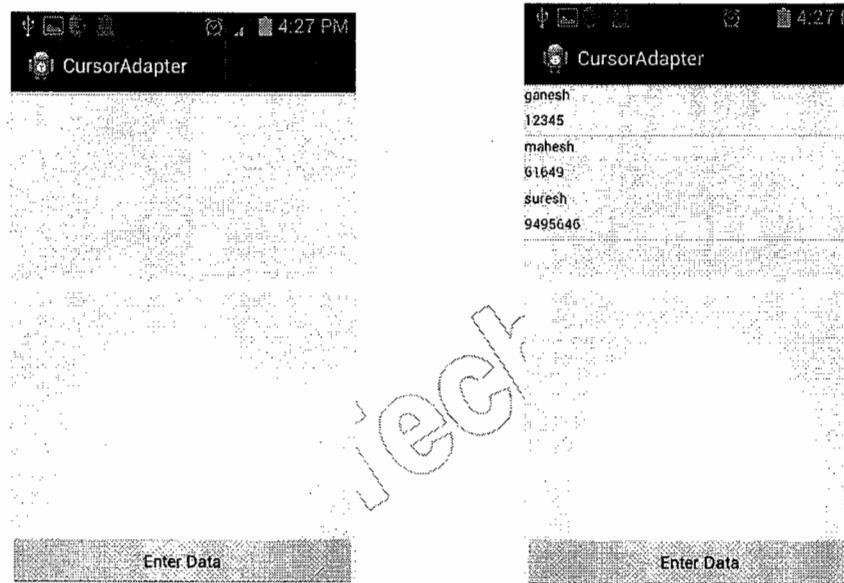
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

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

```
    android:name="com.example.cursoradapter.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.cursoradapter.EnterDataActivity"></activity>
</application>

</manifest>
```



ContentProvider:-

Example on Get Contact list of mobile

ContactListActivity.java:-

```
package com.samir;

import java.util.ArrayList;
import java.util.Collections;
import java.util.Comparator;
import java.util.List;

import android.app.Activity;
import android.app.AlertDialog;
import android.content.DialogInterface;
import android.content.Intent;
import android.database.Cursor;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.view.View;
```

```
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ListView;
import android.widget.Toast;

public class ContactListActivity extends Activity implements
    OnItemClickListener {

    private ListView listView;
    private List<ContactBean> list = new ArrayList<ContactBean>();

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

        listView = (ListView) findViewById(R.id.list);
        listView.setOnItemClickListener(this);

        Cursor phones = getContentResolver().query(
            ContactsContract.CommonDataKinds.Phone.CONTENT_URI, null, null,
            null, null);
        while (phones.moveToNext()) {

            String name = phones
                .getString(phones
                    .getColumnIndex(ContactsContract.CommonDataKinds.Phone.DISPLAY_NAME));

            String phoneNumber = phones
                .getString(phones
                    .getColumnIndex(ContactsContract.CommonDataKinds.Phone.NUMBER));

            ContactBean objContact = new ContactBean();
            objContact.setName(name);
            objContact.setPhoneNo(phoneNumber);
            list.add(objContact);
        }
        phones.close();

        ContactAdapter objAdapter = new ContactAdapter(
            ContactListActivity.this, R.layout.alluser_row, list);
        listView.setAdapter(objAdapter);

        if (null != list && list.size() != 0) {
            Collections.sort(list, new Comparator<ContactBean>() {

                @Override
                public int compare(ContactBean lhs, ContactBean rhs) {
                    return lhs.getName().compareTo(rhs.getName());
                }
            });
            AlertDialog alert = new AlertDialog.Builder(
                ContactListActivity.this).create();
            alert.setTitle("");
        }
    }
}
```

```
        alert.setMessage(list.size() + " Contact Found!!!");

        alert.setButton("OK", new DialogInterface.OnClickListener() {

            @Override
            public void onClick(DialogInterface dialog, int which) {
                dialog.dismiss();
            }
        });
        alert.show();

    } else {
        showToast("No Contact Found!!!");
    }
}

private void showToast(String msg) {
    Toast.makeText(this, msg, Toast.LENGTH_SHORT).show();
}

@Override
public void onItemClick(AdapterView<?> listview, View v, int position,
        long id) {
    ContactBean bean = (ContactBean) listview.getItemAtPosition(position);
    showCallDialog(bean.getName(), bean.getPhoneNo());
}

private void showCallDialog(String name, final String phoneNo) {
    AlertDialog alert = new AlertDialog.Builder(ContactListActivity.this)
        .create();
    alert.setTitle("Call?");
    alert.setMessage("Are you sure want to call " + name + " ?");

    alert.setButton("No", new DialogInterface.OnClickListener() {

        @Override
        public void onClick(DialogInterface dialog, int which) {
            dialog.dismiss();
        }
    });
    alert.setButton2("Yes", new DialogInterface.OnClickListener() {

        @Override
        public void onClick(DialogInterface dialog, int which) {
            String phoneNumber = "tel:" + phoneNo;
            Intent intent = new Intent(Intent.ACTION_CALL, Uri
                .parse(phoneNumber));
            startActivity(intent);
        }
    });
    alert.show();
}

}

ContactAdapter.java:-

package com.samir;
```

```
import java.util.List;

import android.app.Activity;
import android.content.Context;
import android.text.Html;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ArrayAdapter;
import android.widget.TextView;

public class ContactAdapter extends ArrayAdapter<ContactBean> {

    private Activity activity;
    private List<ContactBean> items;
    private int row;
    private ContactBean objBean;

    public ContactAdapter(Activity act, int row, List<ContactBean> items) {
        super(act, row, items);

        this.activity = act;
        this.row = row;
        this.items = items;
    }

    @Override
    public View getView(final int position, View convertView, ViewGroup parent) {
        View view = convertView;
        ViewHolder holder;
        if (view == null) {
            LayoutInflater inflater = (LayoutInflater) activity
                .getSystemService(Context.LAYOUT_INFLATER_SERVICE);
            view = inflater.inflate(row, null);

            holder = new ViewHolder();
            view.setTag(holder);
        } else {
            holder = (ViewHolder) view.getTag();
        }

        if ((items == null) || ((position + 1) > items.size()))
            return view;

        objBean = items.get(position);

        holder.tvname = (TextView) view.findViewById(R.id.tvname);
        holder.tvPhoneNo = (TextView) view.findViewById(R.id.tvphone);

        if (holder.tvname != null && null != objBean.getName()
            && objBean.getName().trim().length() > 0) {
            holder.tvname.setText(Html.fromHtml(objBean.getName()));
        }
        if (holder.tvPhoneNo != null && null != objBean.getPhoneNo()
            && objBean.getPhoneNo().trim().length() > 0) {
```

```
        holder.tvPhoneNo.setText(Html.fromHtml(objBean.getPhoneNo()));
    }
    return view;
}

public class ViewHolder {
    public TextView tvname, tvPhoneNo;
}

}
```

ContactBean.java:-

```
package com.samir;

public class ContactBean {
    private String name;
    private String phoneNo;

    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public String getPhoneNo() {
        return phoneNo;
    }
    public void setPhoneNo(String phoneNo) {
        this.phoneNo = phoneNo;
    }
}
```

Customprovider.java

```
package com.samir;

import android.content.ContentProvider;
import android.content.ContentValues;
import android.database.Cursor;
import android.net.Uri;

public class Customprovider extends ContentProvider{

    @Override
    public int delete(Uri uri, String selection, String[] selectionArgs) {
        // TODO Auto-generated method stub
        return 0;
    }

    @Override
    public String getType(Uri uri) {
        // TODO Auto-generated method stub
        return null;
    }
}
```

```
@Override  
public Uri insert(Uri uri, ContentValues values) {  
    // TODO Auto-generated method stub  
    return null;  
}  
  
@Override  
public boolean onCreate() {  
    // TODO Auto-generated method stub  
    return false;  
}  
  
@Override  
public Cursor query(Uri uri, String[] projection, String selection,  
    String[] selectionArgs, String sortOrder) {  
    // TODO Auto-generated method stub  
    return null;  
}  
  
@Override  
public int update(Uri uri, ContentValues values, String selection,  
    String[] selectionArgs) {  
    // TODO Auto-generated method stub  
    return 0;  
}  
}
```

Alluser_row.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:id="@+id/relativelayout"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:background="@drawable/bg_row"  
    android:orientation="vertical">  
  
<TextView  
    android:id="@+id/tvname"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginLeft="3dp"  
    android:layout_marginTop="3dp"  
    android:ellipsize="end"  
    android:maxLines="1"  
    android:text="Title"  
    android:textColor="#000000"  
    android:textSize="17dp"  
    android:textStyle="bold" >  
</TextView>  
  
<TextView  
    android:id="@+id/tvphone"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"
```

```
    android:layout_below="@+id/tvname"
    android:layout_marginLeft="3dp"
    android:layout_marginTop="10dp"
    android:ellipsize="end"
    android:maxLines="1"
    android:text="Phone no"
    android:textColor="#000000"
    android:textSize="14dp">
</TextView>

</RelativeLayout>
```

Main.xml:-

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

    <ListView
        android:id="@+id/list"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:cacheColorHint="#00000000" />

</RelativeLayout>
```

Android manifest.xml:-

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

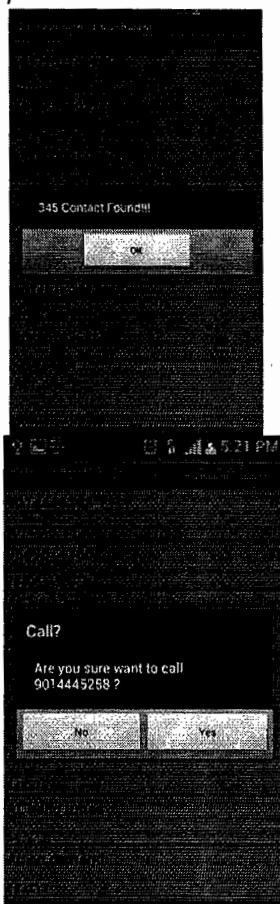
    <uses-sdk android:minSdkVersion="8" />

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

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:name=".ContactListActivity"
            android:label="@string/app_name"
            android:screenOrientation="portrait" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

```
</manifest>
```



2) Example Custom Content Provider

MainActivity.java:-

```
package com.example.contentproviderexample;

import android.app.Activity;
import android.content.ContentValues;
import android.database.Cursor;
import android.net.Uri;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends Activity {

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

```
@Override  
public boolean onCreateOptionsMenu(Menu menu) {  
    getMenuInflater().inflate(R.menu.main, menu);  
    return true;  
}  
  
public void onClickAddName(View view) {  
    // Add a new student record  
    ContentValues values = new ContentValues();  
  
    values.put(StudentsProvider.NAME,  
    ((EditText)findViewById(R.id.txtName)).getText().toString());  
  
    values.put(StudentsProvider.GRADE,  
    ((EditText)findViewById(R.id.txtGrade)).getText().toString());  
  
    Uri uri = getContentResolver().insert(  
    StudentsProvider.CONTENT_URI, values);  
  
    Toast.makeText(getApplicationContext(),  
    uri.toString(), Toast.LENGTH_LONG).show();  
}  
  
public void onClickRetrieveStudents(View view) {  
    // Retrieve student records  
    String URL = "content://com.example.provider.College/students";  
    Uri students = Uri.parse(URL);  
    Cursor c = managedQuery(students, null, null, null, "name");  
    if (c.moveToFirst()) {  
        do{  
            Toast.makeText(this,  
            c.getString(c.getColumnIndex(StudentsProvider._ID)) +  
            ", " + c.getString(c.getColumnIndex(StudentsProvider.NAME)) +  
            ", " + c.getString(c.getColumnIndex(StudentsProvider.GRADE)),  
            Toast.LENGTH_SHORT).show();  
        } while (c.moveToNext());  
    }  
}
```

StudentsProvider.java:-

```
package com.example.contentproviderexample;  
  
import java.util.HashMap;  
  
import android.content.ContentProvider;  
import android.content.ContentUris;  
import android.content.ContentValues;  
import android.content.Context;  
import android.content.UriMatcher;  
import android.database.Cursor;  
import android.database.SQLException;  
import android.database.sqlite.SQLiteDatabase;
```

```
import android.database.sqlite.SQLiteOpenHelper;
import android.database.sqlite.SQLiteQueryBuilder;
import android.net.Uri;
import android.text.TextUtils;

public class StudentsProvider extends ContentProvider {

    static final String PROVIDER_NAME = "com.example.provider.College";
    static final String URL = "content://" + PROVIDER_NAME + "/students";
    static final Uri CONTENT_URI = Uri.parse(URL);

    static final String _ID = "_id";
    static final String NAME = "name";
    static final String GRADE = "grade";

    private static HashMap<String, String> STUDENTS_PROJECTION_MAP;

    static final int STUDENTS = 1;
    static final int STUDENT_ID = 2;

    static final UriMatcher uriMatcher;
    static{
        uriMatcher = new UriMatcher(UriMatcher.NO_MATCH);
        uriMatcher.addURI(PROVIDER_NAME, "students", STUDENTS);
        uriMatcher.addURI(PROVIDER_NAME, "students/#", STUDENT_ID);
    }

    /**
     * Database specific constant declarations
     */
    private SQLiteDatabase db;
    static final String DATABASE_NAME = "College";
    static final String STUDENTS_TABLE_NAME = "students";
    static final int DATABASE_VERSION = 1;
    static final String CREATE_DB_TABLE =
        "CREATE TABLE " + STUDENTS_TABLE_NAME +
        "(" + "id INTEGER PRIMARY KEY AUTOINCREMENT, " +
        "name TEXT NOT NULL, " +
        "grade TEXT NOT NULL);";

    /**
     * Helper class that actually creates and manages
     * the provider's underlying data repository.
     */
    private static class DatabaseHelper extends SQLiteOpenHelper {
        DatabaseHelper(Context context){
            super(context, DATABASE_NAME, null, DATABASE_VERSION);
        }

        @Override
        public void onCreate(SQLiteDatabase db)
        {
            db.execSQL(CREATE_DB_TABLE);
        }

        @Override
        public void onUpgrade(SQLiteDatabase db, int oldVersion,
```

```
        int newVersion) {
    db.execSQL("DROP TABLE IF EXISTS " + STUDENTS_TABLE_NAME);
    onCreate(db);
}
}

@Override
public boolean onCreate() {
    Context context = getContext();
    DatabaseHelper dbHelper = new DatabaseHelper(context);
    /**
     * Create a write able database which will trigger its
     * creation if it doesn't already exist.
     */
    db = dbHelper.getWritableDatabase();
    return (db == null)? false:true;
}

@Override
public Uri insert(Uri uri, ContentValues values) {
    /**
     * Add a new student record
     */
    long rowID = db.insert(STUDENTS_TABLE_NAME, "", values);
    /**
     * If record is added successfully
     */
    if (rowID > 0)
    {
        Uri _uri = ContentUris.withAppendedId(CONTENT_URI, rowID);
        getContext().getContentResolver().notifyChange(_uri, null);
        return _uri;
    }
    throw new SQLException("Failed to add a record into " + uri);
}

@Override
public Cursor query(Uri uri, String[] projection, String selection,
                    String[] selectionArgs, String sortOrder) {

    SQLiteQueryBuilder qb = new SQLiteQueryBuilder();
    qb.setTables(STUDENTS_TABLE_NAME);

    switch (uriMatcher.match(uri)) {
    case STUDENTS:
        qb.setProjectionMap(STUDENTS_PROJECTION_MAP);
        break;
    case STUDENT_ID:
        qb.appendWhere("_ID + '=' + uri.getPathSegments().get(1));
        break;
    default:
        throw new IllegalArgumentException("Unknown URI " + uri);
    }
    if (sortOrder == null || sortOrder == ""){
        /**
         * By default sort on student names
         */
    }
}
```

```
        sortOrder = NAME;
    }
    Cursor c = qb.query(db,      projection,      selection, selectionArgs,
                        null, null, sortOrder);
    /**
     * register to watch a content URI for changes
     */
    c.setNotificationUri(getContext().getContentResolver(), uri);

    return c;
}
@Override
public int delete(Uri uri, String selection, String[] selectionArgs) {
    int count = 0;

    switch (uriMatcher.match(uri)){
    case STUDENTS:
        count = db.delete(STUDENTS_TABLE_NAME, selection, selectionArgs);
        break;
    case STUDENT_ID:
        String id = uri.getPathSegments().get(1);
        count = db.delete( STUDENTS_TABLE_NAME, _ID + " = " + id +
            (!TextUtils.isEmpty(selection) ? " AND (" +
                selection + ')' : ""), selectionArgs);
        break;
    default:
        throw new IllegalArgumentException("Unknown URI " + uri);
    }

    getContext().getContentResolver().notifyChange(uri, null);
    return count;
}

@Override
public int update(Uri uri, ContentValues values, String selection,
                  String[] selectionArgs) {
    int count = 0;

    switch (uriMatcher.match(uri)){
    case STUDENTS:
        count = db.update(STUDENTS_TABLE_NAME, values,
                         selection, selectionArgs);
        break;
    case STUDENT_ID:
        count = db.update(STUDENTS_TABLE_NAME, values, _ID +
            " = " + uri.getPathSegments().get(1) +
            (!TextUtils.isEmpty(selection) ? " AND (" +
                selection + ')' : ""), selectionArgs);
        break;
    default:
        throw new IllegalArgumentException("Unknown URI " + uri );
    }

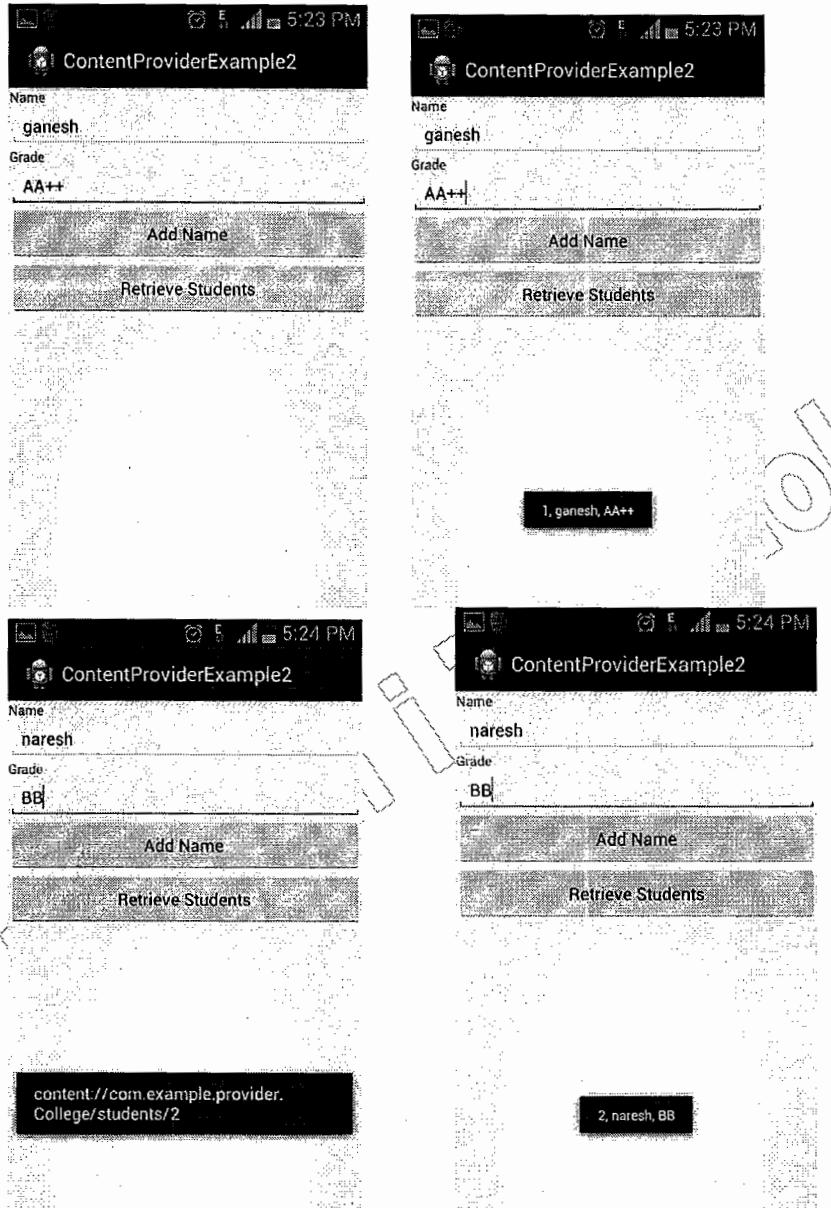
    getContext().getContentResolver().notifyChange(uri, null);
    return count;
}
```

```
@Override  
public String getType(Uri uri) {  
    switch (uriMatcher.match(uri)){  
        /**  
         * Get all student records  
         */  
        case STUDENTS:  
            return "vnd.android.cursor.dir/vnd.example.students";  
        /**  
         * Get a particular student  
         */  
        case STUDENT_ID:  
            return "vnd.android.cursor.item/vnd.example.students";  
        default:  
            throw new IllegalArgumentException("Unsupported URI: " + uri);  
    }  
}
```

Activity_main.xml:-

```
<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:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Name" />  
  
    <EditText  
        android:id="@+id/txtName"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content" />  
  
    <TextView  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Grade" />  
  
    <EditText  
        android:id="@+id/txtGrade"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content" />  
  
    <Button  
        android:id="@+id/btnAdd"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:onClick="onClickAddName"  
        android:text="Add Name" />  
  
    <Button  
        android:id="@+id/btnRetrieve"  
        android:layout_width="fill_parent"
```

```
        android:layout_height="wrap_content"
        android:onClick="onClickRetrieveStudents"
        android:text="Retrieve Students" />
</LinearLayout>
```



Android Threads:-

Example On Handler Messenger

ThreadHandlerAndroidExample.java

```
package com.androidexample.threadhandler;

import org.apache.http.client.HttpClient;
import org.apache.http.client.ResponseHandler;
import org.apache.http.client.methods.HttpGet;
import org.apache.http.impl.client.BasicResponseHandler;
import org.apache.http.impl.client.DefaultHttpClient;

import android.os.Bundle;
import android.os.Handler;
import android.os.Message;
import android.app.Activity;
import android.util.Log;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.Toast;

public class ThreadHandlerAndroidExample extends Activity {

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

        final Button GetServerData = (Button) findViewById(R.id.GetServerData);

        // On button click call this listener
        GetServerData.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                // ALERT MESSAGE
                Toast.makeText(getApplicationContext(),
                        "Please wait, connecting to server.",
                        Toast.LENGTH_SHORT).show();
                // Create Inner Thread Class
                Thread background = new Thread(new Runnable() {

                    private final HttpClient Client = new DefaultHttpClient();
                    private String URL = "http://androidexample.com/media/webservice/getPage.php";

                    // After call for background.start this run method call
                    public void run() {
                        try {

                            String SetServerString = "";
                            HttpGet httpget = new HttpGet(URL);
                            ResponseHandler<String> responseHandler = new BasicResponseHandler();
                            SetServerString = Client.execute(httpget,
                                    responseHandler);
                            threadMsg(SetServerString);
                        }
                    }
                });
                background.start();
            }
        });
    }
}
```

```
 } catch (Throwable t) {
    // just end the background thread
    Log.i("Animation", "Thread exception " + t);
}

private void threadMsg(String msg) {
    if (!msg.equals(null) && !msg.equals("")) {
        Message msgObj = handler.obtainMessage();
        Bundle b = new Bundle();
        b.putString("message", msg);
        msgObj.setData(b);
        handler.sendMessage(msgObj);
    }
}

// Define the Handler that receives messages from the
// thread and update the
// progress
private final Handler handler = new Handler() {
    public void handleMessage(Message msg) {

        String aResponse = msg.getData().getString(
            "message");

        if ((null != aResponse)) {
            // ALERT MESSAGE
            Toast.makeText(getApplicationContext(),
                "Server Response: " + aResponse, 5000)
                .show();
        } else {
            // ALERT MESSAGE
            Toast.makeText(getApplicationContext(),
                "Not Got Response From Server.",
                Toast.LENGTH_SHORT).show();
        }
    }
};

});

// Start Thread
background.start(); // After call start method thread called run
// Method
}
});

}

}

main.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"
```

```
tools:context=".ThreadHandler">

<Button android:id="@+id/GetServerData"
        android:text="Click To Get Server Data"
        android:cursorVisible="true"
        android:clickable="true"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
    />

</RelativeLayout>
```

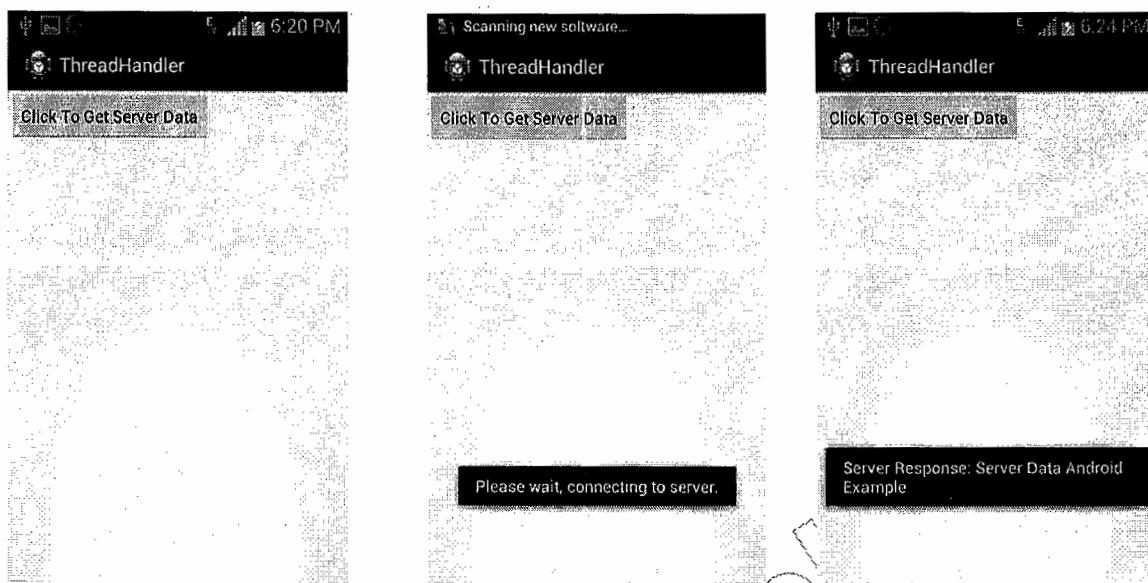
AndroidManifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.androidexample.threadhandler"
    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.androidexample.threadhandler.ThreadHandlerAndroidExample"
            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>
    <uses-permission android:name="android.permission.INTERNET"></uses-permission>
</manifest>
```

Output:-**Example On Handler PostDelayed with Splash Screen android****SplashScreen.java:-**

```

package com.android.splash;

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

public class SplashScreen extends Activity {
    //Splash screen timer
    private static int SPLASH_TIME_OUT = 3000;

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

        new Handler().postDelayed(new Runnable() {

            /*
             * Showing splash screen with a timer. This will be useful when you
             * want to show case your app logo / company
            */

            @Override
            public void run() {
                // This method will be executed once the timer is over
                // Start your app main activity
                Intent i = new Intent(SplashScreen.this, MainActivity.class);
                startActivity(i);
            }
        }, SPLASH_TIME_OUT);
    }
}

```

```
// close this activity  
finish();  
}  
, SPLASH_TIME_OUT);  
}  
}
```

MainActivity.java:-

```
package com.android.splash;  
  
import android.app.Activity;  
import android.os.Bundle;  
  
public class MainActivity extends Activity {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
  
        setContentView(R.layout.activity_main);  
    }  
}
```

Activity_main.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:background="#000000"  
    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">  
  
<LinearLayout  
    android:id="@+id/formLogin"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:layout_centerInParent="true"  
    android:orientation="vertical" >  
  
<TextView  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_margin="10dp"  
    android:text="Email"  
    android:textColor="#ffffff" />  
  
<EditText  
    android:id="@+id/txtEmail"
```

```
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:layout_marginBottom="20dp"
    android:layout_marginLeft="10dp"
    android:layout_marginRight="0dp" />

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:text="Password"
    android:textColor="#ffffff" />

<EditText
    android:id="@+id/txtPassword"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:layout_marginBottom="20dp"
    android:layout_marginLeft="10dp"
    android:layout_marginRight="0dp"
    android:password="true"/>

<Button
    android:id="@+id/btnLogin"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="10dp"
    android:layout_marginRight="10dp"
    android:text="Login" />
</LinearLayout>

</RelativeLayout>
```

Activity_splash.xml:-

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

    <ImageView
        android:id="@+id/imgLogo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:src="@drawable/wwe_logo" />

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_marginBottom="10dp"
        android:textSize="12dp"
        android:textColor="#454545"
        android:gravity="center_horizontal"
        android:layout_alignParentBottom="true"
        android:text="www.androidhive.info" />
```

```
</RelativeLayout>
```

AndroidManifest.xml:-

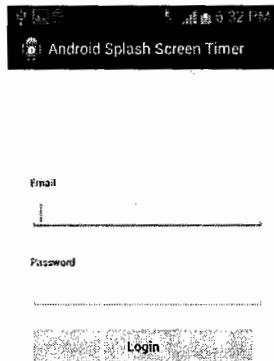
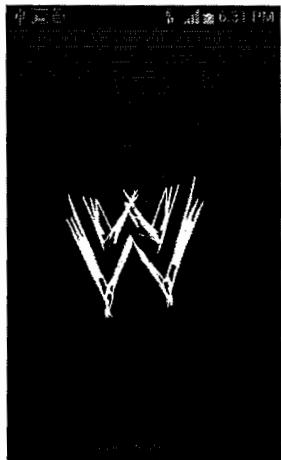
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.android.splash"
    android:versionCode="1"
    android:versionName="1.0">

    <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">
        <!-- Splash screen -->
        <activity
            android:name="com.android.splash.SplashScreen"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@android:style/Theme.Black.NoTitleBar">
            <!-- Main activity -->
            <activity
                android:name="com.android.splash.MainActivity"
                android:label="@string/app_name">
            </activity>

            <activity
                android:name="com.android.splash.HandlerPost"
                android:label="@string/app_name"
                android:screenOrientation="portrait"
                android:theme="@android:style/Theme.Black.NoTitleBar">
                <intent-filter>
                    <action android:name="android.intent.action.MAIN" />
                    <category android:name="android.intent.category.LAUNCHER" />
                </intent-filter>
            </activity>
        </application>

    </manifest>
```

Output:-

Example on Handler Post

HandlerPost.java

```
package com.android.splash;
import android.app.Activity;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.ProgressBar;
public class HandlerPost extends Activity {
    private Handler handler;
    private ProgressBar progressBar;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_handlerpost);
        handler = new Handler();
        progressBar = (ProgressBar) findViewById(R.id.progressBar1);
    }
    public void startProgress(View view) {
        new Thread(new Task()).start();
    }
    class Task implements Runnable {
        @Override
        public void run() {
            for (int i = 0; i <= 20; i++) {
                final int value = i;
                try {
                    Thread.sleep(1000);
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
                handler.post(new Runnable() {
                    @Override
                    public void run() {
                        // TODO Auto-generated method stub
                        progressBar.setProgress(value);
                    }
                });
            }
        }
    }
}
```

```
        });
    }
}
```

Activity_handlepost.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">

    <ProgressBar
        android:id="@+id/progressBar1"
        style="?android:attr/progressBarStyleHorizontal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:indeterminate="false"
        android:max="10"
        android:padding="4dip" >
    </ProgressBar>

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="startProgress"
        android:text="Start" >
    </Button>
</LinearLayout>
```

Androidmanifest.xml:-

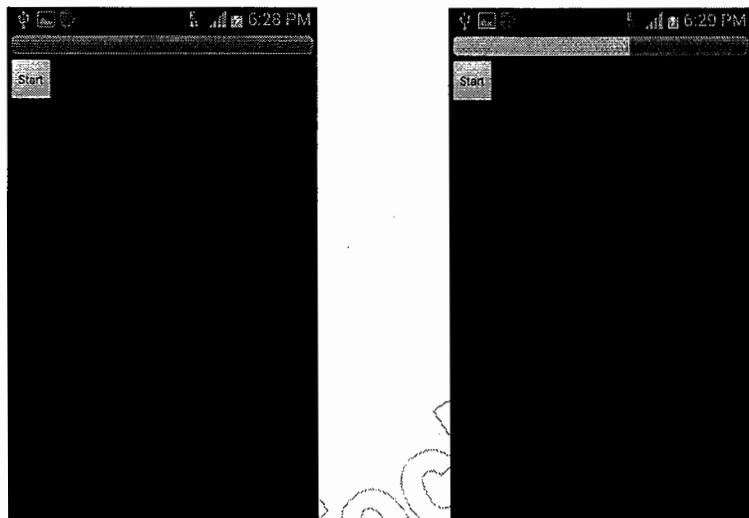
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.android.splash"
    android:versionCode="1"
    android:versionName="1.0" >

    <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.android.splash.HandlerPost"
            android:label="@string/app_name"
            android:screenOrientation="portrait"
            android:theme="@android:style/Theme.Black.NoTitleBar" >
            <intent-filter>
```

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

Output:-



Example on Fragments

HelloFragment.java:-

```
package com.example.fragmentlifecycles;  
  
//it covers Fragment Life Cycle and how to add fragment to Activity  
  
import android.app.Activity;  
import android.app.Fragment;  
import android.os.Bundle;  
import android.util.AttributeSet;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
//without, API Level from So API Level 11  
//With, API Level From API Level 4  
//import android.support.v4.app.Fragment;  
public class HelloFragment extends Fragment {  
  
    @Override  
    public void onInflate(Activity activity, AttributeSet attrs,  
        Bundle savedInstanceState) {  
        // TODO Auto-generated method stub  
        super.onInflate(activity, attrs, savedInstanceState);  
        System.out.println("Fragments...onInflate");  
    }  
}
```

```
@Override  
public void onAttach(Activity activity) {  
    // TODO Auto-generated method stub  
    super.onAttach(activity);  
    System.out.println("Fragments...onAttach");  
}  
@Override  
public void onCreate(Bundle savedInstanceState) {  
    // TODO Auto-generated method stub  
    super.onCreate(savedInstanceState);  
    System.out.println("Fragments...onCreate");  
}  
  
public View onCreateView(LayoutInflater inflater, ViewGroup container,  
    Bundle savedInstanceState) {  
    View v = inflater.inflate(R.layout.hello_fragment_layout, null);  
    System.out.println("Fragments...onCreateView");  
    return v;  
}  
  
@Override  
public void onActivityCreated(Bundle savedInstanceState) {  
    // TODO Auto-generated method stub  
    super.onActivityCreated(savedInstanceState);  
    System.out.println("Fragments...onActivityCreated");  
}  
  
@Override  
public void onStart() {  
    // TODO Auto-generated method stub  
    super.onStart();  
    System.out.println("Fragments...onStart()");  
}  
  
@Override  
public void onResume() {  
    // TODO Auto-generated method stub  
    super.onResume();  
    System.out.println("Fragments...onResume()");  
}  
  
@Override  
public void onPause() {  
    // TODO Auto-generated method stub  
    super.onPause();  
    System.out.println("Fragments...onPause()");  
}  
@Override  
public void onDestroyView() {  
    // TODO Auto-generated method stub  
    super.onDestroyView();  
    System.out.println("Fragments...onDestroyView");  
}  
@Override  
public void onDestroy() {
```

```
// TODO Auto-generated method stub
super.onDestroy();
System.out.println("Fragments...onDestroy");
}
}
```

MainActivity.class:-

```
package com.example.fragmentlifecycles;

import android.app.Activity;
import android.os.Bundle;
public class MainActivity extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }
}
```

hello_fragment_layout.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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:text="@string/app_name"
    />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center_horizontal"
        android:text="This is fragment cycle example"
    />

</LinearLayout>
```

main.xml:-

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

    <fragment
        android:id="@+id/fragment1"
        android:name="com.example.fragmentlifecycles.HelloFragment"
        android:layout_width="match_parent"
    
```

```
    android:layout_height="wrap_content" />
</LinearLayout>
```

AndroidManifest.xml:-

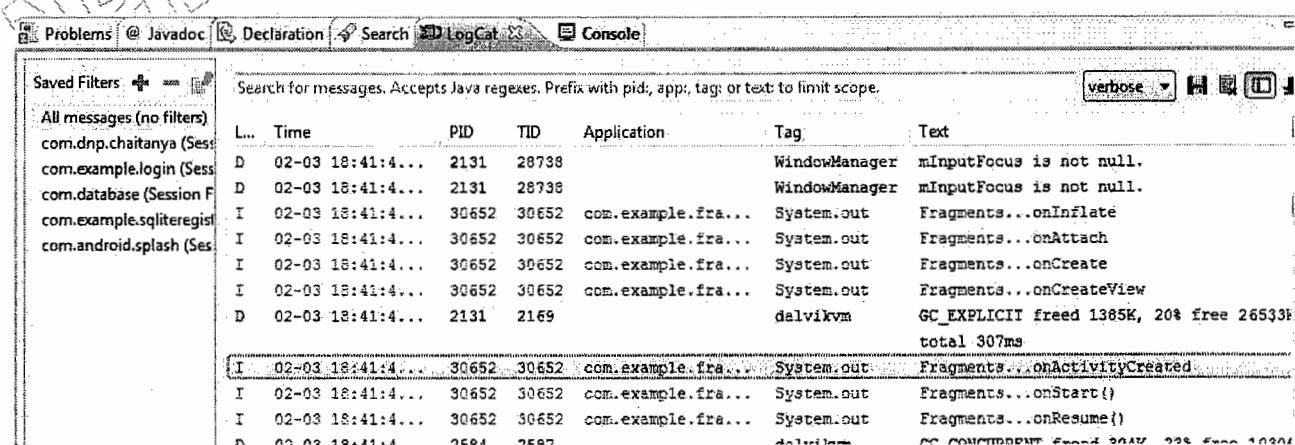
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.fragmentlifecycles"
    android:versionCode="1"
    android:versionName="1.0">

    <uses-sdk
        android:minSdkVersion="12"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme">
        <activity
            android:name="com.example.fragmentlifecycles.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>
```

Output:-

1)



2)	com.database (Session F)	I	02-03 18:44:2...	2131	2196	InputDispa...	Delivering touch to current input target
	com.example.sqliteregist	I	02-03 18:44:2...	2131	2196	InputDispa...	Delivering touch to current input target
	com.android.splash (Ses	I	02-03 18:44:2...	30652	30652 com.example.fra...	System.out	Fragments...onPause()
		D	02-03 18:44:2...	2131	21324	PowerManag...	acquireDVFSLockLocked : type : DVFS_MIN
3)	com.database (Session F)	D	02-03 18:43:3...	2131	2387	PowerManag...	acquireDVFSLockLocked : type : DVFS_MIN
	com.example.sqliteregist	D	02-03 18:43:3...	2131	2387	ActivityMa...	uid : 1000 pid : 2131 tag : ActivityA
	com.android.splash (Ses	W	02-03 18:43:3...	2131	2387	ActivityMa...	dvfsLock.acquire()
		I	02-03 18:43:3...	30652	30652 com.example.fra...	System.out	Fragments...onStart()
		I	02-03 18:43:3...	30652	30652 com.example.fra...	System.out	Fragments...onResume()
		I	02-03 18:43:3...	1845	1970	SurfaceFli...	id=1597(2) createSurf 0x41671124 (480x80
4)	com.database (Session F)	A	02-03 18:45:2...	2045	2002	SurfaceFli...	10-1000 removed MainActivit idx=-2 MapSize
		I	02-03 18:45:2...	1845	2635	SurfaceFli...	id=1603 Removed MainActivit idx=-2 MapSize
		I	02-03 18:45:2...	30652	30652 com.example.fra...	System.out	Fragments...onDestroyView
		I	02-03 18:45:2...	30652	30652 com.example.fra...	System.out	Fragments...onDestroy
		W	02-03 18:45:2...	2131	2186	PowerManag...	Timer 0x7->0x3 0x0



Example On Dynamic Fragment

DynamicFragmentActivity.class

```
package com.example.fragmentdynamic;

import com.example.fragmentstatic.R;

import android.app.Fragment;
import android.app.FragmentManager;
import android.app.FragmentTransaction;
import android.os.Bundle;
import android.support.v4.app.FragmentActivity;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
//fragments from latest

//fragment from 1.6
```

```
//import android.support.v4.app.Fragment;
//import android.support.v4.app.FragmentActivity;
//import android.support.v4.app.FragmentManager;
//import android.support.v4.app.FragmentTransaction;

public class DynamicFragmentActivity extends FragmentActivity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main_dynamic);

        OnClickListener listener = new OnClickListener() {

            @Override
            public void onClick(View v) {

                Fragment hello = new HelloFragment();
                //FragmentManager fragmentManager = getSupportFragmentManager();
                FragmentManager fragmentManager = getFragmentManager();
                FragmentTransaction fragmentTransaction =
fragmentManager.beginTransaction();
                fragmentTransaction.add(R.id.fragment_container,hello);
                fragmentTransaction.commit();

            }
        };

        Button btnLoad = (Button) findViewById(R.id.btn_load);
        btnLoad.setOnClickListener(listener);
    }
}
```

HelloFragment.class:-

```
package com.example.fragment.dynamic;
//it covers Fragment Life Cycle and how to add fragment to Activity

import com.example.fragmentstatic.R;

import android.app.Activity;
import android.app.Fragment;
import android.os.Bundle;
import android.util.AttributeSet;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
//without API Level from So API Level 11
//With API Level From API Level 4
//import android.support.v4.app.Fragment;

public class HelloFragment extends Fragment {

    public View onCreateView(LayoutInflater inflater, ViewGroup container,
```

```
        Bundle savedInstanceState) {  
        View v = inflater.inflate(R.layout.hello_fragment_layout, null);  
        return v;  
    }  
}
```

hello_fragment_layout.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">  
  
    <TextView  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:layout_gravity="center_horizontal"  
        android:text="Dynamic fragment added" />  
  
</LinearLayout>
```

main_dynamic.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical">  
  
    <Button  
        android:id="@+id/btn_load"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="LoadFragment"  
    />  
  
    <LinearLayout  
        android:id="@+id/fragment_container"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:orientation="vertical"  
        android:layout_gravity="center_horizontal"  
    >  
    </LinearLayout>  
</LinearLayout>
```

Androidmanifest.xml:-

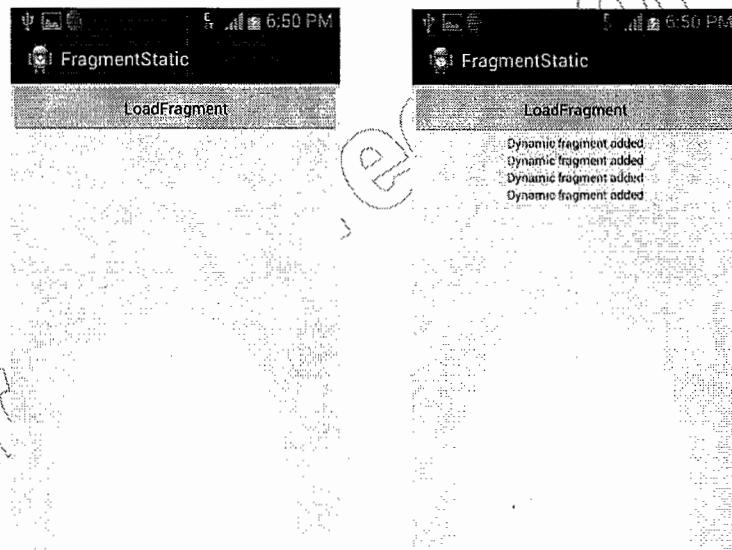
```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.fragmentstatic"  
    android:versionCode="1"  
    android:versionName="1.0" >  
  
    <uses-sdk  
        android:minSdkVersion="12"
```

```
        android:targetSdkVersion="18" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme">
    <activity
        android:name="com.example.fragmentdynamic.DynamicFragmentActivity"
        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>
```

Output:-



Android Themes:-**1) Example on Custom Theme for Text****MainActivity.java:-**

```
package com.example.androidthemes;

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

public class MainActivity extends Activity {

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

    @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;
    }
}
```

activity_main_style.xml

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

    <TextView
        android:id="@+id/text_id"
        style="@style/CustomFontStyle"
        android:text="@string/hello_world" />

</LinearLayout>
```

style.xml:-

```
<resources>

    <!--
        Base application theme, dependent on API level. This theme is replaced
        by AppBaseTheme from res/values-vXX/styles.xml on newer devices.
    -->
    <style name="AppBaseTheme" parent="android:Theme.Light">
        <!--
            Theme customizations available in newer API levels can go in

```

```
res/values-vXX/styles.xml, while customizations related to
backward-compatibility can go here.

-->
</style>

<!-- Application theme. -->
<style name="AppTheme" parent="AppBaseTheme">
    <!-- All customizations that are NOT specific to a particular API-level can go here. -->
</style>

<style name="CustomFontStyle">
    <item name="android:layout_width">fill_parent</item>
    <item name="android:layout_height">wrap_content</item>
    <item name="android:capitalize">characters</item>
    <item name="android:typeface">monospace</item>
    <item name="android:textSize">12pt</item>
    <item name="android:textColor">#D50F0F</item>/
</style>

</resources>
```

AndroidManifest.xml:-

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

**Example On Application Theme****MainActivity.class:-**

```
package com.example.applicationthemexample;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;

public class MainActivity extends Activity {

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

    @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;
    }
}
```

activity_main.xml:-

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

    <Button
        android:id="@+id/button_s"
        style="@style/CustomButtonStyle"
```

```
    android:text="@string/button_small"
    android:onClick="doSmall"/>

<Button
    android:id="@+id/button_l"
    style="@style/CustomButtonStyle"
    android:text="@string/button_large"
    android:onClick="doLarge"/>

<TextView
    android:id="@+id/text_id"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:capitalize="characters"
    android:text="@string/hello_world" />

</LinearLayout>
```

Androidmanifest.xml:-

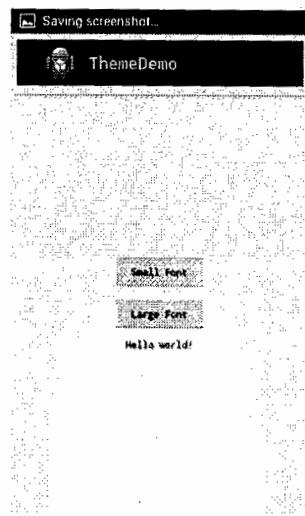
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.applicationthemeeexample"
    android:versionCode="1"
    android:versionName="1.0">

    <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.applicationthemeeexample.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>
```

**Example Background Style for Button :-****MainActivity.class:-**

```
package com.example.backgrndstylesforwidgets;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;

public class MainActivity extends Activity {

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

    @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;
    }
}
```

button_pressbackgrnd.xml

```
<?xml version="1.0" encoding="utf-8"?>
<selector xmlns:android="http://schemas.android.com/apk/res/android">
<item android:state_pressed="true">
    <shape android:shape="rectangle" >
        <corners android:radius="3dip" />
        <stroke android:width="1dip" android:color="#5e7974" />
        <gradient android:angle="-90"
            android:startColor="#345953"
            android:endColor="#689a92"/>

```

```
</shape>
</item>
<item android:state_focused="true">
    <shape android:shape="rectangle" >
        <corners android:radius="3dip" />
        <stroke android:width="1dip" android:color="#5e7974" />
        <solid android:color="#58857e"/>
    </shape>
</item>
<item >
    <shape android:shape="rectangle" >
        <corners android:radius="3dip" />
        <stroke android:width="1dip" android:color="#5e7974" />
        <solid android:color="#DF0101"/>
    </shape>
</item>
</selector>
```

button_rectangel.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:padding="10dp"
    android:shape="rectangle">

    <!-- you can use any color you want I used here gray color -->
    <solid android:color="#ABABAB" />

    <corners
        android:bottomLeftRadius="10dp"
        android:bottomRightRadius="10dp"
        android:topLeftRadius="10dp"
        android:topRightRadius="10dp" />

</shape>
```

Activity_main.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/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp" />
```

```
    android:background="@drawable/button_pressbackgrnd"
    android:text="Button1"
    android:textColor="#ffffff" />

<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignRight="@+id/button1"
    android:layout_below="@+id/button1"
    android:layout_marginTop="14dp"
    android:padding="10dp"
    android:background="@drawable/button_rectangel"
    android:text="Button2"
    android:textColor="#ffffff"/>

</RelativeLayout>
```

Androidmanifest.xml:-

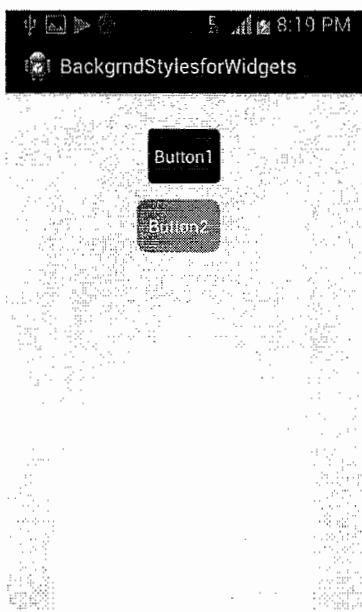
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.backgrndstylesforwidgets"
    android:versionCode="1"
    android:versionName="1.0">

    <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.backgrndstylesforwidgets.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>
```



Example on Shapes

MainActivity.java:-

```
package com.example.tutorials.shapes;

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

public class MainActivity extends Activity {

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

bg_button.xml:-

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

    <stroke android:width="2dp" android:color="#1B395C" />

    <corners android:radius="5dp" />

    <gradient
        android:startColor="#3D689A"
        android:endColor="#96B4D7"
        android:angle="270"
    />
```

```
<corners
    android:bottomRightRadius="5dp"
    android:topLeftRadius="5dp" />

</shape>
```

bg_complex_cart.xml:-

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

            <solid android:color="#130C00" android:angle="270.0"/>
            <corners android:radius="10dp" />
        </shape>
    </item>

    <item android:bottom="30dp" android:top="2dp" android:left="2dp" android:right="2dp">
        <shape>
            <gradient
                android:startColor="#4F4F4E"
                android:endColor="#181818"
                android:angle="270"
            />
            <corners
                android:topLeftRadius="8dp" android:topRightRadius="8dp"
            />
        </shape>
    </item>

    <item android:left="10dp" android:right="140dp" android:top="5dp" android:bottom="5dp">
        <shape xmlns:android="http://schemas.android.com/apk/res/android"
            android:shape="oval">

            <stroke android:width="1dp" android:color="#907A4B" />

            <gradient
                android:startColor="#FC9C00"
                android:endColor="#FEF500"
                android:angle="270"
            />
        </shape>
    </item>

    <item android:left="10dp" android:right="140dp" android:top="5dp" android:bottom="5dp">
        <bitmap
            android:src="@drawable/cart"
            android:gravity="center"
        />
    </item>
```

```
</layer-list>
```

bg_complex.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list xmlns:android="http://schemas.android.com/apk/res/android">
    <item>
        <shape>
            <solid android:color="#3D689A" android:angle="270.0"/>
            <corners android:radius="10dp" />
        </shape>
    </item>
    <item android:bottom="30dp" android:top="2dp" android:left="2dp" android:right="2dp">
        <shape>
            <solid android:color="#5C83AF"/>
            <corners
                android:topLeftRadius="8dp" android:topRightRadius="8dp"
            />
        </shape>
    </item>
</layer-list>
```

bg_line.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="line">
    <size
        android:height="2dp"
        android:width="400dp" />
    <stroke
        android:width="1dp"
        android:color="#08213D"
        android:dashWidth="5dp"
        android:dashGap="2dp" />
</shape>
```

Bg_oval.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="oval">
    <stroke android:width="2dp" android:color="#2B507A" />
    <gradient
        android:startColor="#3D689A"
        android:endColor="#96B4D7"
```

```
    android:angle="270"  
/>  
  
</shape>
```

Bg_ring.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<shape xmlns:android="http://schemas.android.com/apk/res/android"  
  
    android:shape="ring"  
    android:innerRadiusRatio="3"  
    android:thickness="10dp"  
    android:useLevel="false">  
  
    <solid android:color="#2E5697" />  
  
    <size  
        android:height="120dp"  
        android:width="120dp" />  
</shape>
```

Bg_simple.xml:-

```
<?xml version="1.0" encoding="UTF-8"?>  
<shape xmlns:android="http://schemas.android.com/apk/res/android"  
    android:shape="rectangle">  
    <gradient android:type="radial"  
        android:startColor="#39629C"  
        android:centerColor="#5580BD"  
        android:endColor="#C8DAF2"  
        android:gradientRadius="350"/>  
</shape>
```

Androidmanifest.xml:-

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.tutorials.shapes"  
    android:versionCode="1"  
    android:versionName="1.0">  
  
    <uses-sdk  
        android:minSdkVersion="8"  
        android:targetSdkVersion="15" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name"  
        android:theme="@style/AppTheme">  
        <activity  
            android:name="com.example.tutorials.shapes.MainActivity"  
            android:label="@string/title_activity_main">
```

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

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

</manifest>
```

Naresh i Technologies

Google Map Example:-

MainActivity.java:-

```
package com.example.satishmapv2;

import java.util.ArrayList;

import android.app.Activity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.Menu;
import android.view.View;
import android.widget.TextView;

import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.GoogleMap.InfoWindowAdapter;
import com.google.android.gms.maps.GoogleMap.OnMapClickListener;
import com.google.android.gms.maps.GoogleMap.OnMapLongClickListener;
import com.google.android.gms.maps.MapFragment;
import com.google.android.gms.maps.model.BitmapDescriptorFactory;
import com.google.android.gms.maps.model.CameraPosition;
import com.google.android.gms.maps.model.CircleOptions;
import com.google.android.gms.maps.model.LatLng;
import com.google.android.gms.maps.model.Marker;
import com.google.android.gms.maps.model.MarkerOptions;
import com.google.android.gms.maps.model.PolylineOptions;

public class MainActivity extends Activity {
    GoogleMap googlemap;
    int i;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        googlemap = ((MapFragment) getFragmentManager().findFragmentById(
            R.id.mapfragment)).getMap();
        googlemap.setMapType(GoogleMap.MAP_TYPE_HYBRID);
        googlemap.setMyLocationEnabled(true);
        // Enable / Disable zooming controls
        googlemap.getUiSettings().setZoomControlsEnabled(true);

        // Enable / Disable my location button
        googlemap.getUiSettings().setMyLocationButtonEnabled(true);

        // Enable / Disable Compass icon
        googlemap.getUiSettings().setCompassEnabled(true);

        // Move the camera to last position with a zoom level
        CameraPosition cameraPosition = new CameraPosition.Builder()
            .target(new LatLng(17.437226, 78.448128)).zoom(15).build();
    }
}
```

```
googlemap.animateCamera(CameraUpdateFactory  
    .newCameraPosition(cameraPosition));  
  
MarkerOptions marker = new MarkerOptions();  
marker.title("Naresh i technologies ");  
marker.position(new LatLng(17.437226, 78.448128));  
marker.icon(BitmapDescriptorFactory  
    .defaultMarker(BitmapDescriptorFactory.HUE_GREEN));  
googlemap.addMarker(marker);  
  
googlemap.setOnMapClickListener(new OnMapClickListener() {  
  
    @Override  
    public void onMapClick(LatLng arg0) {  
        // TODO Auto-generated method stub  
        MarkerOptions marker1 = new MarkerOptions();  
        i = i + 1;  
        marker1.title("Naresh on mapclick" + i);  
        marker1.icon(BitmapDescriptorFactory  
            .defaultMarker(BitmapDescriptorFactory.HUE_RED));  
        marker1.position(arg0);  
        googlemap.addMarker(marker1);  
    }  
});  
googlemap.setOnMapLongClickListener(new OnMapLongClickListener() {  
  
    @Override  
    public void onMapLongClick(LatLng arg0) {  
        // TODO Auto-generated method stub  
        MarkerOptions marker2 = new MarkerOptions();  
        i = i + 1;  
        marker2.title("Naresh on mapclick" + i);  
        marker2.icon(BitmapDescriptorFactory  
            .defaultMarker(BitmapDescriptorFactory.HUE_YELLOW));  
        marker2.position(arg0);  
        googlemap.addMarker(marker2);  
    }  
});  
  
googlemap.setInfoWindowAdapter(new InfoWindowAdapter() {  
  
    @Override  
    public View getInfoWindow(Marker arg0) {  
        // TODO Auto-generated method stub  
        return null;  
    }  
  
    @Override  
    public View getInfoContents(Marker arg0) {  
        LatLng lt = arg0.getPosition();  
        // TODO Auto-generated method stub  
        LayoutInflator inflater = (LayoutInflator)  
getSystemService(LAYOUT_INFLATER_SERVICE);  
        View v = inflater.inflate(R.layout.address, null);  
        TextView t1 = (TextView) v.findViewById(R.id.lat);  
        TextView t2 = (TextView) v.findViewById(R.id.longi);  
    }  
});
```

```
t1.setText(lt.latitude + " ");
t2.setText(lt.longitude + " ");
return v;
}
});
ArrayList points = new ArrayList();
points.add(new LatLng(17.437226, 78.448128));
points.add(new LatLng(17.446839, 78.370778));
PolylineOptions polyline = new PolylineOptions();
polyline.color(Color.RED);
polyline.width(6);
polyline.addAll(points);
googlemap.addPolyline(polyline);

CircleOptions circke = new CircleOptions();
circke.center(new LatLng(17.437226, 78.448128));
// circke.fillColor(Color.GREEN);
circke.radius(90);
googlemap.addCircle(circke);

// Enable / Disable Rotate gesture
// googleMap.getUiSettings().setRotateGesturesEnabled(true);

// Enable / Disable zooming functionality
// googleMap.getUiSettings().setZoomGesturesEnabled(true);

}
}
```

Activity_main.xml:-

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

    <fragment
        android:id="@+id/mapfragment"
        android:name="com.google.android.gms.maps.MapFragment"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

</LinearLayout>
```

Address.xml:-

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginLeft="18dp"
    android:layout_marginTop="14dp"
    android:text="Latitude" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/textView1"
    android:layout_below="@+id/textView1"
    android:layout_marginTop="25dp"
    android:text="Longitude" />

<TextView
    android:id="@+id/lat"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_above="@+id/textView2"
    android:layout_marginLeft="78dp"
    android:layout_toRightOf="@+id/textView2"
    android:text="TextView" />

<TextView
    android:id="@+id/longi"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/textView2"
    android:layout_alignBottom="@+id/textView2"
    android:layout_alignRight="@+id/lat"
    android:text="TextView" />

</RelativeLayout>
```

Androidmanifest.xml:-

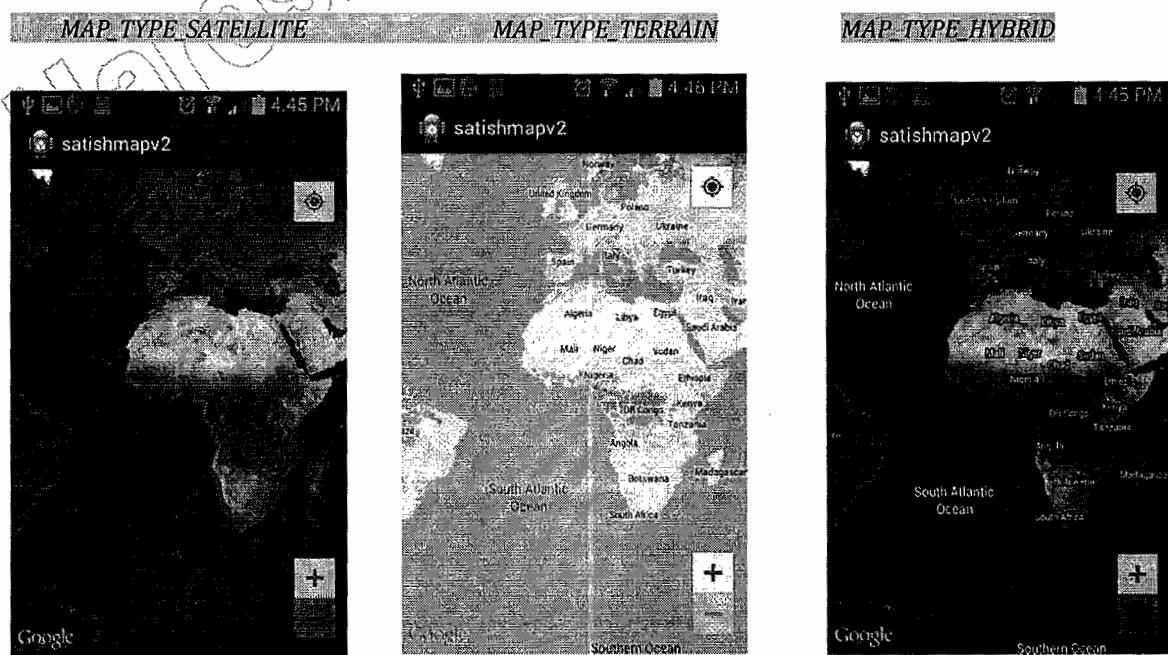
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.satishmapv2"
    android:versionCode="1"
    android:versionName="1.0">

    <uses-sdk
        android:minSdkVersion="11"
        android:targetSdkVersion="18" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="com.google.android.providers.gsf.permission.READ_GSERVICES" />
    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />

    <!-- Required to show current location -->
    <uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
    <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />

    <!-- Required OpenGL ES 2.0. for Maps V2 -->
```

```
<uses-feature  
    android:glEsVersion="0x00020000"  
    android:required="true" />  
  
<!-- Requires OpenGL ES version 2 -->  
<uses-feature  
    android:glEsVersion="0x00020000"  
    android:required="true" />  
<application  
    android:allowBackup="true"  
    android:icon="@drawable/ic_launcher"  
    android:label="@string/app_name"  
    android:theme="@style/AppTheme">  
    <activity  
        android:name="com.example.satishmapv2.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>  
    <meta-data  
        android:name="com.google.android.maps.v2.API_KEY"  
        android:value="AlzaSyCYEEqBRPk81BAdDxYebSd4yxnXuHcVgSM" />  
    <meta-data  
        android:name="com.google.android.gms.version"  
        android:value="@integer/google_play_services_version" />  
    </application>  
  
</manifest>
```



MAP_TYPE_NORMAL



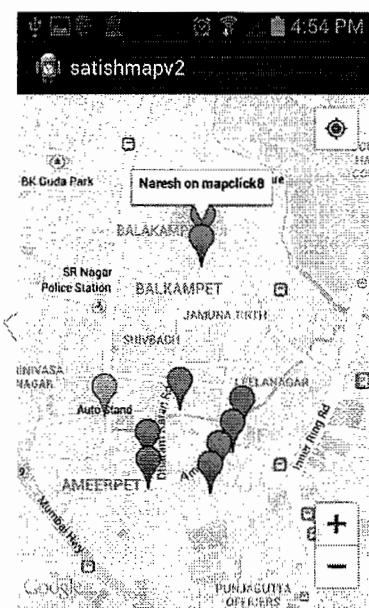
Get Desired Location



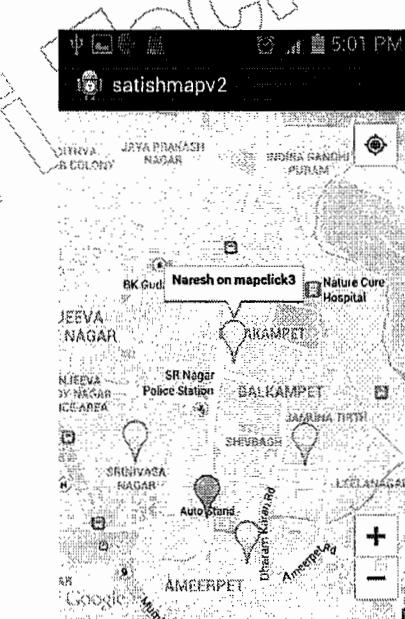
Marker on Particular location



OnClickListener On Map map



OnLongClickListener onMap

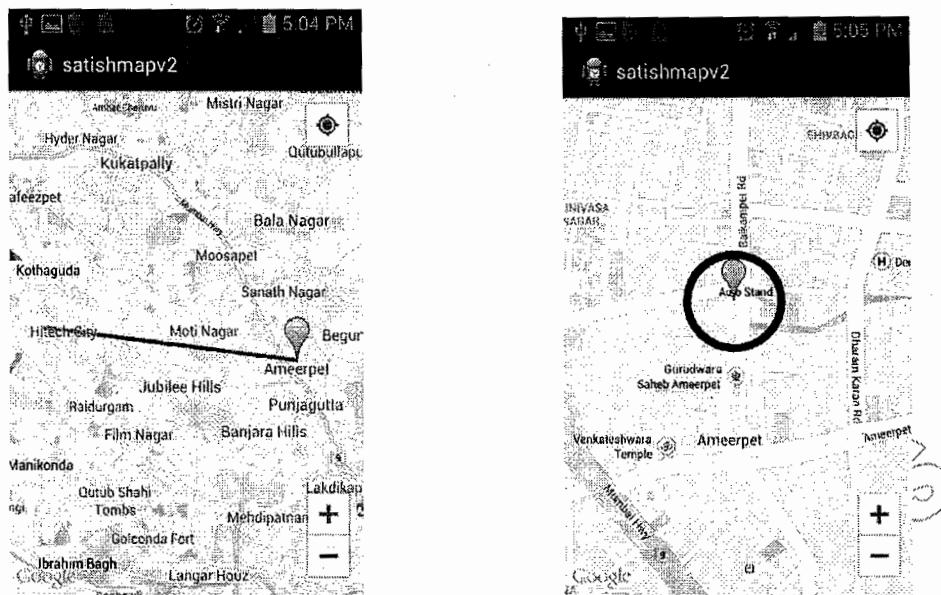


InfoWindow on



DrawLine on Map

DrawCircleOn Map



Get Current Location Latitude and Langitudes using Locationchange Listener:-

MainActivity.java:-

```
package com.example.gps;

import android.app.Activity;
import android.content.Context;
import android.location.Criteria;
import android.location.Location;
import android.location.LocationListener;
import android.location.LocationManager;
import android.os.Bundle;
import android.view.Menu;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends Activity implements LocationListener{

    LocationManager locationManager;
    String provider;

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

        // Getting LocationManager object
        locationManager = (LocationManager) getSystemService(Context.LOCATION_SERVICE);

        // Creating an empty criteria object
        Criteria criteria = new Criteria();

        // Getting the name of the provider that meets the criteria
        provider = locationManager.getBestProvider(criteria, false);
    }
}
```

```

if(provider!=null && !provider.equals("")){

    // Get the location from the given provider
    Location location = locationManager.getLastKnownLocation(provider);

    locationManager.requestLocationUpdates(provider, 20000, 1, this);

    if(location!=null)
        onLocationChanged(location);
    else
        Toast.makeText(getApplicationContext(), "Location can't be retrieved", Toast.LENGTH_SHORT).show();

}else{
    Toast.makeText(getApplicationContext(), "No Provider Found", Toast.LENGTH_SHORT).show();
}

@Override
public void onLocationChanged(Location location) {
    // Getting reference to TextView tv_longitude
    TextView tvLongitude = (TextView)findViewById(R.id.tv_longitude);

    // Getting reference to TextView tv_latitude
    TextView tvLatitude = (TextView)findViewById(R.id.tv_latitude);

    // Setting Current Longitude
    tvLongitude.setText("Longitude:" + location.getLongitude());

    // Setting Current Latitude
    tvLatitude.setText("Latitude:" + location.getLatitude());
}

@Override
public void onProviderDisabled(String provider) {
    // TODO Auto-generated method stub
}

@Override
public void onProviderEnabled(String provider) {
    // TODO Auto-generated method stub
}

@Override
public void onStatusChanged(String provider,
                           int status, Bundle extras) {
    // TODO Auto-generated method stub
}
}

```

Activity_main.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" >

    <TextView
        android:id="@+id/tv_location"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:text="@string/str_tv_location"
        android:textStyle="bold" />

    <TextView
        android:id="@+id/tv_longitude"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/tv_location"
        android:layout_centerHorizontal="true" />

    <TextView
        android:id="@+id/tv_latitude"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/tv_longitude"
        android:layout_centerHorizontal="true" />

</RelativeLayout>
```

AndroidManifest.xml:-

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.gps"
    android:versionCode="1"
    android:versionName="1.0">

    <uses-sdk
        android:minSdkVersion="4"
        android:targetSdkVersion="15" />

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

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme">
        <activity
            android:name="com.example.gps.MainActivity"
            android:label="@string/title_activity_main" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Example on Get Location from given location name

MainActivity.java:-

```
package com.example.gps.geocoding;

import java.io.IOException;
import java.io.InputStream;
import java.util.List;

import org.apache.http.HttpEntity;
import org.apache.http.HttpResponse;
import org.apache.http.client.ClientProtocolException;
import org.apache.http.client.HttpClient;
import org.apache.http.client.methods.HttpGet;
import org.apache.http.client.methods.HttpPost;
import org.apache.http.impl.client.DefaultHttpClient;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;

import android.app.Activity;
import android.location.Address;
import android.location.Geocoder;
import android.os.AsyncTask;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.MapFragment;
import com.google.android.gms.maps.model.CameraPosition;
import com.google.android.gms.maps.model.LatLng;
import com.google.android.gms.maps.model.MarkerOptions;

public class MainActivity extends Activity {

    GoogleMap googleMap;
    MarkerOptions markerOptions;
    LatLng latLng;
    Double longitude, latitude;

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

        // it will give google map object
        googleMap = ((MapFragment) getFragmentManager().findFragmentById(
            R.id.map)).getMap();
    }
}
```

```

// Getting reference to btn_find of the layout activity_main
Button btn_find = (Button) findViewById(R.id.btn_find);

// Defining button click event listener for the find button
OnClickListener findClickListener = new OnClickListener() {
    @Override
    public void onClick(View v) {
        // Getting reference to EditText to get the user input location
        EditText etLocation = (EditText) findViewById(R.id.et_location);

        // Getting user input location
        String location = etLocation.getText().toString();

        if (location != null && !location.equals("")) {
            new GeocoderTask().execute(location);
        }
    }
};

// Setting button click event listener for the find button
btn_find.setOnClickListener(findClickListener);

}

// An AsyncTask class for accessing the GeoCoding Web Service
private class GeocoderTask extends AsyncTask<String, Void, LatLng> {

    @Override
    protected LatLng doInBackground(String... locationName) {
        // Creating an instance of Geocoder class
        Geocoder geocoder = new Geocoder(getApplicationContext());
        JSONObject jsonObject = null;

        // Getting a maximum of 3 Address that matches the input text
        jsonObject = getAddress(locationName[0]);
        try {
            longitude = ((JSONArray) jsonObject.get("results"))
                .getJSONObject(0).getJSONObject("geometry")
                .getJSONObject("location").getDouble("lng");

            latitude = ((JSONArray) jsonObject.get("results"))
                .getJSONObject(0).getJSONObject("geometry")
                .getJSONObject("location").getDouble("lat");
        } catch (JSONException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        LatLng latLng = new LatLng(latitude, longitude);
        return latLng;
    }

    @Override
    protected void onPostExecute(LatLng latLng) {

        markerOptions = new MarkerOptions();
        markerOptions.position(latLng);
    }
}

```

```
        googleMap.addMarker(markerOptions);
        CameraPosition cameraPosition = new CameraPosition.Builder()
            .target(latLng).zoom(15).build();

        googleMap.animateCamera(CameraUpdateFactory
            .newCameraPosition(cameraPosition));

    }

}

public JSONObject getTheAddress(String address) {
    StringBuilder stringBuilder = new StringBuilder();
    try {

        address = address.replaceAll(" ", "%20");

        HttpGet httpget = new HttpGet(
            "http://maps.google.com/maps/api/geocode/json?address="
            + address + "&sensor=false");
        HttpClient client = new DefaultHttpClient();
        HttpResponse response;
        stringBuilder = new StringBuilder();

        response = client.execute(httpget);
        HttpEntity entity = response.getEntity();
        InputStream stream = entity.getContent();
        int b;
        while ((b = stream.read()) != -1) {
            stringBuilder.append((char) b);
        }
    } catch (ClientProtocolException e) {
    } catch (IOException e) {
    }

    JSONObject jsonObject = new JSONObject();
    try {
        jsonObject = new JSONObject(stringBuilder.toString());
    } catch (JSONException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }

    return jsonObject;
}
}
```

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"
    tools:context=".MainActivity">

    <RelativeLayout
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
```

```
    android:orientation="horizontal" >

    <Button
        android:id="@+id/btn_find"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/str_btn_find"
        android:layout_alignParentRight="true" />

    <EditText
        android:id="@+id/et_location"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:inputType="text"
        android:hint="@string/hnt_et_location"
        android:layout_toLeftOf="@+id/btn_find" />

</RelativeLayout>

<fragment xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/map"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    class="com.google.android.gms.maps.MapFragment" />

</LinearLayout>
```

Androidmanifest.xml:-

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

    <uses-sdk
        android:minSdkVersion="11"
        android:targetSdkVersion="16" />

    <permission
        android:name="com.example.gps.geocoding.permission.MAPS_RECEIVE"
        android:protectionLevel="signature"/>

    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="com.google.android.providers.gsf.permission.READ_GSERVICES" />
    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />

    <!-- Required to show current location -->
    <uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
    <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />

    <!-- Required OpenGL ES 2.0. for Maps V2 -->
    <uses-feature
        android:glEsVersion="0x00020000"
        android:required="true" />
</application>
```

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

<activity
    android:name="com.example.gps.geocoding.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>

<meta-data
    android:name="com.google.android.maps.v2.API_KEY"
    android:value="AIzaSyBYYCxcWSC03twr2D9zaoPoB6cVry0Q2IE"/>
<meta-data
    android:name="com.google.android.gms.version"
    android:value="@integer/google_play_services_version" />
</application>

</manifest>
```

JSON Response from Google WebService:-

```
{
  "results": [
    {
      "types": [
        "locality",
        "political"
      ],
      "formatted_address": "Hyderabad, Andhra Pradesh, India",
      "address_components": [
        {
          "types": [
            "locality",
            "political"
          ],
          "short_name": "Hyderabad",
          "long_name": "Hyderabad"
        },
        {
          "types": [
            "administrative_area_level_2",
            "political"
          ],
          "short_name": "R.R. District",
          "long_name": "Ranga Reddy"
        },
        {
          "types": [
            "administrative_area_level_1",
            "political"
          ],
        }
      ]
    }
  ]
}
```

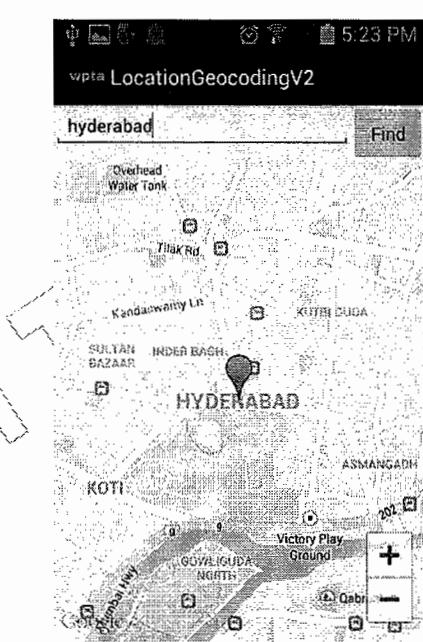
```
"short_name": "AP",
"long_name": "Andhra Pradesh"
},
{
  "types": [
    "country",
    "political"
  ],
  "short_name": "IN",
  "long_name": "India"
}
],
"geometry": {
  "bounds": {
    "southwest": {
      "lng": 78.2401411,
      "lat": 17.2383708
    },
    "northeast": {
      "lng": 78.6913581,
      "lat": 17.5794481
    }
  },
  "viewport": {
    "southwest": {
      "lng": 78.2401411,
      "lat": 17.2383708
    },
    "northeast": {
      "lng": 78.6913581,
      "lat": 17.5794481
    }
  },
  "location": {
    "lng": 78.486671,
    "lat": 17.385044
  },
  "location_type": "APPROXIMATE"
}
},
{
  "types": [
    "locality",
    "political"
  ],
  "formatted_address": "Hyderabad, Andhra Pradesh 502220, India",
  "address_components": [
    {
      "types": [
        "locality",
        "political"
      ],
      "short_name": "Hyderabad",
      "long_name": "Hyderabad"
    },
    {
      "types": [

```

```
"administrative_area_level_2",
"political"
],
"short_name": "Medak",
"long_name": "Medak"
},
{
"types": [
"administrative_area_level_1",
"political"
],
"short_name": "AP",
"long_name": "Andhra Pradesh"
},
{
"types": [
"country",
"political"
],
"short_name": "IN",
"long_name": "India"
},
{
"types": [
"postal_code"
],
"short_name": "502220",
"long_name": "502220"
},
],
"geometry": {
"bounds": {
"southwest": {
"lng": 77.5801199,
"lat": 17.65875
},
"northeast": {
"lng": 77.63266999999999,
"lat": 17.69547
}
},
"viewport": {
"southwest": {
"lng": 77.5801199,
"lat": 17.65875
},
"northeast": {
"lng": 77.63266999999999,
"lat": 17.69547
}
},
"location": {
"lng": 77.6049218,
"lat": 17.6740832
},
"location_type": "APPROXIMATE"
}
```

```
        },
        {
          "types": [
            "locality",
            "political"
          ],
          "formatted_address": "Hyderabad, Pakistan",
          "address_components": [
            {
              "types": [
                "locality",
                "political"
              ],
              "short_name": "Hyderabad",
              "long_name": "Hyderabad"
            },
            {
              "types": [
                "administrative_area_level_2",
                "political"
              ],
              "short_name": "Hyderabad",
              "long_name": "Hyderabad"
            },
            {
              "types": [
                "administrative_area_level_1",
                "political"
              ],
              "short_name": "Sindh",
              "long_name": "Sindh"
            },
            {
              "types": [
                "country",
                "political"
              ],
              "short_name": "PK",
              "long_name": "Pakistan"
            }
          ],
          "geometry": {
            "bounds": {
              "southwest": {
                "lng": 68.3056193,
                "lat": 25.1664163
              },
              "northeast": {
                "lng": 68.453064,
                "lat": 25.448149
              }
            },
            "viewport": {
              "southwest": {
                "lng": 68.3056193,
                "lat": 25.1664163
              }
            }
          }
        }
      ]
    }
  }
}
```

```
"northeast": {  
    "lng": 68.453064,  
    "lat": 25.448149  
}  
},  
"location": {  
    "lng": 68.3683333,  
    "lat": 25.3791667  
},  
"location_type": "APPROXIMATE"  
}  
}  
]  
,"status": "OK"  
}
```



Animation:-

BlinkActivity.class:-

```
package com.android.animations;  
  
import android.app.Activity;  
import android.os.Bundle;  
import android.view.View;  
import android.view.animation.Animation;  
import android.view.animation.Animation.AnimationListener;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.TextView;  
  
public class BlinkActivity extends Activity implements AnimationListener {
```

```
TextView txtMessage;
Button btnStart;

// Animation
Animation animBlink;

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

    txtMessage = (TextView) findViewById(R.id.txtMessage);
    btnStart = (Button) findViewById(R.id.btnStart);

    // load the animation
    animBlink = AnimationUtils.loadAnimation(getApplicationContext(),
        R.anim.blink);

    // set animation listener
    animBlink.setAnimationListener(this);

    // button click event
    btnStart.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {
            txtMessage.setVisibility(View.VISIBLE);

            // start the animation
            txtMessage.startAnimation(animBlink);
        }
    });
}

@Override
public void onAnimationEnd(Animation animation) {
    // Take any action after completing the animation

    // check for blink animation
    if (animation == animBlink) {
    }

}

@Override
public void onAnimationRepeat(Animation animation) {
}

@Override
public void onAnimationStart(Animation animation) {
}

}
```

BounceActivity.java:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class BounceActivity extends Activity implements AnimationListener {

    ImageView imgPoster;
    Button btnStart;

    // Animation
    Animation animBounce;

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

        imgPoster = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animBounce = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.bounce);
        // set animation listener
        animBounce.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // start the animation
                imgPoster.setVisibility(View.VISIBLE);
                imgPoster.startAnimation(animBounce);
            }
        });
    }

    @Override
    public void onAnimationEnd(Animation animation) {
        // Take any action after completing the animation

        // check for zoom in animation
        if (animation == animBounce) {
        }
    }
}
```

```
}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}
```

CrossfadeActivity.java:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class BounceActivity extends Activity implements AnimationListener {

    ImageView imgPoster;
    Button btnStart;

    // Animation
    Animation animBounce;

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

        imgPoster = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animBounce = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.bounce);

        // set animation listener
        animBounce.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {
```

```
    @Override
    public void onClick(View v) {
        // start the animation
        imgPoster.setVisibility(View.VISIBLE);
        imgPoster.startAnimation(animBounce);
    }
}

@Override
public void onAnimationEnd(Animation animation) {
    // Take any action after completing the animation

    // check for zoom in animation
    if (animation == animBounce) {
    }

}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}
```

FadeInActivity.java:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

public class FadeInActivity extends Activity implements AnimationListener {

    TextView txtMessage;
    Button btnStart;

    // Animation
```

```

Animation animFadein;

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

    txtMessage = (TextView) findViewById(R.id.txtMessage);
    btnStart = (Button) findViewById(R.id.btnStart);
    animFadein=AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fade_in);
    // set animation listener
    animFadein.setAnimationListener(this);
    btnStart.setOnClickListener(new OnClickListener() {

        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub
            txtMessage.setVisibility(View.VISIBLE);
            txtMessage.startAnimation(animFadein);
        }
    });
}

@Override
public void onAnimationEnd(Animation animation) {
}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}

```

FadeoutActivity.java:-

```

package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;

```

```
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

public class FadeInActivity extends Activity implements AnimationListener {

    TextView txtMessage;
    Button btnStart;

    // Animation
    Animation animFadein;

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

        txtMessage = (TextView) findViewById(R.id.txtMessage);
        btnStart = (Button) findViewById(R.id.btnStart);

        animFadein=AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fade_in);
        // set animation listener
        animFadein.setAnimationListener(this);
        btnStart.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                txtMessage.setVisibility(View.VISIBLE);
                txtMessage.startAnimation(animFadein);

            }
        });

        @Override
        public void onAnimationEnd(Animation animation) {
        }

        @Override
        public void onAnimationRepeat(Animation animation) {
            // TODO Auto-generated method stub
        }

        @Override
        public void onAnimationStart(Animation animation) {
            // TODO Auto-generated method stub
        }
    }
}
```

MoveActivity.java:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class MoveActivity extends Activity implements AnimationListener {

    ImageView imgLogo;
    Button btnStart;

    // Animation
    Animation animMove;

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

        imgLogo = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animMove = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.move);

        // set animation listener
        animMove.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // start the animation
                imgLogo.startAnimation(animMove);
            }
        });
    }

    @Override
    public void onAnimationEnd(Animation animation) {
        // Take any action after completing the animation

        // check for zoom in animation
        if (animation == animMove) {
```

```
        }

    }

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}
```

RotateActivity.java:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class RotateActivity extends Activity implements AnimationListener {

    ImageView imgLogo;
    Button btnStart;

    //Animation
    Animation animRotate;

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

        imgLogo = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animRotate = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.rotate);

        // set animation listener
        animRotate.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {
```

```
@Override  
public void onClick(View v) {  
    imgLogo.setVisibility(View.VISIBLE);  
  
    // start the animation  
    imgLogo.startAnimation(animRotate);  
}  
});  
  
}  
  
@Override  
public void onAnimationEnd(Animation animation) {  
    // Take any action after completing the animation  
  
    // check for fade in animation  
    if (animation == animRotate) {  
    }  
}  
  
}  
  
@Override  
public void onAnimationRepeat(Animation animation){  
    // TODO Auto-generated method stub  
}  
  
}  
  
@Override  
public void onAnimationStart(Animation animation) {  
    // TODO Auto-generated method stub  
}  
}  
}
```

SequentialActivity.java:-

```
package com.android.animations;  
  
import android.app.Activity;  
import android.os.Bundle;  
import android.view.View;  
import android.view.animation.Animation;  
import android.view.animation.Animation.AnimationListener;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.ImageView;  
  
public class SequentialActivity extends Activity implements AnimationListener {  
  
    ImageView imgLogo;  
    Button btnStart;  
  
    // Animation  
    Animation animSequential;  
  
    @Override
```

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

    imgLogo = (ImageView) findViewById(R.id.imgLogo);
    btnStart = (Button) findViewById(R.id.btnStart);

    // load the animation
    animSequential = AnimationUtils.loadAnimation(getApplicationContext(),
        R.anim.sequential);

    // set animation listener
    animSequential.setAnimationListener(this);

    // button click event
    btnStart.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            // start the animation
            imgLogo.startAnimation(animSequential);
        }
    });
}

@Override
public void onAnimationEnd(Animation animation) {
    // Take any action after completing the animation

    // check for zoom in animation
    if (animation == animSequential) {
    }

}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}
```

SlideDownActivity.class:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
```

```
import android.view.animation.Animation;
import android.view.animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class SlideDownActivity extends Activity implements AnimationListener {

    ImageView imgPoster;
    Button btnStart;

    // Animation
    Animation animSideDown;

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

        imgPoster = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animSideDown = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.slide_down);

        // set animation listener
        animSideDown.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // start the animation
                imgPoster.setVisibility(View.VISIBLE);
                imgPoster.startAnimation(animSideDown);
            }
        });
    }

    @Override
    public void onAnimationEnd(Animation animation) {
        // Take any action after completing the animation

        // check for zoom in animation
        if (animation == animSideDown) {
        }
    }

    @Override
    public void onAnimationRepeat(Animation animation) {
        // TODO Auto-generated method stub
    }
}
```

```
    }

    @Override
    public void onAnimationStart(Animation animation) {
        // TODO Auto-generated method stub
    }

}
```

SlideUpActivity.class:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class SlideUpActivity extends Activity implements AnimationListener {

    ImageView imgPoster;
    Button btnStart;

    // Animation
    Animation animSlideUp;

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

        imgPoster = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animSlideUp = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.slide_up);

        // set animation listener
        animSlideUp.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // start the animation
                imgPoster.setVisibility(View.VISIBLE);
                imgPoster.startAnimation(animSlideUp);
            }
        });
    }

    @Override
    public void onAnimationStart(Animation animation) {
        // ...
    }

    @Override
    public void onAnimationEnd(Animation animation) {
        // ...
    }

    @Override
    public void onAnimationCancel(Animation animation) {
        // ...
    }

    @Override
    public void onAnimationRepeat(Animation animation) {
        // ...
    }
}
```

```
});  
}  
  
@Override  
public void onAnimationEnd(Animation animation) {  
    // Take any action after completing the animation  
  
    // check for zoom in animation  
    if (animation == animSlideUp) {  
    }  
  
}  
  
@Override  
public void onAnimationRepeat(Animation animation) {  
    // TODO Auto-generated method stub  
  
}  
  
@Override  
public void onAnimationStart(Animation animation) {  
    // TODO Auto-generated method stub  
}  
}
```

TogetherActivity.class:-

```
package com.android.animations;  
  
import android.app.Activity;  
import android.os.Bundle;  
import android.view.View;  
import android.view.animation.Animation;  
import android.view.animation.Animation.AnimationListener;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.ImageView;  
  
public class TogetherActivity extends Activity implements AnimationListener {  
  
    ImageView imgLogo;  
    Button btnStart;  
  
    // Animation  
    Animation animTogether;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        // TODO Auto-generated method stub  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_together);  
  
        imgLogo = (ImageView) findViewById(R.id.imgLogo);  
        btnStart = (Button) findViewById(R.id.btnStart);
```

```
// load the animation
animTogether = AnimationUtils.loadAnimation(getApplicationContext(),
    R.anim.together);

// set animation listener
animTogether.setAnimationListener(this);

// button click event
btnStart.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        // start the animation
        imgLogo.startAnimation(animTogether);
    }
});

@Override
public void onAnimationEnd(Animation animation) {
    // Take any action after completing the animation

    // check for zoom in animation
    if(animation == animTogether) {
    }

}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}
```

ZoomInActivity.class:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class ZoomInActivity extends Activity implements AnimationListener {
```

```
ImageView imgPoster;
Button btnStart;

// Animation
Animation animZoomIn;

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

    imgPoster = (ImageView) findViewById(R.id.imgLogo);
    btnStart = (Button) findViewById(R.id.btnStart);

    // load the animation
    animZoomIn = AnimationUtils.loadAnimation(getApplicationContext(),
        R.anim.zoom_in);

    // set animation listener
    animZoomIn.setAnimationListener(this);

    // button click event
    btnStart.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {
            // start the animation
            imgPoster.startAnimation(animZoomIn);
        }
    });
}

@Override
public void onAnimationEnd(Animation animation) {
    // Take any action after completing the animation

    // check for zoom in animation
    if (animation == animZoomIn) {
    }

}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}
```

ZoomOutActivity.class:-

```
package com.android.animations;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.Animation.AnimationListener;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class ZoomOutActivity extends Activity implements AnimationListener {

    ImageView imgPoster;
    Button btnStart;

    // Animation
    Animation animZoomOut;

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

        imgPoster = (ImageView) findViewById(R.id.imgLogo);
        btnStart = (Button) findViewById(R.id.btnStart);

        // load the animation
        animZoomOut = AnimationUtils.loadAnimation(getApplicationContext(),
            R.anim.zoom_out);

        // set animation listener
        animZoomOut.setAnimationListener(this);

        // button click event
        btnStart.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // start animation
                imgPoster.startAnimation(animZoomOut);
            }
        });
    }

    @Override
    public void onAnimationEnd(Animation animation) {
        // Take any action after completing the animation

        // check for zoom in animation
        if (animation == animZoomOut) {
        }
    }
}
```

```
}

@Override
public void onAnimationRepeat(Animation animation) {
    // TODO Auto-generated method stub
}

@Override
public void onAnimationStart(Animation animation) {
    // TODO Auto-generated method stub
}

}
```

Blink.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <alpha android:fromAlpha="0.0"
          android:toAlpha="1.0"
          android:interpolator="@android:anim/accelerate_interpolator"
          android:duration="600"
          android:repeatMode="reverse"
          android:repeatCount="infinite"/>
</set>
```

Bounce.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
      android:fillAfter="true"
      android:interpolator="@android:anim/bounce_interpolator">

    <scale
        android:duration="500"

        android:fromXScale="1.0"
        android:fromYScale="0.0"

        android:toXScale="1.0"
        android:toYScale="1.0" />

</set>
```

fade_in.xml:-

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

    <alpha
```

```
    android:duration="1000"
    android:fromAlpha="0.0"
    android:interpolator="@android:anim/accelerate_interpolator"
    android:toAlpha="1.0" />

</set>
```

fade_out.xml:-

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

    <alpha
        android:duration="1000"
        android:fromAlpha="1.0"
        android:interpolator="@android:anim/accelerate_interpolator"
        android:toAlpha="0.0" />

</set>
```

Flip.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <scale
        android:interpolator="@android:anim/linear_interpolator"
        android:fromXScale="1.0"
        android:toXScale="1.0"
        android:fromYScale="1.0"
        android:toYScale="0.0"
        android:pivotY="100%"
        android:fillAfter="false"
        android:duration="200" />
    <translate
        android:fromYDelta="1.0"
        android:toYDelta="100%"
        android:duration="300"/>
</set>
```

Move.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set
      xmlns:android="http://schemas.android.com/apk/res/android"
      android:interpolator="@android:anim/linear_interpolator"
      android:fillAfter="true">

    <translate
        android:fromXDelta="0%p"
        android:toXDelta="75%p"
        android:duration="800" />
</set>
```

Rotate.xml:-

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

```
<set xmlns:android="http://schemas.android.com/apk/res/android">
<rotate
    android:fromDegrees="0"
    android:toDegrees="360"

    android:pivotX="50%"
    android:pivotY="50%"

    android:duration="600"

    android:repeatMode="restart"
    android:repeatCount="infinite"

    android:interpolator="@android:anim/cycle_interpolator"/>
</set>
```

Sequential.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
    android:fillAfter="true"
    android:interpolator="@android:anim/linear_interpolator">

    <!-- Use startOffset to give delay between animations-->

    <!-- Move -->
    <translate
        android:duration="800"
        android:fillAfter="true"
        android:fromXDelta="0%p"
        android:startOffset="300"
        android:toXDelta="75%p" />
    <translate
        android:duration="800"
        android:fillAfter="true"
        android:fromYDelta="0%p"
        android:startOffset="1100"
        android:toYDelta="70%p" />
    <translate
        android:duration="800"
        android:fillAfter="true"
        android:fromXDelta="0%p"
        android:startOffset="1900"
        android:toXDelta="-75%p" />
    <translate
        android:duration="800"
        android:fillAfter="true"
        android:fromYDelta="0%p"
        android:startOffset="2700"
        android:toYDelta="-70%p" />

    <!-- Rotate 360 degrees -->
    <rotate
        android:duration="1000"
```

```
    android:fromDegrees="0"
    android:interpolator="@android:anim/cycle_interpolator"

    android:pivotX="50%"
    android:pivotY="50%"
    android:startOffset="3800"
    android:repeatCount="infinite"
    android:repeatMode="restart"
    android:toDegrees="360" />

</set>
```

Slide_down.xml:-

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

    <scale
          android:duration="500"

          android:fromXScale="1.0"
          android:fromYScale="0.0"

          android:toXScale="1.0"
          android:toYScale="1.0" />

</set>
```

Slide_up.xml:-

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

    <scale
          android:duration="500"

          android:fromXScale="1.0"
          android:fromYScale="1.0"

          android:interpolator="@android:anim/linear_interpolator"
          android:toXScale="1.0"
          android:toYScale="0.0" />

</set>
```

Together.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
      android:fillAfter="true"
      android:interpolator="@android:anim/linear_interpolator">

    <!-- Use startOffset to give delay between animations -->
```

```
<!-- Move -->
<scale
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:duration="4000"

    android:fromXScale="1"
    android:fromYScale="1"

    android:pivotX="50%"
    android:pivotY="50%"

    android:toXScale="4"
    android:toYScale="4">
</scale>

<!-- Rotate 180 degrees -->
<rotate
    android:duration="500"

    android:fromDegrees="0"

    android:pivotX="50%"
    android:pivotY="50%"

    android:repeatCount="infinite"
    android:repeatMode="restart"
    android:toDegrees="360" />
```

</set>

Zoom_in.xml:-

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

    <scale
        xmlns:android="http://schemas.android.com/apk/res/android"
        android:duration="1000"

        android:fromXScale="1"
        android:fromYScale="1"

        android:pivotX="50%"
        android:pivotY="50%"

        android:toXScale="3"
        android:toYScale="3">
    </scale>

</set>
```

Zoom_out.xml:-

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

```
<set xmlns:android="http://schemas.android.com/apk/res/android"
    android:fillAfter="true">

    <scale
        xmlns:android="http://schemas.android.com/apk/res/android"
        android:duration="1000"
        android:fromXScale="1.0"
        android:fromYScale="1.0"

        android:pivotX="50%"
        android:pivotY="50%"

        android:toXScale="0.5"
        android:toYScale="0.5">
    </scale>

</set>
```

Activity_main.xml:-

```
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent">

    <TableLayout
        android:layout_width="fill_parent"
        android:layout_height="wrap_content">

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">

            <Button
                android:id="@+id/btnFadeIn"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_margin="5dp"
                android:layout_weight="1"
                android:text="Fade In" />

            <Button
                android:id="@+id/btnFadeOut"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_margin="5dp"
                android:layout_weight="1"
                android:text="Fade Out" />
        </TableRow>

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">

            <Button
                android:id="@+id/btnCrossFade"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_weight="1" />
        </TableRow>
    </TableLayout>
</ScrollView>
```

```
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_margin="5dp"
        android:layout_weight="1"
        android:text="Cross Fade" />

    <Button
        android:id="@+id/btnBlink"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_margin="5dp"
        android:layout_weight="1"
        android:text="Blink" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btnZoomIn"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="Zoom In" />
    </TableRow>

    <Button
        android:id="@+id/btnZoomOut"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_margin="5dp"
        android:layout_weight="1"
        android:text="Zoom Out" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btnRotate"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="Rotate" />
    </TableRow>

    <Button
        android:id="@+id/btnMove"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_margin="5dp"
```

```
        android:layout_weight="1"
        android:text="Move" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btnSlideUp"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="Slide Up" />

        <Button
            android:id="@+id/btnSlideDown"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="Slide Down" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btnBounce"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="Bounce" />
    </TableRow>

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center_horizontal"
        android:orientation="horizontal">

        <Button
            android:id="@+id/btnSequential"
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="Sequential Animation" />
    </TableRow>
```

```
</TableRow>

<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:gravity="center_horizontal"
    android:orientation="horizontal">

    <Button
        android:id="@+id/btnTogether"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_margin="5dp"
        android:layout_weight="1"
        android:text="Together Animation" />
</TableRow>
</TableLayout>

</ScrollView>
```

Activity_blink.xml:-

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

    <TextView android:id="@+id/txtMessage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is fadein animation"
        android:layout_centerInParent="true"
        android:textSize="25dp"
        android:padding="20dp"
        android:background="#000000"
        android:visibility="gone"/>

    <Button android:id="@+id/btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Animation"
        android:layout_marginTop="30dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_bounce.xml:-

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

    <ImageView
```

```
    android:id="@+id/imgLogo"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerInParent="true"
    android:src="@drawable/mr_beans"
    android:visibility="gone" />

<Button
    android:id="@+id(btnStart"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="20dp"
    android:layout_marginTop="30dp"
    android:text="Start Animation" />

</RelativeLayout>
```

Activity_crossfade.xml:-

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

    <TextView android:id="@+id/txtMessage1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Naresh"
        android:layout_centerInParent="true"
        android:textSize="25dp"/>

    <TextView android:id="@+id/txtMessage2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Ganesh"
        android:layout_centerInParent="true"
        android:textSize="25dp"
        android:visibility="gone"/>

    <Button android:id="@+id	btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Animation"
        android:layout_marginTop="30dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_fadein.xml

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

```
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"

    <TextView android:id="@+id/txtMessage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is fadein animation"
        android:layout_centerInParent="true"
        android:textSize="25dp"
        android:visibility="gone"/>

    <Button android:id="@+id	btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Animation"
        android:layout_marginTop="30dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_fadeout.xml

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

    <TextView android:id="@+id/txtMessage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="This is fadeout animation"
        android:layout_centerInParent="true"
        android:textSize="25dp"/>

    <Button android:id="@+id	btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Animation"
        android:layout_marginTop="30dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_move.xml:-

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

    <ImageView android:id="@+id/imgLogo"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@drawable/twitter"
    android:layout_alignParentLeft="true"/>

<Button android:id="@+id/btnStart"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Start Animation"
    android:layout_marginTop="30dp"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_rotate.xml:-

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

    <ImageView android:id="@+id/imgLogo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/rotate_clock"
        android:layout_centerInParent="true"/>

    <Button android:id="@+id/btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Animation"
        android:layout_marginTop="30dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_sequential.xml:-

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

    <ImageView android:id="@+id/imgLogo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/twitter"
        android:layout_alignParentLeft="true"/>

    <Button android:id="@+id/btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_marginLeft="10dp"/>

</RelativeLayout>
```

```
    android:text="Start Animation"
    android:layout_marginTop="30dp"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Activity_slide_down.xml:-

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

    <ImageView
        android:id="@+id/imgLogo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:src="@drawable/mr_beans"
        android:visibility="gone" />

    <Button
        android:id="@+id	btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"
        android:layout_marginTop="30dp"
        android:text="Start Animation" />

</RelativeLayout>
```

Activity_slide_up.xml:-

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

    <ImageView
        android:id="@+id/imgLogo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:src="@drawable/mr_beans" />

    <Button
        android:id="@+id	btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"
        android:layout_marginTop="30dp"
```

```
    android:text="Start Animation" />  
  </RelativeLayout>  
  
Activity_together.xml:-  
  
<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent">  
  
    <ImageView android:id="@+id/imgLogo"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:src="@drawable/twitter"  
        android:layout_centerInParent="true"/>  
  
    <Button android:id="@+id/btnStart"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Start Animation"  
        android:layout_marginTop="30dp"  
        android:layout_alignParentBottom="true"  
        android:layout_centerHorizontal="true"  
        android:layout_marginBottom="20dp"/>  
  
</RelativeLayout>
```

Activity_zoom_in.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:background="#000000"  
    android:gravity="center">  
  
    <ImageView android:id="@+id/imgLogo"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:src="@drawable/man_of_steel"  
        android:layout_centerInParent="true"/>  
  
    <Button android:id="@+id/btnStart"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="Start Animation"  
        android:layout_marginTop="30dp"  
        android:layout_alignParentBottom="true"  
        android:layout_centerHorizontal="true"  
        android:layout_marginBottom="20dp"/>  
  
</RelativeLayout>
```

Activity_zoom_out.xml:-

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

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#000000"
    android:gravity="center">

    <ImageView android:id="@+id/imgLogo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/man_of_steel"
        android:layout_centerInParent="true"/>

    <Button android:id="@+id/btnStart"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Animation"
        android:layout_marginTop="30dp"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="20dp"/>

</RelativeLayout>
```

Android Manifest.xml:-

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

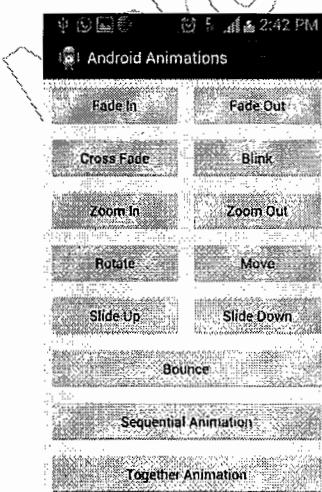
    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="17" />

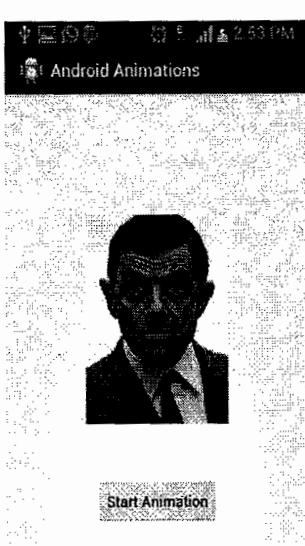
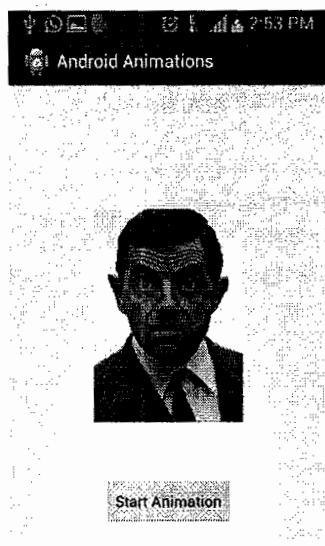
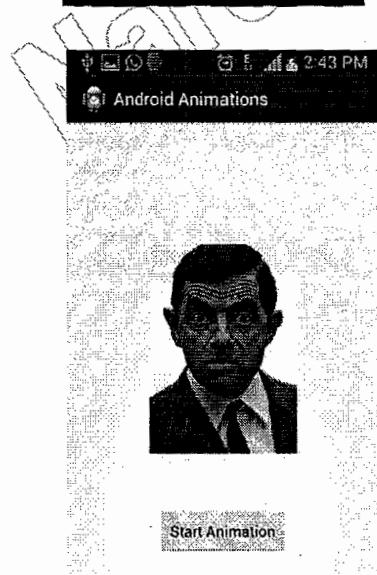
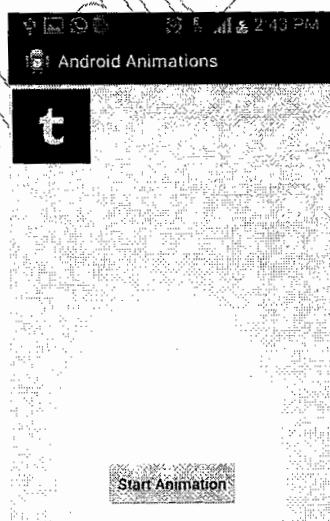
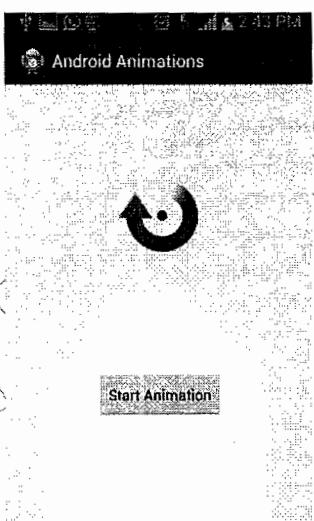
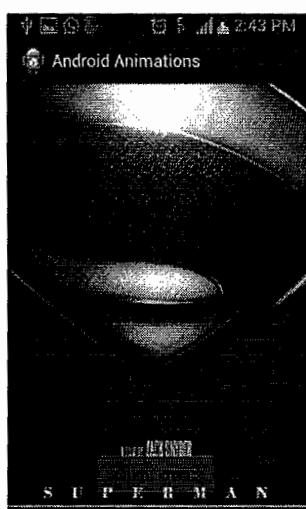
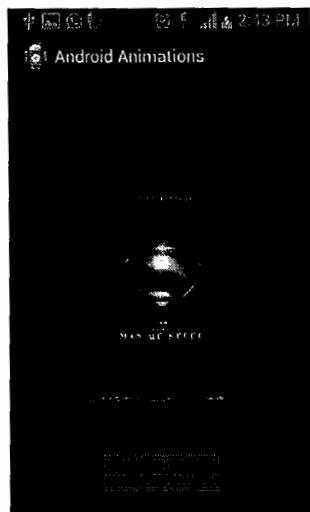
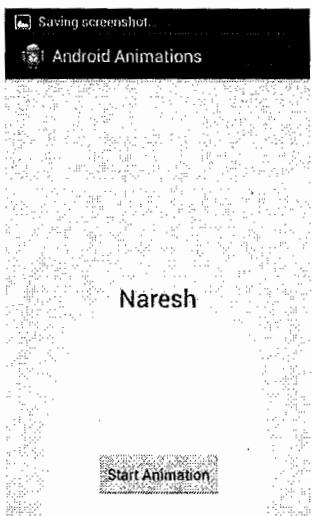
    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.android.animations.MainActivity"
            android:label="@string/app_name" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

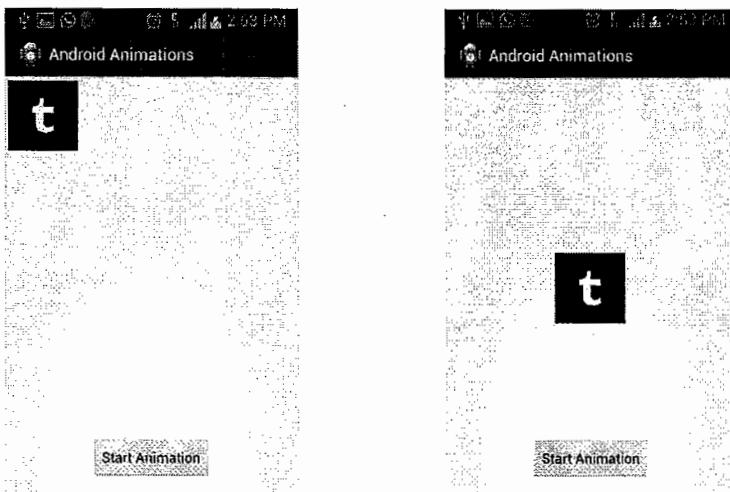
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity
            android:name="com.android.animations.FadeInActivity"
            android:label="@string/app_name" />
        <activity
            android:name="com.android.animations.FadeOutActivity"
            android:label="@string/app_name" />
        <activity
            android:name="com.android.animations.CrossfadeActivity"
```

```
        android:label="@string/app_name" />
<activity
    android:name="com.android.animations.BlinkActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.ZoomInActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.ZoomOutActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.RotateActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.MoveActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.SlideUpActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.SlideDownActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.BounceActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.SequentialActivity"
    android:label="@string/app_name" />
<activity
    android:name="com.android.animations.TogetherActivity"
    android:label="@string/app_name" />
</application>

</manifest>
```







Android activity Animation Example:-

```
package com.example.androidactivityanimation;

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

public class MainActivity extends Activity {

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

        Button switchButton = (Button)findViewById(R.id.switchbutton);

        switchButton.setOnClickListener(new OnClickListener(){

            @Override
            public void onClick(View arg0) {

                Intent intent = new Intent();
                intent.setClass(MainActivity.this, SecondActivity.class);
                startActivity(intent);

                overridePendingTransition(R.anim.right_in, R.anim.left_out);
            }
        });
    }

    package com.example.androidactivityanimation;
```

```
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class SecondActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.layout2);

        Button backButton = (Button)findViewById(R.id.backbutton);
        backButton.setOnClickListener(new OnClickListener(){

            @Override
            public void onClick(View v) {
                finish();
                overridePendingTransition(R.anim.bottom_in, R.anim.top_out);
            }
        });
    }
}
```

Bottom_in.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
      android:interpolator="@android:anim/linear_interpolator">
    <translate
        android:fromYDelta="100%p"
        android:toYDelta="0"
        android:duration="500"/>
</set>
```

Left_out.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
      android:interpolator="@android:anim/linear_interpolator">
    <translate
        android:fromXDelta="0"
        android:toXDelta="-100%p"
        android:duration="500"/>
</set>
```

right_in.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
      android:interpolator="@android:anim/linear_interpolator">
    <translate
        android:fromXDelta="100%p"
        android:toXDelta="0"
        android:duration="500"/>
</set>
```

Top_out.xml:-

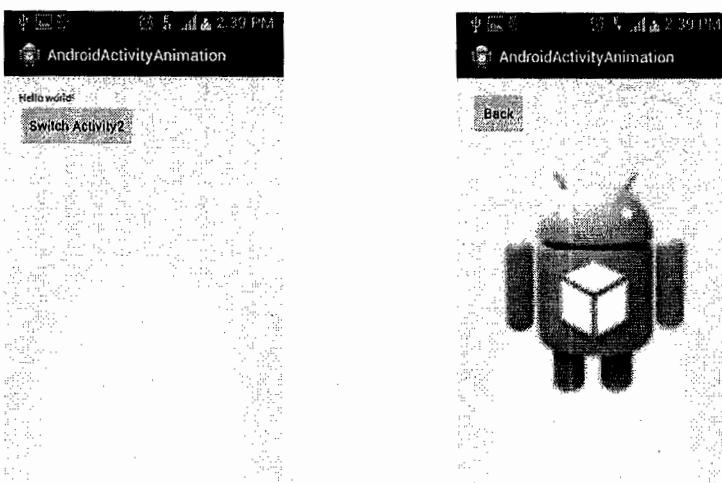
```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android"
      android:interpolator="@android:anim/linear_interpolator">
<translate
      android:fromYDelta="0"
      android:toYDelta="-100%p"
      android:duration="500"/>
</set>
```

Androidmanifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.androidactivityanimation"
    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.androidactivityanimation.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.androidactivityanimation.SecondActivity"
            android:label="@string/app_name" >
        </activity>
    </application>
</manifest>
```

**Example on Frame Animation:-**

```
package com.animations;

import android.app.Activity;
import android.graphics.drawable.AnimationDrawable;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.ImageView;

public class FrameAnimationDemo extends Activity {
    ImageView iv;
    Button bt;
    AnimationDrawable draw;
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

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

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub
                iv=(ImageView)findViewById(R.id.iv);
                iv.setBackgroundResource(R.drawable.custom);

                draw=(AnimationDrawable)iv.getBackground();
                if(draw.isRunning()){
                    draw.stop();
                }
                else {
                    draw.start();
                }
            }
        });
    }
}
```

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

Main.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical">  
  
    <TextView  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Frame Animations Demo"  
        android:textColor="#aa0000"  
        android:gravity="center"  
        android:textSize="20dp"  
        android:textStyle="bold" />  
  
    <ImageView android:id="@+id/iv"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"/>  
  
    <Button android:id="@+id/bt"  
        android:layout_width="fill_parent"  
        android:layout_height="wrap_content"  
        android:text="Start/Stop The Animation"  
        android:textColor="#336600"  
        android:gravity="center"/>  
  
</LinearLayout>
```

Androidmanifest.xml:-

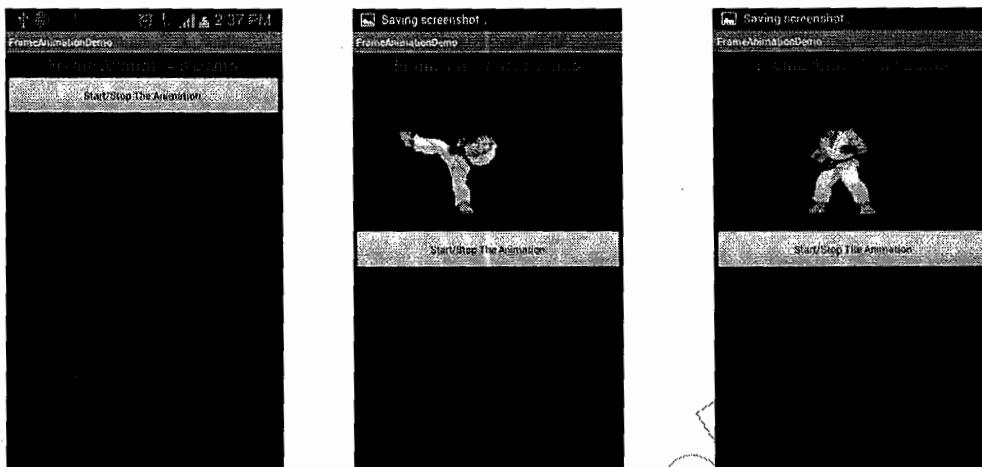
```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.animations"  
    android:versionCode="1"  
    android:versionName="1.0">  
  
    <uses-sdk android:minSdkVersion="8" />  
  
    <application  
        android:icon="@drawable/ic_launcher"  
        android:label="@string/app_name" >  
        <activity  
            android:label="@string/app_name"  
            android:name=".FrameAnimationDemo" >  
            <intent-filter >  
                <action android:name="android.intent.action.MAIN" />  
  
                <category android:name="android.intent.category.LAUNCHER" />
```

```

</intent-filter>
</activity>
</application>

</manifest>

```



Example ON Extrnal Font in andorid:-

```

package com.example.androidhive;

import android.app.Activity;
import android.graphics.Typeface;
import android.os.Bundle;
import android.widget.TextView;

public class AndroidExternalFontsActivity extends Activity {
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        // Font path
        String fontPath = "fonts/Face Your Fears.ttf";

        // text view label
        TextView txtGhost = (TextView) findViewById(R.id.ghost);

        // Loading Font Face
        Typeface tf = Typeface.createFromAsset(getAssets(), fontPath);

        // Applying font
        txtGhost.setTypeface(tf);
    }
}

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

```

```
    android:layout_height="fill_parent"
    android:orientation="vertical"
    android:background="#222222" >

    <TextView
        android:id="@+id/ghost"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:textSize="70dip"
        android:gravity="center"
        android:textColor="#ef0000"
        android:layout_marginTop="50dip"
        android:text="Android Market" />

</LinearLayout>

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

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

    <application
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name" >
        <activity
            android:label="@string/app_name"
            android:name=".AndroidExternalFontsActivity" >
            <intent-filter >
                <action android:name="android.intent.action.MAIN" />

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



Example on Text to speech

```
package com.example.texttospeech;

import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import java.util.Locale;

import android.app.Activity;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends Activity implements
TextToSpeech.OnInitListener {
/** Called when the activity is first created. */

private TextToSpeech tts;
private Button buttonSpeak;
private EditText editText;

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

tts = new TextToSpeech(this, this);
buttonSpeak = (Button) findViewById(R.id.button1);
editText = (EditText) findViewById(R.id.editText1);

buttonSpeak.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View arg0) {
speakOut();
}
});

}

@Override
public void onDestroy() {
// Don't forget to shutdown tts!
if (tts != null) {
tts.stop();
tts.shutdown();
}
super.onDestroy();
}
```

```
@Override
public void onInit(int status) {

    if (status == TextToSpeech.SUCCESS) {

        int result = tts.setLanguage(Locale.US);

        if (result == TextToSpeech.LANG_MISSING_DATA
            || result == TextToSpeech.LANG_NOT_SUPPORTED) {
            Log.e("TTS", "This Language is not supported");
        } else {
            buttonSpeak.setEnabled(true);
            speakOut();
        }
    } else {
        Log.e("TTS", "Initialization Failed!");
    }
}

private void speakOut() {
    String text = editText.getText().toString();
    tts.speak(text, TextToSpeech.QUEUE_FLUSH, null);
}

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

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity" >

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="77dp"
        android:layout_marginTop="42dp"
        android:ems="10" >

        <requestFocus />
```

```
</EditText>

<Button
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/editText1"
    android:layout_below="@+id/editText1"
    android:layout_marginLeft="59dp"
    android:layout_marginTop="39dp"
    android:text="Speak" />

<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/editText1"
    android:layout_alignBottom="@+id/editText1"
    android:layout_alignParentLeft="true"
    android:text="Enter Text:" />

</RelativeLayout>

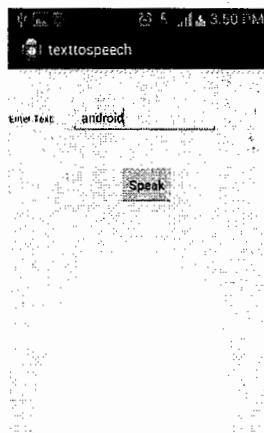
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.texttospeech"
    android:versionCode="1"
    android:versionName="1.0">

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="16" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@style/AppTheme" >
        <activity
            android:name="com.example.texttospeech.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>
```



Examples on internationalization 1

I18N.java:-

```
package sample.i18n;

import java.util.Locale;

import android.app.Activity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.TextView;

public class I18N extends Activity implements OnClickListener {

    private String logtag = getClass().getSimpleName();

    private TextView textView;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        textView = (TextView) findViewById(R.id.textView1);

        Button button = (Button) findViewById(R.id.button1);
        button.setOnClickListener(this);

        Locale locale = Locale.getDefault(); // current locale
        // Locale locale = getResources().getConfiguration().locale; // or you can ...
        Log.d(logtag, "lang = " + locale.getLanguage());
    }

    @Override
    public void onClick(View v) {
        if (v.getId() == R.id.button1) {
            textView.setText(getString(R.string.byebye)); // set localized text
            // textView.setText(R.string.byebye); // or you can do it faster
    }
}
```

```
        }  
    }  
}
```

Main.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical">  
  
    <TextView  
        android:id="@+id/textView1"  
        android:layout_width="match_parent"  
        android:layout_height="match_parent"  
        android:layout_weight="0.9"  
        android:background="#AAAAAA"  
        android:gravity="center"  
        android:isScrollContainer="true"  
        android:text="@string/hello"  
        android:textColor="#333333" >  
    </TextView>  
  
    <Button  
        android:id="@+id/button1"  
        android:layout_width="match_parent"  
        android:layout_height="wrap_content"  
        android:layout_weight="0.1"  
        android:gravity="center"  
        android:text="@string/button" >  
    </Button>  
  
</LinearLayout>
```

Values/strings.xml

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
    <string name="app_name">I18N</string><string name="hello">Hello World.</string>  
  
    <string name="byebye">Bye bye World</string>  
    <string name="button">Change Text</string>  
</resources>
```

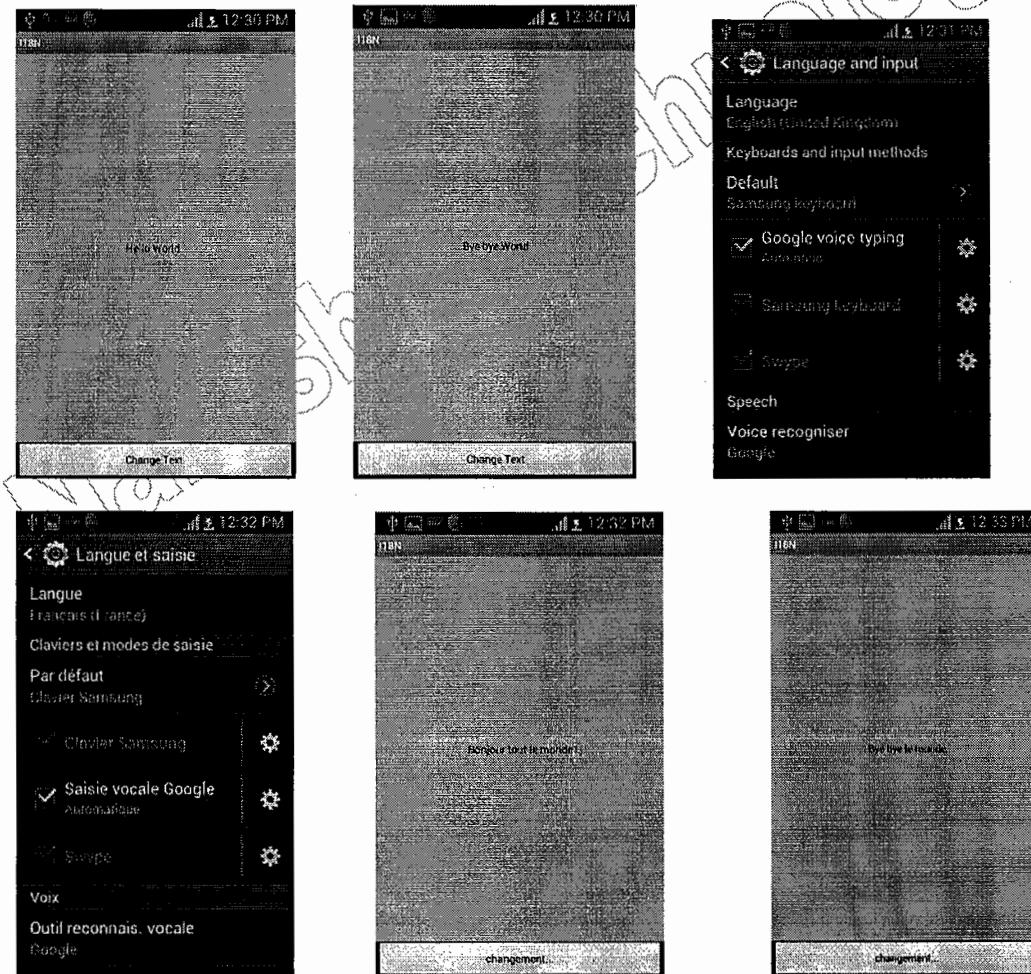
Values-fr/strings.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
    <string name="app_name">I18N</string><string name="hello">Bonjour tout le monde</string>  
  
    <string name="byebye">Bye bye le monde</string>  
    <string name="button">changement...</string>  
</resources>
```

Adnroid manifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="sample.i18n"
    android:versionCode="1"
    android:versionName="1.0">
    <uses-sdk android:minSdkVersion="8" />

    <application android:icon="@drawable/icon" android:label="@string/app_name">
        <activity android:name=".I18N"
            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>
```



Example On internationalization 2**PhrasebookActivity.java:-**

```
public class PhrasebookActivity extends Activity {  
    /** Called when the activity is first created. */  
    @Override  
    public void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.main);  
    }  
}
```

Main.xml:-

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
<ScrollView  
    android:id="@+id/ScrollView01"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_gravity="center" >  
  
<LinearLayout  
    xmlns:android="http://schemas.android.com/apk/res/android"  
    android:layout_width="fill_parent"  
    android:layout_height="fill_parent"  
    android:orientation="vertical" >  
  
<TableLayout  
    android:id="@+id/TableLayout01"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="@dimen/phrase_margin"  
    android:stretchColumns="1" >  
  
<TableRow  
    android:id="@+id/TableRow01"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" >  
  
<TextView  
    android:id="@+id/TextLabel"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/locale_label"  
    android:textColor="@color/locale_color"  
    android:textSize="@dimen/phrase_size" >  
/</TextView>  
  
<TextView  
    android:id="@+id/TextLocale" />
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="@string/locale"
        android:textColor="@color/phrase_color"
        android:textSize="@dimen/phrase_size" >
    </TextView>
</TableRow>

<TableRow
    android:id="@+id/TableRow02"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >

    <TextView
        android:id="@+id/TextView_HelloLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_label"
        android:textColor="@color/label_color"
        android:textSize="@dimen/phrase_size" >
    </TextView>

    <TextView
        android:id="@+id/TextView_Hello"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="@string/hello"
        android:textColor="@color/phrase_color"
        android:textSize="@dimen/phrase_size" >
    </TextView>
</TableRow>

<TableRow
    android:id="@+id/TableRow03"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" >

    <TextView
        android:id="@+id/TextView_GoodbyeLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/goodbye_label"
        android:textColor="@color/label_color"
        android:textSize="@dimen/phrase_size" >
    </TextView>

    <TextView
        android:id="@+id/TextView_Goodbye"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="@string/goodbye"
        android:textColor="@color/phrase_color"
        android:textSize="@dimen/phrase_size" >
    </TextView>
```

```
</TableRow>

<TableRow
    android:id="@+id/TableRow04"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <TextView
        android:id="@+id/TextView_PleaseLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/please_label"
        android:textColor="@color/label_color"
        android:textSize="@dimen/phrase_size">
    </TextView>

    <TextView
        android:id="@+id/TextView_Please"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="@string/please"
        android:textColor="@color/phrase_color"
        android:textSize="@dimen/phrase_size">
    </TextView>
</TableRow>

<TableRow
    android:id="@+id/TableRow05"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <TextView
        android:id="@+id/TextView_ThankyouLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/thankyou_label"
        android:textColor="@color/label_color"
        android:textSize="@dimen/phrase_size">
    </TextView>

    <TextView
        android:id="@+id/TextView_Thankyou"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="@string/thankyou"
        android:textColor="@color/phrase_color"
        android:textSize="@dimen/phrase_size">
    </TextView>
</TableRow>

<TableRow
    android:id="@+id/TableRow06"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
```

```
<TextView  
    android:id="@+id/TextView_HelpLabel"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/help_label"  
    android:textColor="@color/label_color"  
    android:textSize="@dimen/phrase_size">  
</TextView>  
  
<TextView  
    android:id="@+id/TextView_help"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_gravity="right"  
    android:text="@string/help"  
    android:textColor="@color/phrase_color"  
    android:textSize="@dimen/phrase_size">  
</TextView>  
</TableRow>  
</TableLayout>  
  
<TableLayout  
    android:id="@+id/TableLayout02"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content"  
    android:layout_margin="@dimen/phrase_margin">  
  
<TableRow  
    android:id="@+id/TableRow07"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content">  
  
<TextView  
    android:id="@+id/TextView_FlagLabel"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/flag_label"  
    android:textColor="@color/label_color"  
    android:textSize="@dimen/phrase_size">  
</TextView>  
</TableRow>  
  
<TableRow  
    android:id="@+id/TableRow08"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content">  
  
<ImageView  
    android:id="@+id/ImageView01"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:adjustViewBounds="true"  
    android:saveEnabled="true"  
    android:src="@drawable/flag">  
</ImageView>  
</TableRow>
```

```
<TableRow
    android:id="@+id/TableRow09"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <TextView
        android:id="@+id/TextView_MapLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/map_label"
        android:textColor="@color/label_color"
        android:textSize="@dimen/phrase_size">
    </TextView>
</TableRow>

<TableRow
    android:id="@+id/TableRow10"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <ImageView
        android:id="@+id/ImageViewMap"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/map">
    </ImageView>
</TableRow>

<TableRow
    android:id="@+id/TableRow11"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <TextView
        android:id="@+id/TextView_CIAFactbookLabel"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/cia_factbook_label"
        android:textColor="@color/label_color"
        android:textSize="@dimen/phrase_size">
    </TextView>
</TableRow>

<TableRow
    android:id="@+id/TableRow12"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">

    <TextView
        android:id="@+id/TextView_help"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:autoLink="web"
        android:text="@string/cia_factbook_url"
        android:textColor="@color/phrase_color"
        android:textSize="@dimen/phrase_size">

```

```
</TextView>
</TableRow>
</TableLayout>
</LinearLayout>
</ScrollView>

</LinearLayout>
```

Androidmanifest.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.i18nexample"
    android:versionCode="1"
    android:versionName="1.0">

    <uses-sdk
        android:minSdkVersion="8"
        android:targetSdkVersion="18" />

    <application
        android:allowBackup="true"
        android:icon="@drawable/icon"
        android:label="@string/app_name">
        <activity
            android:name="com.example.i18nexample.PhrasebookActivity"
            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>
```

Images:-

- 1)
drawable/flag.png
drawable/map.png
- 2)drawable-fr-rBE/flag.png
drawable-fr-rBE/map.png
- 3)
drawable-fr-rFR/flag.png
drawable-fr-rFR/map.png

value/strings.xml:-

```
<resources>
    <string name="hello">Bon jour!</string>
    <string name="goodbye">Au revoir!</string>
    <string name="please">"S'il vous plaît"</string>
    <string name="thankyou">Merci!</string>
    <string name="help">Au Secours!</string>
```

```
</resources>
```

Value-fr/values.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="locale">Belgium</string>
    <string name="cia_factbook_url">"https://www.cia.gov/library/publications/the-world-
factbook/geos/be.html"</string>
</resources>
```

Value-fr-rFR/values.xml:-

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="locale">France</string>
    <string name="cia_factbook_url">"https://www.cia.gov/library/publications/the-world-
factbook/geos/fr.html"</string>
</resources>
```



