Android Programming
Practical programs

Hello World Program (Write a program to Toast Hello World)
Xml File

```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_centerHorizontal="true"
        android:layout_marginLeft="52dp"
        android:layout_marginTop="61dp"
        android:text="SHOW" />


</RelativeLayout>
```

Java File

```java
package com.andoubleos.myprogram;

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


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

        btn=(Button) findViewById(R.id.button1);

        btn.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub
                Toast.makeText(MainActivity.this, "Hello World",
Toast.LENGTH_LONG).show();
            }
        });
    }
```

```
}
```

Addition of two Numbers (Write a program to add two numbers)
Xml File

```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_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="97dp"
        android:text="Addition "
        android:textAppearance="?android:attr/textAppearanceMedium" />

<TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/textView1"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="43dp"
        android:text="Number One"
        android:textAppearance="?android:attr/textAppearanceMedium" />

<EditText
        android:id="@+id/txtNumber1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/textView2"
        android:layout_alignRight="@+id/textView1"
        android:ems="2"
        android:inputType="number" >

</EditText>
        <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView2"
        android:layout_below="@+id/textView2"
        android:layout_marginTop="47dp"
        android:text="Number Two"
        android:textAppearance="?android:attr/textAppearanceMedium" />

<Button
        android:id="@+id/btnAdd"
        android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView3"
        android:layout_alignRight="@+id/textView3"
        android:layout_below="@+id/textView3"
        android:layout_marginTop="46dp"
        android:text="Add" />

<EditText
        android:id="@+id/txtNumber2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/btnAdd"
        android:layout_alignLeft="@+id/txtNumber1"
        android:ems="2"
        android:inputType="number" />

<TextView
        android:id="@+id/txtResult"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignRight="@+id/txtNumber2"
        android:layout_alignTop="@+id/btnAdd"
        android:textAppearance="?android:attr/textAppearanceMedium" />

</RelativeLayout>
```

Java File

```java
package com.example.twosum;

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

public class MainActivity extends Activity {

    EditText firstNumber;
    EditText secondNumber;
    TextView addResult;
    Button btnAdd;

    double num1,num2,sum;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        firstNumber = (EditText)findViewById(R.id.txtNumber1);
        secondNumber = (EditText)findViewById(R.id.txtNumber2);
        addResult = (TextView)findViewById(R.id.txtResult);
        btnAdd = (Button)findViewById(R.id.btnAdd);

        btnAdd.setOnClickListener(new OnClickListener() {

            public void onClick(View v) {
                num1 = Double.parseDouble(firstNumber.getText().toString());
```

```java
                num2 = Double.parseDouble(secondNumber.getText().toString());
                sum = num1 + num2;
                addResult.setText(Double.toString(sum));
            }
        });
    }


    @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;

    }

}
```

Alert Box (Write a program to Display an alert box with OK and Cancel)
Xml File

```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="146dp"
        android:text="SHOW" />

</RelativeLayout>
```

Java File

```java
package com.andoubleos.alertbox;

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

public class MainActivity extends Activity implements OnClickListener {
    Button btn;

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

```java
        setContentView(R.layout.activity_main);

        btn=(Button) findViewById(R.id.button1);
        btn.setOnClickListener(this);
    }

    @Override
    public void onClick(View arg0) {
        // TODO Auto-generated method stub
        AlertDialog.Builder b1= new AlertDialog.Builder(MainActivity.this);
        b1.setIcon(R.drawable.ic_launcher);
        b1.setTitle("Sample Alert Box");
        b1.setMessage("Hello, Goodmorning");

        b1.setPositiveButton("OK", new DialogInterface.OnClickListener() {

            @Override
            public void onClick(DialogInterface arg0, int arg1) {
                // TODO Auto-generated method stub
                Toast.makeText(MainActivity.this, "You Clicked OK",
Toast.LENGTH_LONG).show();
            }
        });

        b1.setNegativeButton("Cancel", new DialogInterface.OnClickListener()
{

            @Override
            public void onClick(DialogInterface arg0, int arg1) {
                // TODO Auto-generated method stub
                Toast.makeText(MainActivity.this, "You Clicked Cancel",
Toast.LENGTH_LONG).show();
            }
        });

        AlertDialog dl = b1.create();
        dl.show();
    }
}
```

Menu Program (Write a Program to create menu with three menu items)
Xml File

```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>
```

Java File

```java
package com.andoubleos.menuprgm;

import android.net.Uri;
import android.os.Bundle;
```

```java
import android.app.Activity;
import android.content.Intent;
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) {
        // TODO Auto-generated method stub
        int id = item.getItemId();

        if (id == R.id.copyItem){
            Toast.makeText(MainActivity.this, "You Clicked Copy Menu Item",
500).show();
        }
        else if (id == R.id.cutItem){
            Toast.makeText(MainActivity.this, "You Clicked Cut Menu
Item",Toast.LENGTH_LONG).show();
        }
        else if (id == R.id.copyItem){
            Toast.makeText(MainActivity.this, "You Clicked Paste Menu Item",
500).show();
        }
        else if (id == R.id.ggle){
            Intent i = new Intent(Intent.ACTION_VIEW);
            i.setData(Uri.parse("http://www.google.com"));
            startActivity(i);
        }
        return super.onOptionsItemSelected(item);
    }
}
```

Radio Button (Write a Program to Select gender using radio button)
Xml File

```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" >

    <RadioGroup
```

```xml
        android:id="@+id/radioGroup1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginLeft="80dp"
        android:layout_marginTop="76dp" >

        <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" />

        <RadioButton
            android:id="@+id/radio2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Other" />
    </RadioGroup>

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/radioGroup1"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="110dp"
        android:text="SHOW" />

</RelativeLayout>
```

Java File

```java
package com.example.radio;

import android.os.Bundle;
import android.app.Activity;
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 MainActivity extends Activity {
    Button btn;
    RadioGroup rdg;

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

```
        btn=(Button) findViewById(R.id.button1);
        rdg=(RadioGroup) findViewById(R.id.radioGroup1);

        btn.setOnClickListener(new OnClickListener() {

                @Override
                public void onClick(View arg0) {
                        // TODO Auto-generated method stub
                        int selectId = rdg.getCheckedRadioButtonId();
                        RadioButton rdb = (RadioButton) findViewById(selectId);
                        Toast.makeText(MainActivity.this,
rdg.getText(),500).show();
                }
        });
    }
}
```

Spinner (Write a Program to Spin the four items).
Xml File
```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" >

    <Spinner
        android:id="@+id/spinner1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="24dp" />

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/spinner1"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="120dp"
        android:layout_marginLeft="60dp"
        android:text="Large Text"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>
```

Java File
```java
package com.andoubleos.spinnercontrol;

import android.os.Bundle;
import android.app.Activity;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter;
```

```java
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends Activity implements OnItemSelectedListener {
    Spinner sp;
    TextView tv;

    String [] items = {"Keybord","Mouse", "Printer", "Speaker"} ;

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

        sp=(Spinner) findViewById(R.id.spinner1);
        tv=(TextView) findViewById(R.id.textView1);

        sp.setOnItemSelectedListener(this);

        ArrayAdapter<String> adt = new ArrayAdapter<String>(this,
                android.R.layout.simple_list_item_1,items);
        sp.setAdapter(adt);

    }
    @Override
    public void onItemSelected(AdapterView<?> arg0, View arg1, int arg2,
            long arg3) {
        // TODO Auto-generated method stub
        tv.setText(items[arg2]);
    }
}
```

Check box (Write a Program to check the items listed)
Xml File

```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" >

    <CheckBox
        android:id="@+id/checkBox1"
        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="30dp"
        android:text="Android" />

    <CheckBox
        android:id="@+id/checkBox2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/checkBox1"
        android:layout_below="@+id/checkBox1"
```

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

        <CheckBox
            android:id="@+id/checkBox3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignLeft="@+id/checkBox2"
            android:layout_below="@+id/checkBox2"
            android:text="PHP" />

        <CheckBox
            android:id="@+id/checkBox4"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignLeft="@+id/checkBox3"
            android:layout_below="@+id/checkBox3"
            android:text="Shell Script" />

        <Button
            android:id="@+id/button1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignLeft="@+id/checkBox4"
            android:layout_below="@+id/checkBox4"
            android:layout_marginLeft="58dp"
            android:layout_marginTop="67dp"
            android:text="SHOW" />

</RelativeLayout>
```

Java File

```java
package com.andoubleos.mycheckbox;

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

public class MainActivity extends Activity implements OnClickListener {
    CheckBox chk1,chk2,chk3,chk4;
    Button btn;

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

        chk1=(CheckBox) findViewById(R.id.checkBox1);
        chk2=(CheckBox) findViewById(R.id.checkBox2);
        chk3=(CheckBox) findViewById(R.id.checkBox3);
        chk4=(CheckBox) findViewById(R.id.checkBox4);
        btn=(Button) findViewById(R.id.button1);

        btn.setOnClickListener(this);
    }

    @Override
```

```java
    public void onClick(View arg0) {
        // TODO Auto-generated method stub
        StringBuffer strb = new StringBuffer();
        strb.append("Android: ").append(chk1.isChecked());
        strb.append("\nJava: ").append(chk2.isChecked());
        strb.append("\nPHP: ").append(chk3.isChecked());
        strb.append("\nShell Script: ").append(chk4.isChecked());

        Toast.makeText(MainActivity.this, strb.toString(),
Toast.LENGTH_LONG).show();
    }
}
```

Image View (Write a Program to Display images from local drive of the computer)

Xml File

```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/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/button2"
        android:layout_alignParentRight="true"
        android:text="Image 3" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/button1"
        android:layout_alignBottom="@+id/button1"
        android:layout_toLeftOf="@+id/button3"
        android:text="Image 2" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_toLeftOf="@+id/button2"
        android:text="Image 1" />

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="300dp"
        android:layout_height="300dp"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
```

```xml
            android:layout_marginLeft="14dp"
            android:layout_marginTop="40dp"
            />

</RelativeLayout>
```

Java File

```java
package com.andoubleos.imgview;

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

public class MainActivity extends Activity implements OnClickListener {
    ImageView img;
    Button b1,b2,b3;

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

        img=(ImageView) findViewById(R.id.imageView1);
        b1=(Button) findViewById(R.id.button1);
        b2=(Button) findViewById(R.id.button2);
        b3=(Button) findViewById(R.id.button3);

        b1.setOnClickListener(this);
        b2.setOnClickListener(this);
        b3.setOnClickListener(this);

    }

    @Override
    public void onClick(View arg0) {
        // TODO Auto-generated method stub
        switch (arg0.getId()) {
        case R.id.button1:
            img.setBackgroundResource(R.drawable.image1);
            break;
        case R.id.button2:
            img.setBackgroundResource(R.drawable.image2);
            break;
        case R.id.button3:
            img.setBackgroundResource(R.drawable.image3);
            break;

        default:
            break;
        }
    }

}
```

List View (Write a Program to Display the items in a list)

Xml File

```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" >

    <ListView
        android:id="@+id/listView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true" >

    </ListView>

</RelativeLayout>
```

Java File

```java
package com.andoubleos.mylistview;

import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class MainActivity extends Activity {
    ListView lv;

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

        lv=(ListView) findViewById(R.id.listView1);
        String title[] = {"Google","Facebook", "Twitter", "YouTube"};
        ArrayAdapter<String> adt = new ArrayAdapter<String>(MainActivity.this,
                android.R.layout.simple_list_item_1,android.R.id.text1,title) ;
        lv.setAdapter(adt);
    }

    @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;
    }
}
```

Fetch data from an EditText and display it in a TextView
Xml File

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

```xml
    android:id="@+id/relativeLayout1"
    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="36dp"
        android:layout_marginTop="50dp"
        android:text="Enter Any String"
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignRight="@+id/button1"
        android:layout_below="@+id/textView1"
        android:layout_marginTop="18dp"
        android:ems="10"
        android:inputType="textPersonName" >

        <requestFocus />
    </EditText>

    <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="38dp"
        android:text="SHOW" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignRight="@+id/textView1"
        android:layout_marginBottom="53dp"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>
```

Java File

```java
package com.example.abc;

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

```java
public class MainActivity extends Activity {
    Button btn;
    TextView tv;
    EditText txt1;

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

        btn=(Button) findViewById(R.id.button1);
        tv=(Button) findViewById(R.id.textView2);
        txt1=(EditText) findViewById(R.id.editText1);

        btn.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub
                tv.setText(txt1.getText().toString());
            }
        });
    }
}
```

Write a program to display multiplication table of a given number

Xml File

```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/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="16dp"
        android:ems="10"
        android:inputType="number" />

    <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="20dp"
        android:text="Button" />

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
        android:layout_alignParentBottom="true"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/button1"
        android:layout_marginTop="30dp"
        android:text="Large Text"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>
```

Java File

```java
package com.andoubleos.multiplicationtable;

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

public class MainActivity extends Activity {

    EditText txt;
    Button btn;
    TextView txtv;
    int ans = 1;

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

        txt=(EditText) findViewById(R.id.editText1);
        btn=(Button) findViewById(R.id.button1);
        txtv=(TextView) findViewById(R.id.textView1);

        btn.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub
                StringBuffer temp= new StringBuffer();
                String num = txt.getText().toString();
                int n = Integer.parseInt(num);

                for(int i =1; i<=14; i++){
                    ans=(i*n);
                    temp.append(i + " X " + n + " = " + ans + "\n");
                    txtv.setText(temp);
                }
            }
        });
    }
}
```

Write a program to Get IP Address of the device
Xml File

```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_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="156dp"
        android:text="Large Text"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>
```

Java File

```
package com.andoubleos.ipaddress;

import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.app.Activity;
import android.text.format.Formatter;
import android.widget.TextView;

public class MainActivity extends Activity {
    TextView tv;
    String ipa;

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

        tv=(TextView) findViewById(R.id.textView1);
        WifiManager wm = (WifiManager) getSystemService(WIFI_SERVICE);
        ipa=Formatter.formatIpAddress(wm.getConnectionInfo().getIpAddress());
        tv.setText(ipa);
    }
}
```

Write a program to Change the Background colour of the Activity

Xml File

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/r1"
    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
```

```xml
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/button1"
        android:layout_toRightOf="@+id/button1"
        android:text="CHANGE COLOR" />

</RelativeLayout>
```

Java File

```java
package com.gems.pqr;

import android.os.Bundle;
import android.app.Activity;
import android.graphics.Color;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.RelativeLayout;
public class MainActivity extends Activity {
    Button b1;
    RelativeLayout rel;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1=(Button) findViewById(R.id.button1);

        rel=(RelativeLayout) findViewById(R.id.r1);
        b1.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub
                rel.setBackgroundColor(Color.BLUE);
            }
        });

    }
}
```

Write a program to Change the Background image
Xml File

```xml
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/rView"
    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"
```

```xml
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="47dp"
        android:text="CHANGE" />

</RelativeLayout>
```

Java File

```java
package com.andoubleos.background;

import java.util.Random;

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

public class MainActivity extends Activity {

    Button btn;
    View screenView;
    int[] images;

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

        btn =(Button) findViewById(R.id.button1);
        screenView = findViewById(R.id.rView);

        images = new int[]
{R.drawable.image1,R.drawable.image2,R.drawable.image3,R.drawable.image4,R.drawable.image6};
        btn.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub
                int aryLength = images.length;
                Random rand = new Random();
                int randNum = rand.nextInt(aryLength);
                screenView.setBackgroundResource(images[randNum]);

            }
        });
    }
}
```

Write a program to start another activity from your own activity using intent

First Xml File

```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="#0000ff"
    android:paddingBottom="@dimen/activity_vertical_margin"
```

```xml
        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_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:text="Move To Next Activity" />

</RelativeLayout>
```

Second Xml File

```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="#ff0000"
    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" >

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentLeft="true"
        android:layout_marginBottom="63dp"
        android:layout_marginLeft="41dp"
        android:text="Move To Fisrt Activity" />

</RelativeLayout>
```

First Java File

```java
package com.andoubleos.usingintent;

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

public class MainActivity extends Activity implements OnClickListener {
    Button btn;

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

        btn=(Button) findViewById(R.id.button1);
        btn.setOnClickListener(this);
```

```java
        }

        @Override
        public void onClick(View arg0) {
                // TODO Auto-generated method stub
                Intent i = new Intent(MainActivity.this,SecondActivity.class);
                startActivity(i);
        }
}
```

Second Java File

```java
package com.andoubleos.usingintent;

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

public class SecondActivity extends Activity implements OnClickListener {
        Button btn;

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

                 btn=(Button) findViewById(R.id.button1);
            btn.setOnClickListener(this);
        }

        @Override
        public void onClick(View arg0) {
                // TODO Auto-generated method stub
                Intent i = new Intent(SecondActivity.this,MainActivity.class);
                startActivity(i);
        }
}
```

Program to display date and time using dialog box
.xml file

```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="123dp"
        android:text="DISPLAY DATE" />
```

```
        </RelativeLayout>
```

.java file

```java
package com.example.showdate;

import java.util.Calendar;

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

public class MainActivity extends Activity {
    Button btn;
    int year,month,day;
    String sysdate;

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

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

            @Override
            public void onClick(View arg0) {
                // TODO Auto-generated method stub

                 Calendar c = Calendar.getInstance();
                year = c.get(Calendar.YEAR);
                month = c.get(Calendar.MONTH);
                day = c.get(Calendar.DAY_OF_MONTH);
                sysdate = day + " / " + (month+1) + " / " + year;

                AlertDialog.Builder b1= new
AlertDialog.Builder(MainActivity.this);
                b1.setTitle("System Date");
                b1.setMessage("Current System Date is: "+sysdate);
                b1.setPositiveButton("OK", new
DialogInterface.OnClickListener() {

                    @Override
                    public void onClick(DialogInterface arg0, int arg1)
{

                        // TODO Auto-generated method stub

                    }
                });
                AlertDialog d1= b1.create();
                d1.show();
            }
        });
    }
}
```

Write a Program to display Stop watch

.xml file

```xml
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:background="#000000"
    android:layout_height="match_parent" >

    <TextView
        android:id="@+id/timerValue"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/pauseButton"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="37dp"
        android:textSize="40sp"
        android:textColor="#ffffff"
        android:text="@string/timerVal" />

    <Button
        android:id="@+id/startButton"
        android:layout_width="90dp"
        android:layout_height="45dp"
        android:layout_alignParentLeft="true"
        android:layout_centerVertical="true"
        android:layout_marginLeft="38dp"
        android:text="@string/startButtonLabel" />

    <Button
        android:id="@+id/pauseButton"
        android:layout_width="90dp"
        android:layout_height="45dp"
        android:layout_alignBaseline="@+id/startButton"
        android:layout_alignBottom="@+id/startButton"
        android:layout_alignParentRight="true"
        android:layout_marginRight="38dp"
        android:text="@string/pauseButtonLabel" />

    <Button
        android:id="@+id/resetButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/startButton"
        android:layout_marginTop="28dp"
        android:layout_toLeftOf="@+id/pauseButton"
        android:text="@string/resetButtonLabel" />

</RelativeLayout>
```

.java File

```java
package com.example.eightstopwatch;

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

```java
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;


public class MainActivity extends Activity {

    private Button startButton;
    private Button pauseButton;
    private Button resetButton;

    private TextView timerValue;

    private long startTime = 0L;

    private Handler customHandler = new Handler();

    long timeInMilliseconds = 0L;
    long timeSwapBuff = 0L;
    long updatedTime = 0L;

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

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

        startButton = (Button) findViewById(R.id.startButton);

        startButton.setOnClickListener(new View.OnClickListener() {

            public void onClick(View view) {
                startTime = SystemClock.uptimeMillis();
                customHandler.postDelayed(updateTimerThread, 0);
            }
        });
        resetButton = (Button) findViewById(R.id.resetButton);
        resetButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {

                timerValue.setText("00:00:00");

                // adapter.notifyDataSetChanged();
            }
        });
        pauseButton = (Button) findViewById(R.id.pauseButton);

        pauseButton.setOnClickListener(new View.OnClickListener() {

            public void onClick(View view) {

                timeSwapBuff += timeInMilliseconds;
                customHandler.removeCallbacks(updateTimerThread);
```

```
                }
            });
        }

        private Runnable updateTimerThread = new Runnable() {

            public void run() {

                timeInMilliseconds = SystemClock.uptimeMillis() - startTime;

                updatedTime = timeSwapBuff + timeInMilliseconds;

                int secs = (int) (updatedTime / 1000);
                int mins = secs / 60;
                secs = secs % 60;
                int milliseconds = (int) (updatedTime % 1000);
                timerValue.setText("" + mins + ":"
                                + String.format("%02d", secs) + ":"
                                + String.format("%03d", milliseconds));
                customHandler.postDelayed(this, 0);
            }
        };
}
```

Write a Program to Select current system time using date time picker

.xml file

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

    <EditText
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:id="@+id/in_date"
        android:layout_marginTop="82dp"
        android:layout_alignParentTop="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/sel_date"
        android:id="@+id/btn_date"
        android:layout_alignBottom="@+id/in_date"
        android:layout_toRightOf="@+id/in_date"
        android:layout_toEndOf="@+id/in_date" />
```

```xml
<EditText
    android:layout_width="200dp"
    android:layout_height="wrap_content"
    android:id="@+id/in_time"
    android:layout_below="@+id/in_date"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/sel_time"
    android:id="@+id/btn_time"
    android:layout_below="@+id/btn_date"
    android:layout_alignLeft="@+id/btn_date"
    android:layout_alignStart="@+id/btn_date" />

</RelativeLayout>
```

.java file

```java
package com.example.tencurrentsystemtime;

import android.widget.TimePicker;
import java.util.Calendar;
import android.os.Bundle;
import android.app.Activity;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;


public class MainActivity extends Activity implements
        View.OnClickListener {

    Button btnDatePicker, btnTimePicker;
    EditText txtDate, txtTime;
    private int mYear, mMonth, mDay, mHour, mMinute;

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

        btnDatePicker=(Button)findViewById(R.id.btn_date);
        btnTimePicker=(Button)findViewById(R.id.btn_time);
        txtDate=(EditText)findViewById(R.id.in_date);
        txtTime=(EditText)findViewById(R.id.in_time);

        btnDatePicker.setOnClickListener(this);
        btnTimePicker.setOnClickListener(this);
    }

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

```java
        if (v == btnDatePicker) {

            // Get Current Date
            final Calendar c = Calendar.getInstance();
            mYear = c.get(Calendar.YEAR);
            mMonth = c.get(Calendar.MONTH);
            mDay = c.get(Calendar.DAY_OF_MONTH);

            DatePickerDialog datePickerDialog = new DatePickerDialog(this,
                new DatePickerDialog.OnDateSetListener() {

                    @Override
                    public void onDateSet(DatePicker view, int year,
                                int monthOfYear, int dayOfMonth) {

                        txtDate.setText(dayOfMonth + "-" + (monthOfYear + 1) + "-" + year);

                    }
                }, mYear, mMonth, mDay);
            datePickerDialog.show();

        }
        if (v == btnTimePicker) {

            // Get Current Time
            final Calendar c = Calendar.getInstance();
            mHour = c.get(Calendar.HOUR_OF_DAY);
            mMinute = c.get(Calendar.MINUTE);


            // Launch Time Picker Dialog
            TimePickerDialog timePickerDialog = new TimePickerDialog(this,
                new TimePickerDialog.OnTimeSetListener() {

                    @Override
                    public void onTimeSet(TimePicker view, int hourOfDay,
                            int minute) {

                        txtTime.setText(hourOfDay + ":" + minute);

                    }
                }, mHour, mMinute, false);
            timePickerDialog.show();

        }
    }
}
```

Write a Program to display contacts using Grid View Control
Manifest.xml

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

XML File

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

```xml
        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" >

    <GridView
        android:id="@+id/gridView1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:numColumns="3" >
    </GridView>

</RelativeLayout>
```

Java File

```java
package com.example.gridview;

import android.widget.GridView;
import android.os.Bundle;
import android.app.Activity;
import android.view.View;
import android.widget.GridView;

public class MainActivity extends Activity {
        GridView gv;

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

        gv=(GridView) findViewById(R.id.gridView1);
        gv.setNumColumns(2);

        Cursor c =managedQuery(Contacts.People.CONTENT_URI, null, null,
null,Contacts.People.NAME);

        String[] cols = new String[]{Contacts.People.NAME};
        int[] views= new int[] {android.R.id.text1};

        SimpleCursorAdapter adpt = new SimpleCursorAdapter(this,
android.R.layout.simple_list_item_1, c, cols, views);

        gv.setAdapter(adpt);
    }
}
```

Write a program using array adapter
.xml file

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
        android:id="@+id/myLinearLayout"
```

```
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:orientation="vertical"
        xmlns:android="http://schemas.android.com/apk/res/android">
        <TextView
                android:id="@+id/selection"
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:background="#ff0033cc"
                android:textColor="#ff0000"
                android:textSize="25dp"
                android:textStyle="bold">
        </TextView>
        <Spinner
                android:id="@+id/spinner"
                android:layout_width="fill_parent"
                android:layout_height="wrap_content">
        </Spinner>
</LinearLayout>
```

.java file

```java
package com.example.sevenspinnercontrol;

import android.widget.TextView;
import android.os.Bundle;
import android.app.Activity;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.TextView;
import android.widget.Spinner;


public class MainActivity extends Activity implements
                AdapterView.OnItemSelectedListener {
        TextView selection;
        String[] items = { "an double os", "COMPUTER", "MOUSE", "KEYBORD", "MONITOR",
                        "HARD DISK", "LAPTOP", "PRINTER", "SCANNER", "SPEAKER" };

        @Override
        public void onCreate(Bundle icicle) {
                super.onCreate(icicle);
                setContentView(R.layout.activity_main);
                selection = (TextView) findViewById(R.id.selection);

                Spinner spin = (Spinner) findViewById(R.id.spinner);
                spin.setOnItemSelectedListener(this);

                ArrayAdapter aa = new
ArrayAdapter(this,android.R.layout.simple_spinner_item,items);

                aa.setDropDownViewResource(
                    android.R.layout.simple_spinner_dropdown_item);
                spin.setAdapter(aa);
        }
```

```java
        public void onItemSelected(AdapterView<?> parent, View v, int position,
                        long id) {
                selection.setText(items[position]);
        }

        public void onNothingSelected(AdapterView<?> parent) {
                selection.setText("");
        }
}
```

Write a program for Login Using username and password
XML File

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.onlinetutorialspoint.official.simplelogin.MainActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:layout_marginLeft="16dp"
    android:layout_marginRight="16dp"
    android:layout_centerInParent="true">
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="UserName"
        android:id="@+id/username"/>
<EditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="password"
    android:id="@+id/password"
    android:inputType="textPassword"
    />
    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Login"
        android:background="#3f76ff"
        android:textColor="#fff"
        android:id="@+id/login"/>

</LinearLayout>
</RelativeLayout>
```

JAVA file

```java
package com.example.login;

import android.widget.Toast;
import android.os.Bundle;
```

```java
import android.app.Activity;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends Activity {
    private EditText usernameEditText;
    private EditText passwordEditText;
    private Button loginButton;

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

        usernameEditText = (EditText) findViewById(R.id.username);
        passwordEditText = (EditText) findViewById(R.id.password);
        loginButton = (Button) findViewById(R.id.login);

        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (usernameEditText.getText().length() > 0 &&
passwordEditText.getText().length() > 0) {
                    String toastMessage = "Username: " + usernameEditText.getText().toString() +
", Password: " + passwordEditText.getText().toString();
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                } else {
                    String toastMessage = "Username or Password are not populated";
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```