1. Program to check whether a number is prime or not

MainActivity.java file

```
package com.example.myapplication;
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.Toast;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final EditText GetNumber = (EditText)findViewById(R.id.getvalue);
        Button button = (Button) findViewById(R.id.result);
        button.setOnClickListener(new OnClickListener() {
            public void onClick(View arg0) {
                int flag=0;
                double num1 =
Double.parseDouble(GetNumber.getText().toString());
                for (int i = 2; i < num1; i++)
                {
                    if (num1 % i == 0)
                        flag = 1;
                }
                if (flag == 0)
                {
                    Toast t = Toast.makeText(getApplicationContext(),"Given
Number is Prime Number",Toast.LENGTH_SHORT); t.show();
                }else{
                    Toast t = Toast.makeText(getApplicationContext(),"Given
Number is Not a Prime Number",Toast.LENGTH_SHORT);
                    t.show();
                }
            }
        });
    }
}
```

Activity_Main.Xml File

```
<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_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="36dp"
        android:text="Check Prime or Not" />
    <EditText
        android:id="@+id/getvalue"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="100dp"
        android:ems="10" />
    <Button
        android:id="@+id/result"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/getvalue"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="26dp"
        android:text="Check" />
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/getvalue"
        android:layout_alignLeft="@+id/getvalue"
        android:layout_marginBottom="53dp"
        android:layout_marginLeft="18dp"
        android:text="Enter a Number" />
</RelativeLayout>
```

2. Write a program to display multiplication table of a given number

Activity_Main.Xml File

```
<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_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="76dp"
        android:ems="10" />
    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignRight="@+id/textView1"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="30dp"
        android:text="Click Here" />
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/button1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="29dp"
        android:text="ENTER A NUMBER:" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
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 editText;
    Button button;
    TextView result;
    int ans = 0;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        editText = (EditText) findViewById(R.id.editText1);
        button = (Button) findViewById(R.id.button1);
        result = (TextView) findViewById(R.id.textView1);
        button.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View arg0) {
// TODO Auto-generated method stub
                StringBuffer buffer = new StringBuffer();
                String fs = editText.getText().toString();
                int n = Integer.parseInt(fs);
                for (int i = 1; i <= 15; i++) {
                    ans = (i * n);
                    buffer.append(i + " X " + n + " = " + ans + "\n");
                    result.setText(buffer);
                }
            }
        });
    }
}
```

3. Program to Toast a message when a Button is pressed

Activity_Main.Xml File

```
<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/Toast"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="147dp"
        android:text="Click Here" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
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.Toast;
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.Toast);
        button.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View arg0) {
// TODO Auto-generated method stub
                Toast t = Toast.makeText(getApplicationContext(),
                        "Welcome To Android Proramming",Toast.LENGTH_SHORT);
t.show();
            }
        });
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
// Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.layout.activity_main, menu);
        return true;
    }
}
```

4. Android application for adding two numbers

Activity_Main.Xml File

```
<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_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" >
        <requestFocus />
    </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"
        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>
```

MainActivity.java file

```
package com.example.myapplication;
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;
```

```
    @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);
        Button btnAdd = (Button) findViewById(R.id.btnAdd);
        btnAdd.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                double num1 =
Double.parseDouble(firstNumber.getText().toString());
                double num2 =
Double.parseDouble(secondNumber.getText().toString());
                double sum = num1 + num2;
                addResult.setText(Double.toString(sum));
            }
        });
    }
}
```

5. Develop a simple user interface to display message

Activity_Main.Xml File

```
<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/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:text="Click Here to Display Message" />
    <TextView
        android:id="@+id/display"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/button"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="26dp"
        android:text="Hi" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.view.View.OnClickListener;
import android.widget.Toast;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final TextView display=(TextView)findViewById(R.id.display);
        Button button = (Button) findViewById(R.id.button);
        button.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View arg0) {
                display.setText("Welcome to Android Programming");
            }
        });
    }
}
```

6. Create two menu items-opening a file-saving a file

Goto res> Menu> activity_main.xml

MainActivity.java file

7. Inserting values into Spinner control using Edit Text and Button

Activity_Main.Xml File

```
<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/gettext"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/textView1"
        android:layout_marginLeft="32dp"
```

```
        android:layout_marginTop="30dp"
        android:ems="10" >
        <requestFocus />
    </EditText>
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/gettext"
        android:layout_alignParentTop="true"
        android:layout_marginTop="40dp"
        android:text="Enter String value" />
    <Button
        android:id="@+id/add"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignRight="@+id/gettext"
        android:layout_below="@+id/gettext"
        android:layout_marginRight="68dp"
        android:layout_marginTop="23dp"
        android:text="Enter " />
    <Spinner
        android:id="@+id/spinner"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/gettext"
        android:layout_below="@+id/add"
        android:layout_marginLeft="19dp"
        android:layout_marginTop="28dp" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import java.util.ArrayList;
import java.util.Collection;
import android.os.Bundle;
import android.annotation.SuppressLint;
import android.app.Activity;
import android.widget.Adapter;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;
import android.text.TextUtils;
import android.view.Menu;
import android.view.View;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final EditText selection = (EditText) findViewById(R.id.gettext);
        Spinner spin = (Spinner) findViewById(R.id.spinner);
```

```
        Button add = (Button)findViewById(R.id.add);
        final ArrayList<String> items = new ArrayList<String>();
        items.add("ITEMS");
        items.add("COMPUTER");
        items.add("MOUSE");
        ArrayAdapter aa = new
ArrayAdapter(this,android.R.layout.simple_spinner_item,items);
        aa.setDropDownViewResource(
                android.R.layout.simple_spinner_dropdown_item);
        spin.setAdapter(aa);
        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View arg0) {
                String getitem = selection.getText().toString();
                if(TextUtils.isEmpty(getitem))
                {
                    Toast.makeText(MainActivity.this,
                            "Enter Some Value", Toast.LENGTH_SHORT).show();
                }
                else
                {
                    items.add(getitem);
                    Toast.makeText(MainActivity.this,"Value Entered
successfully",
                            Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```

8. Implementation of Background Image

Activity_Main.Xml File

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/rl"
    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_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="146dp"
        android:text="Image 1" />
    <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="25dp"
        android:text="Image 2" />
    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/button2"
        android:src="@drawable/cube" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
public class MainActivity extends Activity implements View.OnClickListener {
    ImageView v1;
    Button btn1;
    Button btn2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btn1=(Button)findViewById(R.id.button1);
        btn2=(Button)findViewById(R.id.button2);
        v1=(ImageView)findViewById(R.id.imageView1);
        btn1.setOnClickListener(this);
        btn2.setOnClickListener(this);
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
// Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.activity_main, menu);
        return true;
    }
    @Override
    public void onClick(View v) {
        int viewId = v.getId();

        if (viewId == R.id.button1) {
            v1.setImageResource(R.drawable.cube);
        } else if (viewId == R.id.button2) {
            v1.setImageResource(R.drawable.bg);
        }
    }

}
```

9. Implementation of arrayadapter

Activity_Main.Xml File

```
<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" >
    <Spinner
        android:id="@+id/spinner"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="132dp" />
    <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="54dp"
        android:text="Array Adapter Program" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import java.util.ArrayList;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Spinner spin = (Spinner) findViewById(R.id.spinner);
        final ArrayList<String> items = new ArrayList<String>();
        items.add("ITEMS");
        items.add("COMPUTER");
        items.add("MOUSE");
        ArrayAdapter aa = new
ArrayAdapter(this,android.R.layout.simple_spinner_item,items);
        aa.setDropDownViewResource(
                android.R.layout.simple_spinner_dropdown_item);
        spin.setAdapter(aa);
    }
}
```

10. Create an alert dialogs used to display a message and offer two button options to continue. Clicking either button will close the dialog after executing the attached click listener

Activity_Main.Xml File

```
<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/buttonAlert"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:text="Show Alert Box" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import android.app.Activity;
import android.app.AlertDialog;
import android.content.Context;
import android.content.DialogInterface;
import android.os.Bundle;
import android.view.Menu;
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;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = (Button) findViewById(R.id.buttonAlert);
        button.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View arg0) {
                AlertDialog.Builder alertDialogBuilder = new
AlertDialog.Builder(context);
                alertDialogBuilder.setTitle("Your Title");
                alertDialogBuilder.setMessage("Click yes to exit
!").setCancelable(false).setPositiveButton(" Yes " ,new
DialogInterface.OnClickListener()
                {
                    public void onClick (DialogInterface dialog,int id){
                    MainActivity.this.finish();
```

```
                }
                }) .setNegativeButton("No", new
DialogInterface.OnClickListener() {
                    public void onClick(DialogInterface dialog, int id) {
                        dialog.cancel();
                    }
                });
                AlertDialog alertDialog = alertDialogBuilder.create();
                alertDialog.show();
            }
        });
    }
}
```

11. Load menu item by parsing XML data

Goto res> Menu>menu main.xml

MainActivity.java file

12. A Button control shows Date picker and Text view control displays selected date

Activity_Main.Xml File

```
<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/btnTime"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentLeft="true"
        android:layout_marginBottom="139dp"
        android:text="Set the Time" />
    <Button
        android:id="@+id/btnDate"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_above="@+id/btnTime"
        android:layout_alignParentLeft="true"
        android:text="Set the Date" />
    <TextView
        android:id="@+id/lblDateAndTime"
        android:layout_width="fill_parent"
        android:layout_height="67dp"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
```

```
        android:layout_marginTop="48dp"
        android:background="#FFFFFF"
        android:textStyle="bold" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import android.app.Activity;
import android.os.Bundle;
import android.app.DatePickerDialog;
import android.app.TimePickerDialog;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.TimePicker;
import android.widget.TextView;
import java.text.DateFormat;
import java.util.Calendar;
public class MainActivity extends Activity {
    DateFormat fmtDateAndTime = DateFormat.getDateTimeInstance();
    TextView lblDateAndTime;
    Calendar myCalendar = Calendar.getInstance();
    DatePickerDialog.OnDateSetListener d = new
DatePickerDialog.OnDateSetListener() {
        public void onDateSet(DatePicker view, int year, int monthOfYear,
                              int dayOfMonth) {
            myCalendar.set(Calendar.YEAR, year);
            myCalendar.set(Calendar.MONTH, monthOfYear);
            myCalendar.set(Calendar.DAY_OF_MONTH, dayOfMonth);
            updateLabel();
        }
    };
    TimePickerDialog.OnTimeSetListener t = new
            TimePickerDialog.OnTimeSetListener() {
                public void onTimeSet(TimePicker view, int hourOfDay, int
minute) {
                    myCalendar.set(Calendar.HOUR_OF_DAY, hourOfDay);
                    myCalendar.set(Calendar.MINUTE, minute);
                    updateLabel();
                }
            };

    private void updateLabel() {
        lblDateAndTime.setText(fmtDateAndTime.format(myCalendar.getTime()));
    }

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        lblDateAndTime = (TextView) findViewById(R.id.lblDateAndTime);
        Button btnDate = (Button) findViewById(R.id.btnDate);
        btnDate.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
```

```
                new DatePickerDialog(MainActivity.this, d,
myCalendar.get(Calendar.YEAR),
                        myCalendar.get(Calendar.MONTH),
myCalendar.get(Calendar.DAY_OF_MONTH)).show();
            }
        });
        Button btnTime = (Button) findViewById(R.id.btnTime);
        btnTime.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                new TimePickerDialog(MainActivity.this, t, myCalendar
                        .get(Calendar.HOUR_OF_DAY),
myCalendar.get(Calendar.MINUTE), true).show();
            }
        });
        updateLabel();
    }
}
```

13. Create a spinner that takes data from the String.xml file

Goto>Res/values/strings.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="app_name">Spinner new</string>
    <string name="menu_settings">Settings</string>
    <string-array name="fruits">
        <item>Apple</item>
        <item>Orange</item>
        <item>PineApple</item>
        <item>Watermelon</item>
    </string-array>
</resources>
```

Activity_Main.Xml File

```
<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="97dp"
        android:layout_marginTop="40dp"
        android:text="SPINNER PROGRAM" />
    <Spinner
        android:id="@+id/spinner"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/textView1"
```

```
        android:layout_marginTop="65dp" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Spinner spin = (Spinner) findViewById(R.id.spinner);
        ArrayAdapter adapter =
ArrayAdapter.createFromResource(this,R.array.fruits,
                android.R.layout.simple_spinner_item);
        spin.setAdapter(adapter);
    }
}
```

14. Write a program to Get IP Address of the device

AndroidManifest.xml

Add code:

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

Activity_Main.Xml File

```
<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/getIPAddress"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:text="Please wait.. IP Loading" />
</RelativeLayout>
```

MainActivity.java file

```
package com.example.myapplication;
import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.net.HttpURLConnection;
import java.net.URL;
import java.util.ArrayList;
import android.os.Bundle;
import android.app.Activity;
import android.util.Log;
import android.view.Menu;
import android.widget.TextView;
public class MainActivity extends Activity {
    TextView textView;
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        textView = (TextView)findViewById(R.id.getIPAddress);
        getPublicIP();
    }
    private void getPublicIP() {
        new Thread(new Runnable() {
            ArrayList<String> urls = new ArrayList<String>();

            public void run() {
                try {
                    URL url = new URL("https://api.ipify.org/");
                    HttpURLConnection conn = (HttpURLConnection)
url.openConnection();
                    conn.setConnectTimeout(60000);
                    BufferedReader in = new BufferedReader(new
                            InputStreamReader(conn.getInputStream()));
                    String str;
                    while ((str = in.readLine()) != null) {
                        urls.add(str);
                    }
                    in.close();
                } catch (Exception e) {
                    Log.d("MyTag", e.toString());
                }
                MainActivity.this.runOnUiThread(new Runnable() {
                    public void run() {
                        try {
                            textView.setText("Your Device IP Address: " +
urls.get(0));
                        } catch (Exception e) {
                            textView.setText("Please check Network
Connectivity");
                        }
                    }
                });
            }
        }).start();
    }
}
```

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

Activity_Main.Xml File

Second.Xml File

MainActivity.java file

SecondActivity.java file