ANDROID PROGRAMMING SAMPLE PROGRAMS

1. Hello World Program (Write a program to Toast Hello World)

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"
    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=".ToastMainActivity" >

    <Button
        android:id="@+id/buttonToast"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="44dp"
        android:layout_marginTop="74dp"
        android:text="Show Toast" />

  </RelativeLayout>
```

MainActivity.java file

```
package gems.andoubleos.onetoast;

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

public class ToastMainActivity extends Activity {
      private Button button;

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

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

            button.setOnClickListener(new OnClickListener() {
                    public void onClick(View arg0) {

                        Toast.makeText(getApplicationContext(),
                              "Hello World", Toast.LENGTH_LONG).show();
                    }
            });
      }
   }
```

Output

2. **Addition of two Numbers (Write a program to add 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"
    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" >

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

}
```

Output

3. Date and Time Dialog box(Write a program to display date and time using dialog box)

activity_main.xml file

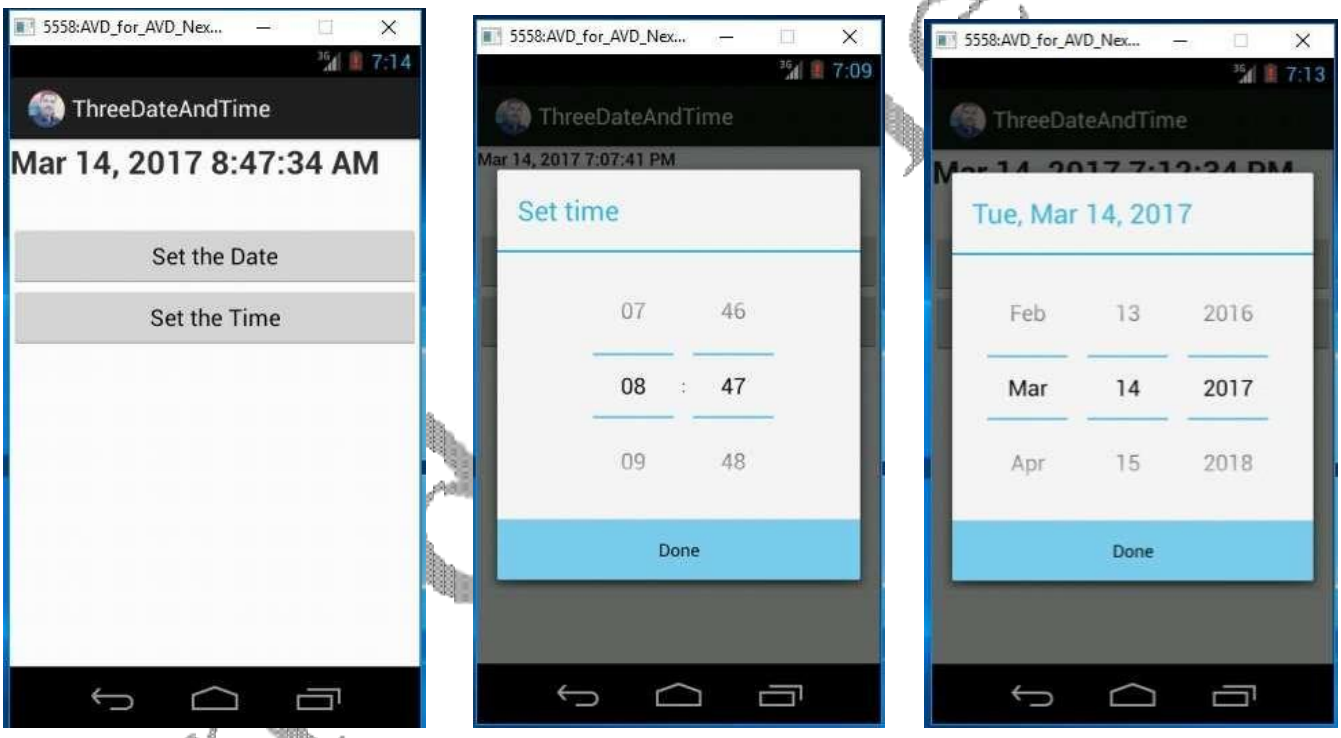
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
	android:id="@+id/widget28"
	android:layout_width="fill_parent"
	android:layout_height="fill_parent"
	android:orientation="vertical"
	xmlns:android="http://schemas.android.com/apk/res/android">
	<TextView
		android:id="@+id/lblDateAndTime"
		android:layout_width="fill_parent"
		android:layout_height="67dp"
		android:background="#FFFFFF"
		android:textStyle="bold">
	</TextView>
	<Button
		android:id="@+id/btnDate"
		android:layout_width="fill_parent"
		android:layout_height="wrap_content"
		android:text="Set the Date">
	</Button>

	<Button
	    android:id="@+id/btnTime"
	    android:layout_width="fill_parent"
	    android:layout_height="wrap_content"
	    android:text="Set the Time" />

</LinearLayout>
```

MainActivity.java file

```
package gems.andoubleos.threedateandtime;

import android.app.Activity;
import android.os.Bundle;
import  android.app.DatePickerDialog;
import  android.app.TimePickerDialog;
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
	public void onCreate(Bundle icicle) {
	super.onCreate(icicle);
	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();
        }
}
```

Output



4. **Alert Box (Write a program to Display an alert box with OK and Cancel)**

activity_main.xml file

```
<?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>
```

MainActivity.java file

```
package gems.andoubleos.fouralertbox;

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.activity_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();
                    }
                });
        }
}
```

Output

5. **Menu Program(Write a Program to create menu with three menu items)**

activity_main.xml file

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:padding="10dip"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content">

    <TextView
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dip"
```

```
        android:text="Category:"
        android:layout_marginBottom="5dp"/>

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:prompt="@string/spinner_title"/>

</LinearLayout>
```

MainActivity.java file

```
package gems.andoubleos.spinner;

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

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

        // Spinner element
        Spinner spinner = (Spinner) findViewById(R.id.action_settings);

        // Spinner click listener
        spinner.setOnItemSelectedListener(this);

        // Spinner Drop down elements
        List<String> categories = new ArrayList<String>();
        categories.add("Automobile");
        categories.add("Business Services");
        categories.add("Computers");
        categories.add("Education");
        categories.add("Personal");
        categories.add("Travel");

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


dataAdapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

        spinner.setAdapter(dataAdapter);
    }
        @Override
```

```
    public void onItemSelected(AdapterView<?> parent, View view, int position, long id)
{
        String item = parent.getItemAtPosition(position).toString();

        Toast.makeText(parent.getContext(), "Selected: " + item,
Toast.LENGTH_LONG).show();
    }
    public void onNothingSelected(AdapterView<?> arg0) {
    }
}
```

Output

6. Radio Button(Write a Program to Select gender using radio button)

activity_main.xml file

```
<?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" >

    <RadioGroup
        android:id="@+id/radioSex"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" >

        <RadioButton
            android:id="@+id/radioMale"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/radio_male"
```

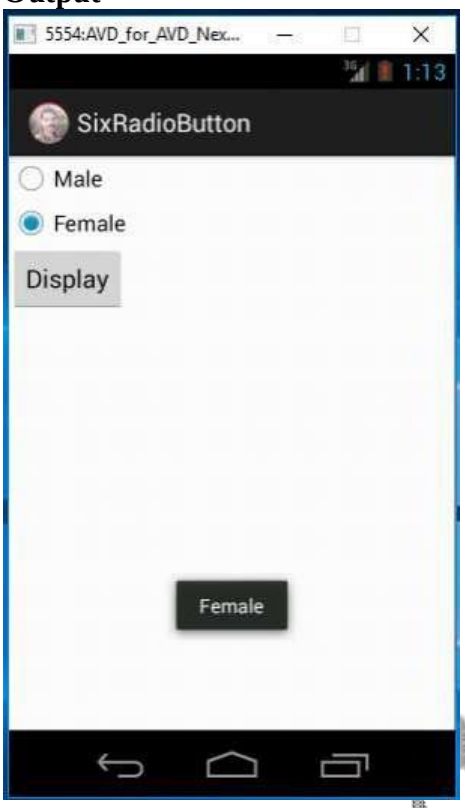
```
            android:checked="true" />

        <RadioButton
            android:id="@+id/radioFemale"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/radio_female" />

    </RadioGroup>

    <Button
        android:id="@+id/btnDisplay"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/btn_display" />

</LinearLayout>
```

MainActivity.java file

```
package gems.andoubleos.sixradiobutton;

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 MainActivity extends Activity {

      private RadioGroup radioSexGroup;
      private RadioButton radioSexButton;
      private Button btnDisplay;
      @Override
      public void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            setContentView(R.layout.activity_main);

            addListenerOnButton();
      }

      public void addListenerOnButton() {

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

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

Output



7. Spinner(Write a Program To Spin the four items)

activity_main.xml file

```
<?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>
```

MainActivity.java file

```
package gems.andoubleos.sevenspinnercontrol;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.TextView;

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);
	}

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

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

Output

8. **Timer Program (Write a Program to display Stop watch)**

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: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>
```

MainActivity.java file

```
package gems.andoubleos.eightstopwatch;

import android.app.Activity;
import android.os.Bundle;
import android.os.Handler;
import android.os.SystemClock;
import android.view.View;
import android.widget.Button;
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) {

                /*   MillisecondTime = 0L ;
                   StartTime = 0L ;
                   TimeBuff = 0L ;
                   UpdateTime = 0L ;
                   Seconds = 0 ;
                   Minutes = 0 ;
                   MilliSeconds = 0 ;  */

                   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);
                }
            };
}
```

Output

9. Check box(Write a Program to check the items listed)

activity_main.xml file

```
<?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/android"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/chk_first" />

        <CheckBox
            android:id="@+id/java"
            android:layout_width="wrap_content"
```

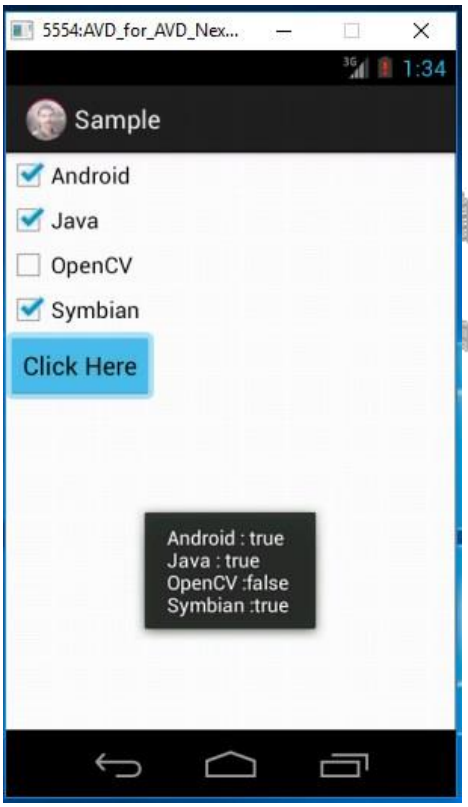
```
            android:layout_height="wrap_content"
            android:text="@string/chk_second"
            android:checked="true" />

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

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

        <Button
            android:id="@+id/Clickhere"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/btn_click" />

</LinearLayout>
```

MainActivity.java file

```
package gems.andoubleos.ninecheckbox;

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 MainActivity extends Activity {

    private CheckBox android, java, opencv, symbian;
    private Button Clickhere;

    @Override
    public void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        android   = (CheckBox) findViewById(R.id.android);
        java      = (CheckBox) findViewById(R.id.java);
        opencv    = (CheckBox) findViewById(R.id.opencv);
        symbian     = (CheckBox) findViewById(R.id.symbian);
        Clickhere = (Button) findViewById(R.id.Clickhere);


        Clickhere.setOnClickListener(new OnClickListener() {

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

```
                // Create string buffer to

                StringBuffer OUTPUT = new StringBuffer();
                OUTPUT.append("Android : ")
                        .append(android.isChecked());

                OUTPUT.append("\nJava : ").append(
                        java.isChecked());

               OUTPUT.append("\nOpenCV :").append(
                        opencv.isChecked());

               OUTPUT.append("\nSymbian :").append(
                       symbian.isChecked());

                Toast.makeText(MainActivity.this, OUTPUT.toString(),
                        Toast.LENGTH_LONG).show();

            }
        });

    }
}
```

Output



10. Date Time Picker(Write a Program to Select current system time using date time picker)

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"
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" />

    <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>
```

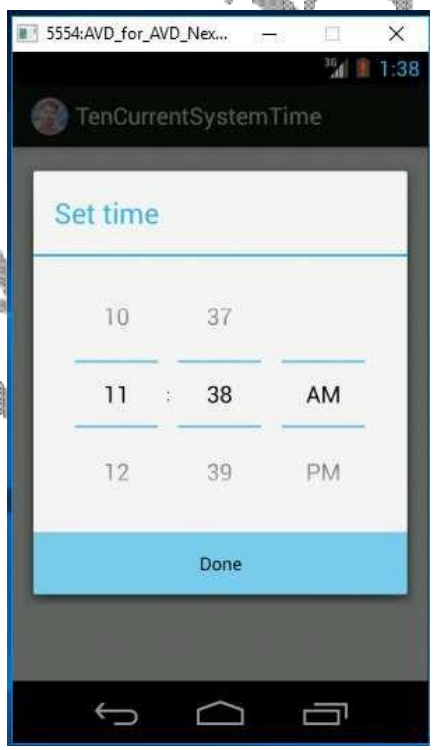
MainActivity.java file

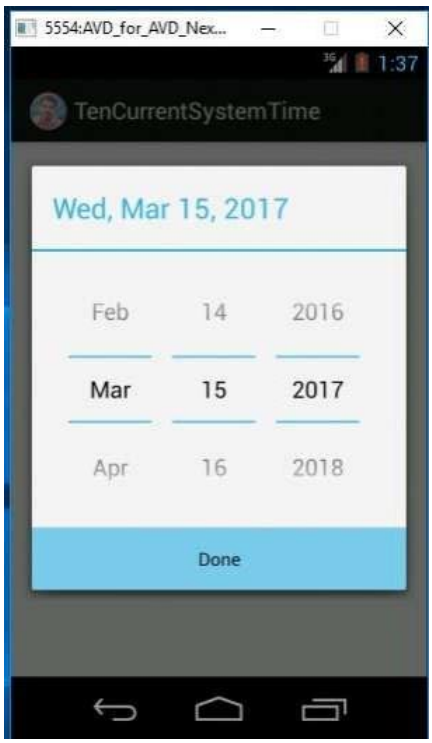
```
package gems.andoubleos.tencurrentsystemtime;

import  android.app.DatePickerDialog;
import  android.app.TimePickerDialog;
import android.app.Activity;
import android.os.Bundle;
```

```
import android.view.View;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.TimePicker;

import java.util.Calendar;

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) {

        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();
        }
    }
}
```

Output





11. Grid View (Write a Program to display contacts using Grid View Control)

activity_main.xml file

```
<?xml version="1.0" encoding="utf-8"?>
<GridView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/gridview"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:columnWidth="90dp"
    android:numColumns="auto_fit"
    android:verticalSpacing="10dp"
    android:horizontalSpacing="10dp"
    android:stretchMode="columnWidth"
    android:gravity="center"
/>
```

MainActivity.java file

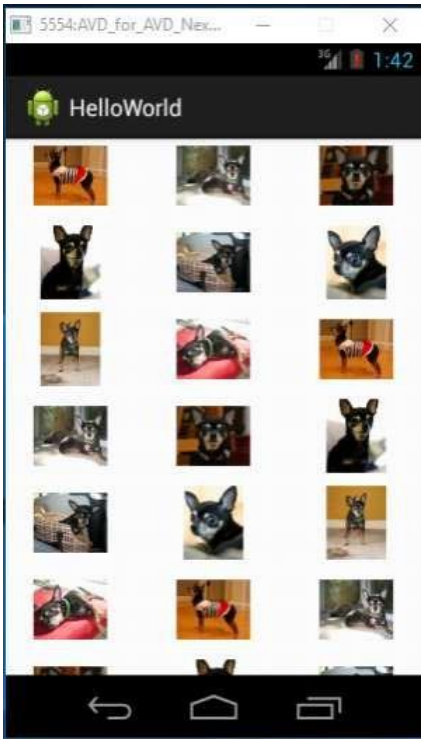
```
package gems.andoubleos.hellogridview;

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

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

        GridView gridview = (GridView) findViewById(R.id.gridview);
        gridview.setAdapter(new ImageAdapter(this));
    }
}
```

ImageAdapter.java

```
package gems.andoubleos.hellogridview;

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;

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

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

    public Object getItem(int position) {
        return null;
    }

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

    // create a new ImageView for each item referenced by the Adapter  public
    View getView(int position, View convertView, ViewGroup parent) {
        ImageView imageView;

        if (convertView == null) {
            imageView = new ImageView(mContext);
            imageView.setLayoutParams(new GridView.LayoutParams(85, 85));
            imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
            imageView.setPadding(8, 8, 8, 8);
        }
        else
        {
            imageView = (ImageView) convertView;
        }
        imageView.setImageResource(mThumbIds[position]);
        return imageView;
    }

    // Keep all Images in array
    public Integer[] mThumbIds = {
        R.drawable.sample_2,  R.drawable.sample_3,
        R.drawable.sample_4,  R.drawable.sample_5,
        R.drawable.sample_6,  R.drawable.sample_7,
        R.drawable.sample_0,  R.drawable.sample_1,
        R.drawable.sample_2,  R.drawable.sample_3,
        R.drawable.sample_4,  R.drawable.sample_5,
        R.drawable.sample_6,  R.drawable.sample_7,
        R.drawable.sample_0,  R.drawable.sample_1,
        R.drawable.sample_2,  R.drawable.sample_3,
        R.drawable.sample_4,  R.drawable.sample_5,
        R.drawable.sample_6, R.drawable.sample_7
    };
}
```

Output



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

activity_main.xml file

```
<?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/imageView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/android" />

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

</LinearLayout>
```

MainActivity.java file

```
package gems.andoubleos.twelvedisplayimage;

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

public class MainActivity extends Activity {

	Button button;
	ImageView image;

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

		addListenerOnButton();

	}

	public void addListenerOnButton() {

		image = (ImageView) findViewById(R.id.imageView1);

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

			@Override
			public void onClick(View arg0) {
				image.setImageResource(R.drawable.android3d);
			}
		});
	}
}
```

Output

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

MainActivity.java file

```
package gems.andoubleos.thirteendisplayitemslist;

import android.app.ListActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;
import android.widget.AdapterView.OnItemClickListener;

public class MainActivity extends ListActivity {

	static final String[] FRUITS = new String[] { "Apple", "Avocado", "Banana",
			"Blueberry", "Coconut", "Durian", "Guava", "Kiwifruit",
			"Jackfruit", "Mango", "Olive", "Pear", "Sugar-apple" };

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

```
            setListAdapter(new ArrayAdapter<String>(this,
R.layout.activity_main,FRUITS));

            ListView listView = getListView();
            listView.setTextFilterEnabled(true);

            listView.setOnItemClickListener(new OnItemClickListener() {
                  public void onItemClick(AdapterView<?> parent, View view,
                              int position, long id) {

                        Toast.makeText(getApplicationContext(),
                          ((TextView) view).getText(), Toast.LENGTH_SHORT).show();
                  }
            });
      }
}
```

activity_main.xml file

```
<?xml version="1.0" encoding="utf-8"?>
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:padding="10dp"
    android:textSize="20sp" >
</TextView>
```

Output

14. Fetch from an EditText and display it in a TextView

activity_main.xml file

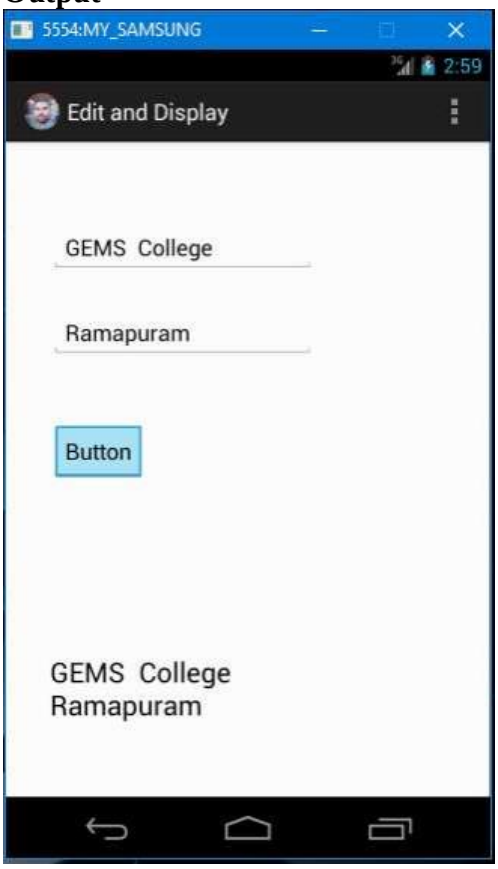
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    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_alignLeft="@+id/textView1"
        android:layout_alignParentTop="true"
        android:layout_marginTop="48dp"
        android:ems="10"
        android:inputType="textPersonName" >

        <requestFocus />
    </EditText>

    <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText1"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="28dp"
        android:ems="10"
        android:inputType="textPersonName" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText2"
        android:layout_below="@+id/editText2"
        android:layout_marginTop="50dp"
        android:text="Button" />

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/button1"
        android:layout_marginRight="184dp"
        android:layout_marginTop="136dp"
        android:text="Display Here"
        android:textAppearance="?android:attr/textAppearanceLarge" />
```

```
</RelativeLayout>
```

MainActivity.java file

```
package com.andoubleos.editanddisplay;

import android.os.Bundle;
import android.app.Activity;
import android.text.method.ScrollingMovementMethod;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends Activity {

      Button butn;
      EditText text1;
      EditText text2;
      TextView txtview;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        butn=(Button)findViewById(R.id.button1);
        txtview=(TextView)findViewById(R.id.textView1);
        txtview.setMovementMethod(new ScrollingMovementMethod());

        butn.setOnClickListener(new View.OnClickListener() {

                    @Override
                    public void onClick(View arg0) {
                          // TODO Auto-generated method stub
                           text1= (EditText)findViewById(R.id.editText1);
                           text2= (EditText)findViewById(R.id.editText2);

      txtview.setText(text1.getText().toString()+"\n"+text2.getText().toString());

                    }
            });
    }
}
```

Output



15. 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"
    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_alignBottom="@+id/editText1"
        android:layout_alignParentRight="true"
        android:layout_marginRight="78dp"
        android:text="Button" />

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

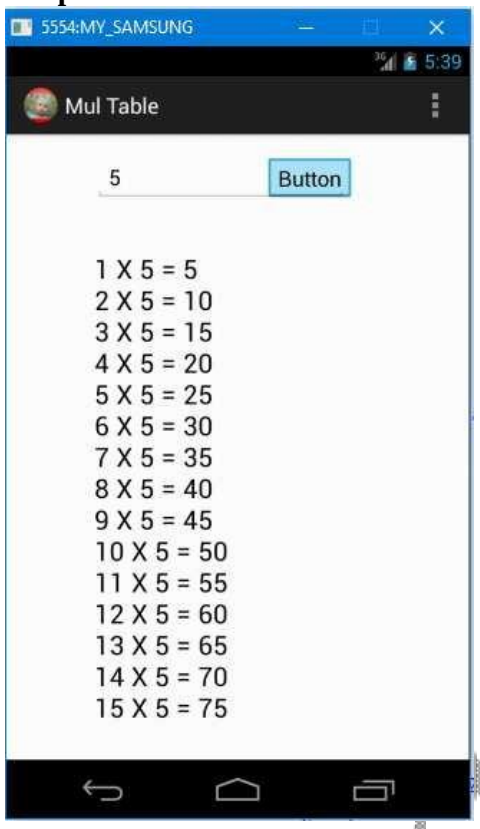
```
        android:layout_alignLeft="@+id/editText1"
        android:layout_alignParentBottom="true"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="41dp"
        android:text=" "
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <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="57dp"
        android:ems="10" />

</RelativeLayout>
```

MainActivity.java file

```
package com.andoubleos.multable;

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);
                }
                }
            });
    }

}
```

Output



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

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"
    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_alignParentLeft="true"
```

```
        android:layout_marginBottom="143dp"
        android:layout_marginLeft="174dp"
        android:text="Large Text"
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView1"
        android:layout_alignParentTop="true"
        android:layout_marginTop="124dp"
        android:text="Get IP Address" />

</RelativeLayout>
```

MainActivity.java file

```
package com.andoubleos.getip;
import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.app.Activity;
import android.text.format.Formatter;
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 {

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

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

                @Override
                public void onClick(View arg0) {
                    // TODO Auto-generated method stub
                    txtview = (TextView) findViewById(R.id.textView1);
                    WifiManager wifiManager =
(WifiManager)getSystemService(WIFI_SERVICE);
                String ipAddress=
Formatter.formatIpAddress(wifiManager.getConnectionInfo().getIpAddress());
                    txtview.setText("Your Device IP Address: " + ipAddress);
                }
            });
    }
}
```

Output

17. Write a program to Change the Background colour of the Activity

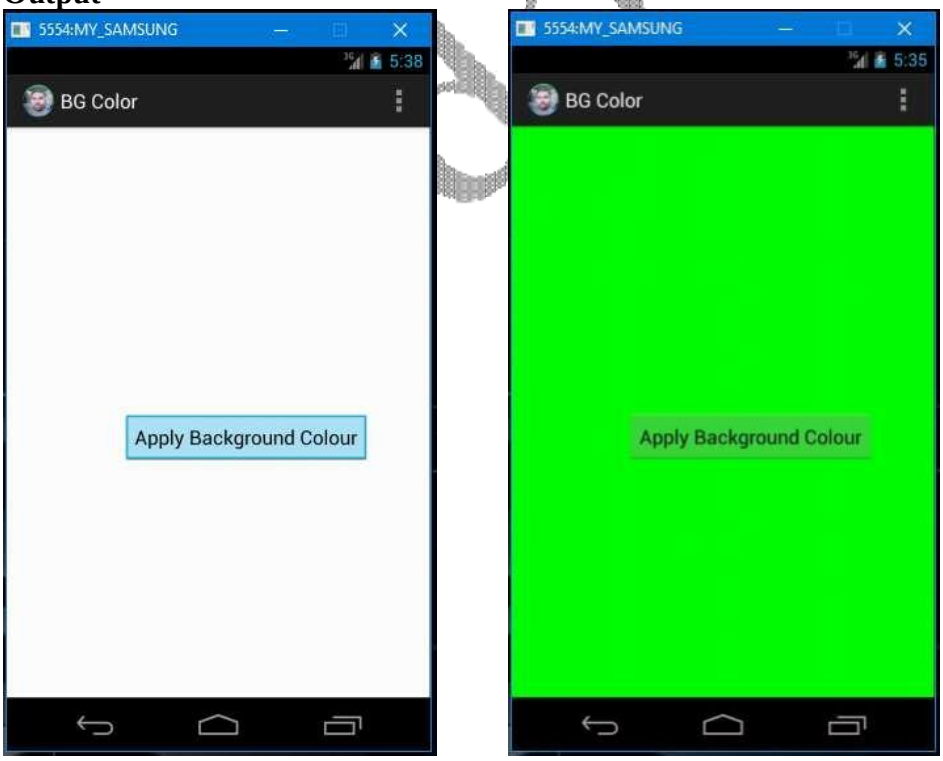
activity_main.xml file

```
<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"
    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="88dp"
        android:layout_marginTop="242dp"
        android:text="Apply Background Colour" />

</RelativeLayout>
```

MainActivity.java file

```
package com.andoubleos.bgcolor;
import android.os.Bundle;
import android.app.Activity;
import android.graphics.Color;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.RelativeLayout;

public class MainActivity extends Activity {
      Button butn;

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

        final RelativeLayout r1 = (RelativeLayout)findViewById(R.id.rl);
        butn= (Button)findViewById(R.id.button1);
        butn.setOnClickListener(new OnClickListener() {

                @Override
                public void onClick(View arg0) {
                      r1.setBackgroundColor(Color.YELLOW);
                }
            });
    }
}
```

Output



18. Write a program to Change the Background image

activity_main.xml file

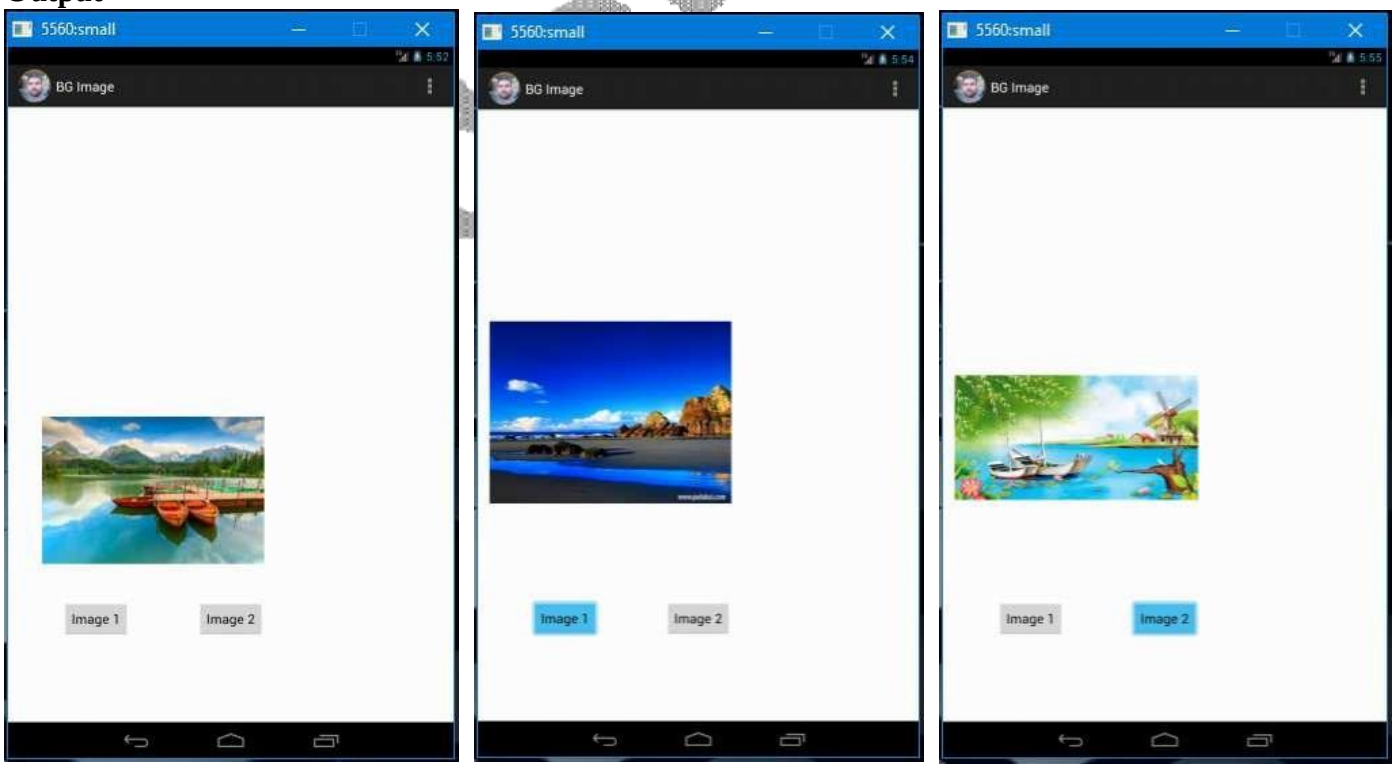
```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"

android:layout_height="match_parent"
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=".ToastMainActivity" >

<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="100dp"
    android:layout_marginLeft="58dp"
    android:text="Image 1" />

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

<ImageView
    android:id="@+id/imageView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_above="@+id/button2"
    android:layout_alignRight="@+id/button2"
    android:minHeight="300dp"
    android:minWidth="300dp"
    android:src="@drawable/bg3" />

</RelativeLayout>
```

MainActivity.java file

```
package com.andoubleos.bgimage;

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 void onClick(View v) {
        // TODO Auto-generated method stub
        switch(v.getId()){
              case R.id.button1:
                    v1.setImageResource(R.drawable.bg1);
                    break;
              case R.id.button2:
                    v1.setImageResource(R.drawable.bg2);
                    break;
        }
  }
}
```

Output



19. Program using array adapter

activity_main.xml file

```
<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: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_weight="1" >
    </ListView>

</LinearLayout>
```

MainActivity.java file

```
package com.andoubleos.arryadapter;

import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.TextView;
import android.widget.ListView;
import android.widget.Toast;

public class MainActivity extends Activity {

      ListView lst;
      String[] months =
{"Janaury","Feb","March","April","May","June","July","August","September","Octomber","
November","December"};

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

        lst= (ListView) findViewById(R.id.listView1);
        ArrayAdapter<String> arrayadapter=new
ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,months);
        lst.setAdapter(arrayadapter);
        lst.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
```

```
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
        TextView tv= (TextView) view;
        Toast.makeText(MainActivity.this,tv.getText()+"
"+position,Toast.LENGTH_LONG).show();
    }
   });
}
```

Output

20. Program to start another activity from your own activity using intent

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"
    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_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="236dp"
```

```
        android:text="Button" />

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:text="You are in First Activity"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>
```

Nextactivitylayout.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/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="You are in Second Activity"
        android:textAppearance="?android:attr/textAppearanceLarge" />

</LinearLayout>
```

MainActivity.java file

```
package com.example.activityintent;

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

public class MainActivity extends Activity {

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

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

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

```
            });
      }
    }
```

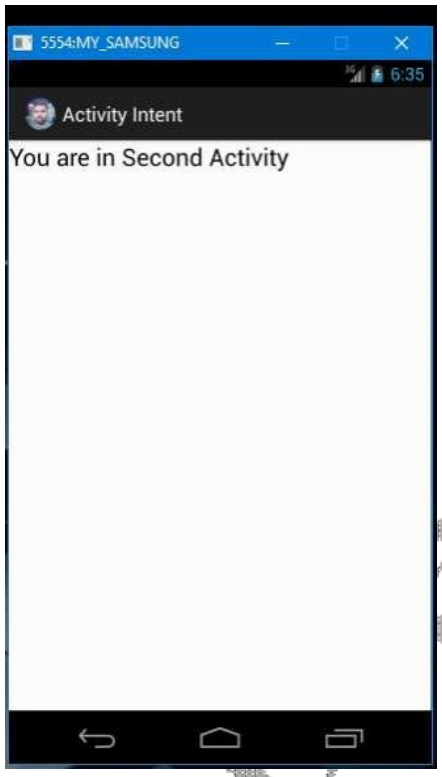
Nextactivity.java

```
package com.example.activityintent;

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

public class nextactivity extends Activity{
      @Override
      protected void onCreate(Bundle savedInstanceState) {
            // TODO Auto-generated method stub

            setContentView(R.layout.nextactivitylayout);

            super.onCreate(savedInstanceState);
      }
}
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.activityintent"
    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.activityintent.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.activityintent.nextactivity"
            android:label="@string/app_name" >
        </activity>
    </application>

</manifest>
```

Output



21.To check whether the number is prime or not

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_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="54dp"
        android:text="PRIME CHECKER"
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <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="65dp"
        android:layout_marginTop="26dp"
        android:text="Enter a Number" />
```

```
    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView1"
        android:layout_below="@+id/textView2"
        android:layout_marginTop="19dp"
        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_marginTop="38dp"
        android:text="CHECK" />

</RelativeLayout>
```

Main_activity.java

```
package com.example.prime;

import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
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 ed=(EditText)findViewById(R.id.editText1);
    Button bt=(Button)findViewById(R.id.button1);
    bt.setOnClickListener(new View.OnClickListener() {

                        @Override
                        public void onClick(View arg0) {
                                double n = Double.parseDouble(ed.getText().toString());
        int f = 0;
for (int i = 2; i < n; i++)
{
if (n % i == 0)
f = 1;
}
```

```
if (f == 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();


}
                    }
            });
      }
```

22.Android program to display message

Activity.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/simpleTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:text="Before Clicking"
        android:textColor="#f00"
        android:textSize="25sp"
        android:textStyle="bold|italic"
        android:layout_marginTop="50dp"/>

    <Button
        android:id="@+id/btnChangeText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:background="#f00"
        android:padding="10dp"
        android:text="Change Text"
        android:textColor="#fff"
        android:textStyle="bold" />


</RelativeLayout>
```

Activity_main.java

```
package com.example.displaymsg;

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

public class MainActivity extends Activity {

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




@Override
                        public void onClick(View arg0) {

                                simpleTextView.setText("welcome to Android");
                        }
                });
        }
```

23.CREATE TWO MENU ITEMS

ACTIVITY.XML

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

xmlns:tools="https://schemas.android.com/tools" tools:context=".MainActivity">

<item  android:id="@+id/item1"
        android:title="OPEN"
        android:showAsAction="ifRoom"/>

    <item  android:id="@+id/item2"
        android:title="SAVE"
        android:showAsAction="ifRoom"/>

        </menu>
```

Activity_main.java

```
package com.example.io;

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

				getMenuInflater().inflate(R.menu.game_menu, menu);
					super.onCreateOptionsMenu(menu);

		return true;
	}
public boolean onOptionsItemSelected(MenuItem item)
{




switch(item.getItemId())
	{
	case R.id.item1:
		Toast.makeText(getApplicationContext(), "OPENING NEW FILE", Toast.LENGTH_LONG).show();

break;
	case R.id.item2:
		Toast.makeText(getApplicationContext(), "SAVING CURRENT FILE", Toast.LENGTH_LONG).show();
		break;

	}

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

24.INSERT ITEMS INTO SPINNER FROM STRINGS.XML FILE

Note::PLACE SPINNER IN LAYOUT ->activity_main.xml

Strings.xml

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

    <string name="app_name">prg13</string>
    <string name="hello_world">Hello world!</string>
    <string name="menu_settings">Settings</string>
    <string-array name="planets"><item name="MERCURY">MERCURY</item>
    <item name="VENUS">VENUS</item>
    <item name="EARTH">EARTH</item></string-array>



</resources>
```

Activity_main.java

```
package com.example.prg13;

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 spinner = (Spinner) findViewById(R.id.spinner1);
                ArrayAdapter<CharSequence> adapter =
ArrayAdapter.createFromResource(this,R.array.planets,android.R.layout.simple_spinner_item);
                adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
                spinner.setAdapter(adapter);
        }}
```

25.ADD ITEMS TO SPINNER USING EDITTEXT AND BUTTON

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="19dp"
        android:layout_marginTop="26dp"
        android:text="enter item" />

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBottom="@+id/textView1"
        android:layout_alignParentRight="true"
        android:ems="10" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_marginTop="16dp"
        android:layout_toRightOf="@+id/textView1"
        android:text="add item" />

    <Spinner
        android:id="@+id/spinner1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/textView1"
        android:layout_below="@+id/button1"
        android:layout_marginTop="23dp" />

</RelativeLayout>
```

JAVA FILE

```
package com.example.prg7;
import java.util.ArrayList;
import java.util.Arrays;
import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter;
```

```
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends Activity implements OnItemSelectedListener {
	EditText t1;
	Button b1;
	Spinner s1;
	String data[]={"Fruits"};
	ArrayList list=new ArrayList(Arrays.asList(data));

	@Override
	protected void onCreate(Bundle savedInstanceState) {
		super.onCreate(savedInstanceState);
		setContentView(R.layout.activity_main);
		b1=(Button)findViewById(R.id.button1);
		t1=(EditText)findViewById(R.id.editText1);
		s1=(Spinner)findViewById(R.id.spinner1);
		s1.setOnItemSelectedListener(this);
		final ArrayAdapter ad=new
ArrayAdapter(this,android.R.layout.simple_spinner_dropdown_item,list);
		s1.setAdapter(ad);
		b1.setOnClickListener(new View.OnClickListener() {

			public void onClick(View v) {
				String s=t1.getText().toString();
				list.add(s);
				ad.notifyDataSetChanged();
				s1.setAdapter(ad);
				Toast.makeText(getApplicationContext(), "item added ti listener",
Toast.LENGTH_LONG).show();


			}
		});

	}
```

26. LOAD MENU ITEMS BY PARSING XML DATA

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_alignParentTop="true"
        android:layout_alignRight="@+id/editText1"
        android:layout_marginTop="76dp"
        android:text="click on option menu first" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginBottom="105dp"
        android:text="Button" />

    <EditText
        android:id="@+id/editText1"
        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="46dp"
        android:ems="10" />

</RelativeLayout>
```

Menu.xml

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

    <item
        android:id="@+id/menu_settings"
        android:orderInCategory="100"
        android:showAsAction="ifRoom"
        android:title="@string/menu_settings"/>
    <item android:id="@+id/window"
        android:showAsAction="ifRoom"
        android:title="window"></item>

</menu>
```

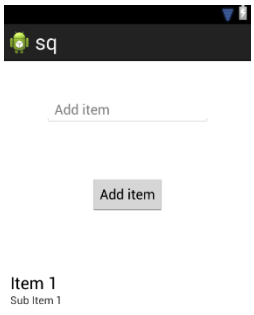
Main_activity.java

```
package com.example.sdf;

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

public class MainActivity extends Activity {
Button b1;String locationItem;EditText t1;
        @Override
```

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

        }

        @Override
  public boolean onCreateOptionsMenu(final Menu menu) {
    getMenuInflater().inflate(R.menu.activity_main, menu);
    t1=(EditText)findViewById(R.id.editText1);

    b1.setOnClickListener(new View.OnClickListener() {

                        @Override
                        public void onClick(View v) {

                                MenuItem locationItem = menu.add(0, R.id.window, 0,t1.getText().toString());
                        }
                });
    return true;
  }
  @Override
  public boolean onOptionsItemSelected(MenuItem item) {
    Toast.makeText(this, "Selected Item: " +item.getTitle(), Toast.LENGTH_SHORT).show();

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

27.INSERT DATA INTO SPINNER USING SQLITE

XML



MAINACTIVITY.JAVA

```
package com.example.sq;

import java.util.List;

import android.os.Bundle;
import android.app.Activity;
import android.content.Context;
import android.database.sqlite.SQLiteDatabase;
import android.view.Menu;
import android.view.View;
import android.view.inputmethod.InputMethodManager;
import android.widget.Adapter;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends Activity  implements OnItemSelectedListener {
   Spinner spinner;
   Button btnAdd,btndel;
   EditText inputLabel;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      spinner = (Spinner) findViewById(R.id.spinner);
      btnAdd =  (Button) findViewById(R.id.btn_add);

      inputLabel = (EditText) findViewById(R.id.input_label);

      spinner.setOnItemSelectedListener(this);


      // Loading spinner data from database
      loadSpinnerData();

      btnAdd.setOnClickListener(new View.OnClickListener() {

@Override
public void onClick(View arg0) {
String label = inputLabel.getText().toString();


         if (label.trim().length() > 0) {
            DatabaseHandler db = new DatabaseHandler(getApplicationContext());
            db.insertLabel(label);
```

```
            // making input filed text to blank
            inputLabel.setText("");

            // Hiding the keyboard
            InputMethodManager imm = (InputMethodManager)
                  getSystemService(Context.INPUT_METHOD_SERVICE);
            imm.hideSoftInputFromWindow(inputLabel.getWindowToken(), 0);
            // loading spinner with newly added data
            loadSpinnerData();
         } else {
            Toast.makeText(getApplicationContext(), "Please enter label name",
                  Toast.LENGTH_SHORT).show();
         }
 }
});
   }


   private void loadSpinnerData() {
   DatabaseHandler db = new DatabaseHandler(getApplicationContext());
      List<String> labels = db.getAllLabels();
      // Creating adapter for spinner
      ArrayAdapter<String> dataAdapter = new
ArrayAdapter<String>(this,android.R.layout.simple_spinner_item, labels);


      // Drop down layout style - list view with radio button
      dataAdapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

      // attaching data adapter to spinner
      spinner.setAdapter(dataAdapter);
   }




@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 onItemSelected(AdapterView<?> parent, View view, int position,
        long id) {

 String label = parent.getItemAtPosition(position).toString();
```

// Showing selected spinner item

Toast.makeText(parent.getContext(), "You selected: " + label,

Toast.LENGTH_LONG).show();
}

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

DatabaseHandler.JAVA

```
package com.example.sq;

import java.util.ArrayList;
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;

public class DatabaseHandler extends SQLiteOpenHelper{
       private static final int DATABASE_VERSION = 1;
    private static final String DATABASE_NAME = "spinnerExample";
    private static final String TABLE_NAME = "labels";
    private static final String COLUMN_ID = "id";
    private static final String COLUMN_NAME = "name";

    public DatabaseHandler(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }

    // Creating Tables
    @Override
    public void onCreate(SQLiteDatabase db) {
        // Category table create query
        String CREATE_ITEM_TABLE = "CREATE TABLE " + TABLE_NAME + "("
                + COLUMN_ID + " INTEGER PRIMARY KEY," + COLUMN_NAME + " TEXT)";
        db.execSQL(CREATE_ITEM_TABLE);
    }

    // Upgrading database
    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        // Drop older table if existed
        db.execSQL("DROP TABLE IF EXISTS " + TABLE_NAME);

        // Create tables again
        onCreate(db);
    }
```

```
    /**
     * Inserting new label into labels table
     * */
    public void insertLabel(String label){
        SQLiteDatabase db = this.getWritableDatabase();

        ContentValues values = new ContentValues();
        values.put(COLUMN_NAME, label);//column name, column value

        // Inserting Row
        db.insert(TABLE_NAME, null, values);//tableName, nullColumnHack, CotentValues
        db.close(); // Closing database connection
    }

    /**
     * Getting all labels
     * returns list of labels
     * */
    public List<String> getAllLabels(){
        List<String> list = new ArrayList<String>();

        // Select All Query
        String selectQuery = "SELECT  * FROM " + TABLE_NAME;

        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.rawQuery(selectQuery, null);//selectQuery,selectedArguments

        // looping through all rows and adding to list
        if (cursor.moveToFirst()) {
            do {
                list.add(cursor.getString(1));//adding 2nd column data
            } while (cursor.moveToNext());
        }
        // closing connection
        cursor.close();
        db.close();
        // returning labels
        return list;
    }


    }
```