



MAD ASSIGNMENT NO 2

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Android Widgets

There are given a lot of **android widgets** with simplified examples such as Button, EditText, AutoCompleteTextView, ToggleButton, DatePicker, TimePicker, ProgressBar etc.

Android widgets are easy to learn. The widely used android widgets with examples are given below:

Android Button

Buttons allows us to control or trigger different events and intents. Example of a button along the code is given at the end of widgets list.

Android Toast

Displays information for the short duration of time.

Custom Toast

We are able to customize the toast, such as we can display image on the toast

ToggleButton

It has only two states. Either it could be ON or OFF.

CheckBox

Checkbox allows us to select the multiple options from any given list.

AlertDialog

AlertDialog displays a alert dialog containing the message with OK and Cancel buttons.

Spinner

Spinner displays the multiple options, but only one can be selected at a time.

AutoCompleteTextView

It allows us to auto complete our text views so that it could be time saving and efficient.

RatingBar

RatingBar displays the rating of an item or a number up to which it has been rated yet.

DatePicker

Datepicker displays the datepicker dialog that can be used to pick the date.

TimePicker

TimePicker displays the timepicker dialog that can be used to pick the time.

ProgressBar

ProgressBar displays progress of any ongoing task or event in application.

Android Button

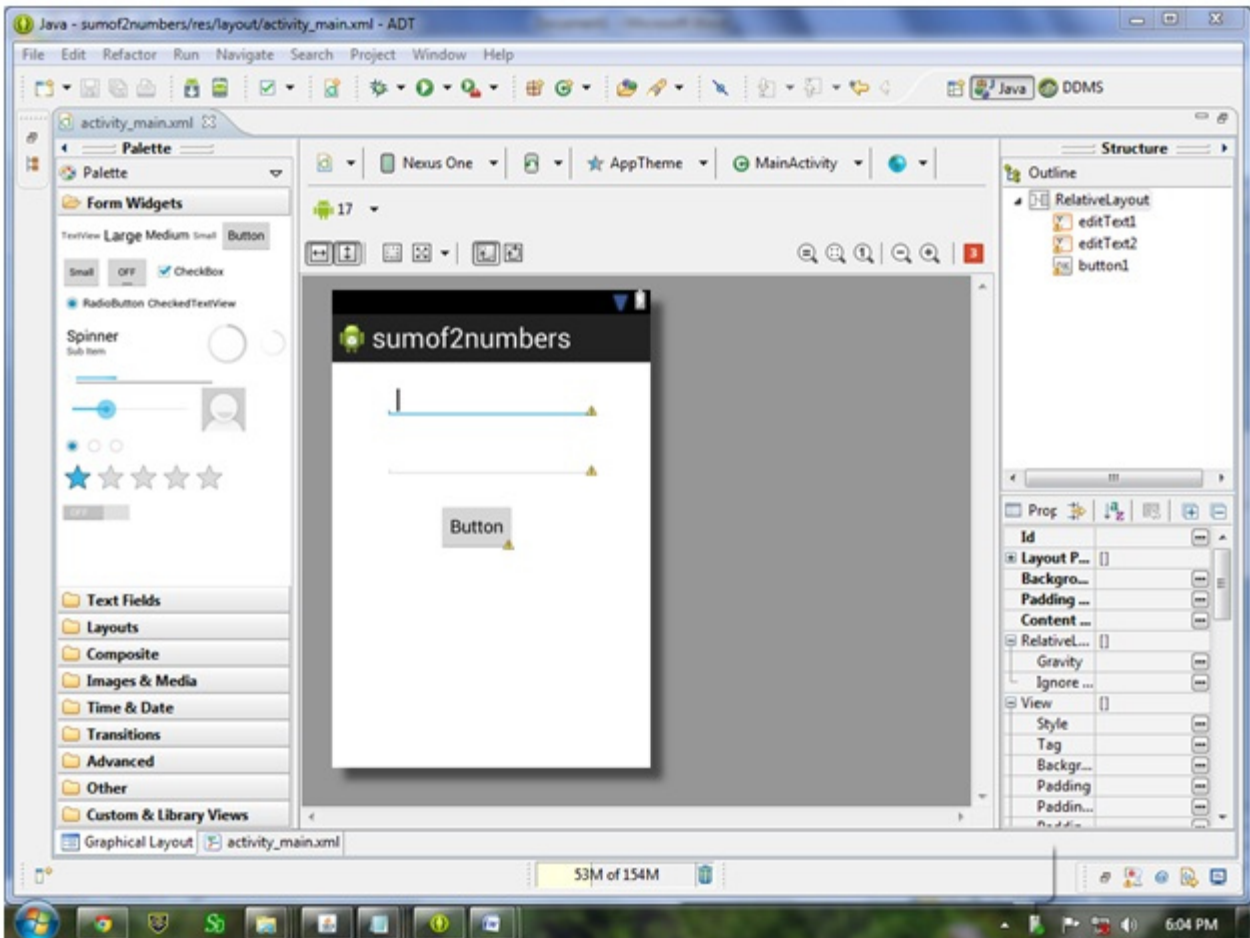
Android Button represents a push-button. The `android.widget.Button` is subclass of `TextView` class and `CompoundButton` is the subclass of `Button` class.

There are different types of buttons in android such as `RadioButton`, `ToggleButton`, `CompoundButton` etc.

Here, we are going to create two textfields and one button for sum of two numbers. If user clicks button, sum of two input values is displayed on the Toast.

Drag the component or write the code for UI in activity_main.xml

First of all, drag 2 textfields from the Text Fields palette and one button from the Form Widgets palette as shown in the following figure.



The generated code for the UI components will be like this:

File: activity_main.xml

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

<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="24dp"
    android:ems="10" />
```

<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="34dp"
    android:ems="10" >
```

```
    <requestFocus />
```

</EditText>

<Button

```
    android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_centerVertical="true"
    android:text="@string/Button" />
```

</RelativeLayout>

File: MainActivity.java

```
package com.example.sumof2numbers;

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 {
    private EditText edittext1,edittext2;
    private Button buttonSum;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        addListenerOnButton();

    }
    public void addListenerOnButton(){
        edittext1=(EditText)findViewById(R.id.editText1);
        edittext2=(EditText)findViewById(R.id.editText2);
        buttonSum=(Button)findViewById(R.id.button1);

        buttonSum.setOnClickListener(new OnClickListener){

            @Override
            public void onClick(View view) {
                String value1=edittext1.getText().toString();
                String value2=edittext2.getText().toString();
                int a=Integer.parseInt(value1);
                int b=Integer.parseInt(value2);
                int sum=a+b;
                Toast.makeText(getApplicationContext(),String.valueOf(sum),Toast.LENGTH_LONG).show
                ();
            }

        });

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

```

```
return true;
```

```
}
```

```
}
```