

**DOCUMENTATION ON MAD PROJECT**

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Sub: Mobile Application Development

Batch: MAD2

### Title Of Project: ****Basic Calculator Application****

* **Introducation**

 A calculator is a device that performs on numbers. The simplest calculators can do only **addition, subtraction, multiplication, and division**.

* **Purpose:**

The user inputs two numbers in two different text fields and then selects the operation by clicking the button and the result is displayed. On clicking the reset button the calculator resets and the user can enter the values again.

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

<**LinearLayout** xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:app="http://schemas.android.com/apk/res-auto"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout\_width="match\_parent"  
    android:layout\_height="match\_parent"  
    tools:context=".MainActivity"  
    android:orientation="vertical"  
    android:background="#FFF">  
    <**LinearLayout**  
        android:layout\_width="match\_parent"  
        android:layout\_height="wrap\_content"  
        android:layout\_marginTop="10dp"  
        android:layout\_marginBottom="30dp"  
        android:layout\_marginLeft="0dp"  
        android:layout\_marginRight="0dp"  
        android:background="#FFF">  
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            android:layout\_width="match\_parent"  
            android:layout\_height="wrap\_content"  
            android:layout\_gravity="center"  
            android:text="Basic Calculator"  
            android:textAlignment="center"  
            android:textColor="#000"  
            android:textSize="30dp" />  
    </**LinearLayout**>  
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        android:layout\_height="wrap\_content"  
        android:layout\_marginBottom="20dp"  
        android:layout\_marginLeft="0dp"  
        android:layout\_marginRight="0dp"  
        android:background="#FFF"  
        android:layout\_gravity="center">  
        <**EditText**  
            android:id="@+id/firstVal"  
            android:layout\_width="0dp"  
            android:layout\_height="match\_parent"  
            android:layout\_weight="1"  
            android:hint="Enter First Number"  
            android:textColorHint="#03A9F4"  
            android:textAlignment="center"  
            android:textSize="20dp"  
            android:textColor="#000"  
            android:inputType="numberDecimal"  
            android:layout\_marginLeft="30dp"  
            android:layout\_marginRight="30dp"  
            />  
    </**LinearLayout**>  
    <**LinearLayout**  
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        android:layout\_height="wrap\_content"  
        android:layout\_marginBottom="50dp"  
        android:layout\_marginLeft="0dp"  
        android:layout\_marginRight="0dp"  
        android:background="#FFF"  
        android:layout\_gravity="center">  
        <**EditText**  
            android:id="@+id/secondVal"  
            android:layout\_width="0dp"  
            android:layout\_height="match\_parent"  
            android:layout\_weight="1"  
            android:hint="Enter Second Number"  
            android:textColorHint="#03A9F4"  
            android:textAlignment="center"  
            android:textSize="20dp"  
            android:textColor="#000"  
            android:inputType="numberDecimal"  
            android:layout\_marginLeft="30dp"  
            android:layout\_marginRight="30dp"/>  
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        android:layout\_marginLeft="0dp"  
        android:layout\_marginTop="20dp"  
        android:layout\_marginRight="0dp"  
        android:background="#FFF"  
        android:layout\_gravity="center"  
        >  
        <**Button**  
            android:id="@+id/add"  
            android:layout\_width="wrap\_content"  
            android:layout\_height="wrap\_content"  
            android:layout\_marginLeft="20dp"  
            android:background="#03A9F4"  
            android:onClick="add"  
            android:text="+"  
            android:textSize="15dp" />  
        <**Button**  
            android:id="@+id/sub"  
            android:layout\_width="wrap\_content"  
            android:layout\_height="wrap\_content"  
            android:layout\_marginLeft="5dp"  
            android:background="#03A9F4"  
            android:onClick="add"  
            android:text="-"  
            android:textSize="15dp" />  
        <**Button**  
            android:layout\_width="wrap\_content"  
            android:layout\_height="wrap\_content"  
            android:layout\_marginLeft="5dp"  
            android:background="#03A9F4"  
            android:onClick="add"  
            android:text="/"  
            android:textSize="15dp" />  
        <**Button**  
            android:layout\_width="wrap\_content"  
            android:layout\_height="wrap\_content"  
            android:layout\_marginLeft="5dp"  
            android:background="#03A9F4"  
            android:onClick="add"  
            android:text="\*"  
            android:textSize="15dp"/>  
    </**LinearLayout**>  
    <**LinearLayout**  
        android:layout\_width="match\_parent"  
        android:layout\_height="wrap\_content"  
        android:layout\_marginBottom="30dp"  
        android:layout\_marginLeft="0dp"  
        android:layout\_marginRight="0dp"  
        android:background="#FFF"  
        android:layout\_gravity="center">  
        <**Button**  
            android:id="@+id/reset"  
            android:layout\_width="match\_parent"  
            android:layout\_height="wrap\_content"  
            android:layout\_marginLeft="60dp"  
            android:layout\_marginRight="60dp"  
            android:textAlignment="center"  
            android:layout\_marginTop="30dp"  
            android:background="#03A9F4"  
            android:onClick="reset"  
            android:text="Reset"  
            android:textSize="30dp" />  
    </**LinearLayout**>  
    <**LinearLayout**  
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        android:layout\_height="wrap\_content"  
        android:layout\_marginBottom="0dp"  
        android:layout\_marginLeft="0dp"  
        android:layout\_marginRight="0dp"  
        android:layout\_marginTop="10dp"  
        android:background="#FFF"  
        android:layout\_gravity="center">  
        <**TextView**  
            android:id="@+id/result"  
            android:background="#03A9F4"  
            android:layout\_width="match\_parent"  
            android:layout\_height="match\_parent"  
            android:hint="Result"  
            android:textSize="30dp"  
            android:layout\_marginRight="20dp"  
            android:layout\_marginLeft="20dp"  
            android:textColor="#FFF"  
            android:textColorHint="#FFF"  
            android:textAlignment="center"  
            android:layout\_marginTop="50dp"/>  
    </**LinearLayout**>  
</**LinearLayout**>

**Mainactivity Java :**

**package** com.skarora.basiccalculator;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
**public** **class** **MainActivity** **extends** **AppCompatActivity** {  
    EditText et1,et2;  
    TextView t1,result;  
    Button b1,b2,b3,b4;  
    @Override  
  
    **protected** **void** **onCreate**(Bundle savedInstanceState) {  
        **super**.onCreate(savedInstanceState);  
        setContentView(R.layout.activity\_main);  
        et1 = findViewById(R.id.firstVal);  
        et2 = findViewById(R.id.secondVal);  
        b1 = findViewById(R.id.add);  
        b2 = findViewById(R.id.sub);  
        b3 = findViewById(R.id.div);  
        b4 = findViewById(R.id.times);  
        result = findViewById(R.id.result);  
    }  
    **public** **void** **add**(View view) {  
        String firstVal = et1.getText().toString();  
        String secondVal = et2.getText().toString();  
        **double** x = Double.parseDouble(firstVal);  
        **double** y = Double.parseDouble(secondVal);  
        result.setText(""+(x+y));  
    }  
    **public** **void** **sub**(View view) {  
        String firstVal = et1.getText().toString();  
        String secondVal = et2.getText().toString();  
        **double** x = Double.parseDouble(firstVal);  
        **double** y = Double.parseDouble(secondVal);  
        result.setText(""+(x-y));  
    }  
    **public** **void** **div**(View view) {  
        String firstVal = et1.getText().toString();  
        String secondVal = et2.getText().toString();  
        **double** x = Double.parseDouble(firstVal);  
        **double** y = Double.parseDouble(secondVal);  
        result.setText(""+(x/y));  
    }  
    **public** **void** **times**(View view) {  
        String firstVal = et1.getText().toString();  
        String secondVal = et2.getText().toString();  
        **double** x = Double.parseDouble(firstVal);  
        **double** y = Double.parseDouble(secondVal);  
        result.setText(""+(x\*y));  
    }  
    **public** **void** **reset**(View view) {  
        String firstVal = et1.getText().toString();  
        String secondVal = et2.getText().toString();  
        et1.setText(**null**);  
        et2.setText(**null**);  
    }  
}

**OUTPUT:**

