

Ex.No: 3

Date :

Develop a native calculator application

AIM:

To develop a native calculator application.

PROCEDURE:

1. Open Eclipse IDE.
2. Create the project Ex_No_3.
3. Go to package explorer in the left hand side. Select the project Ex_No_3.
4. Go to res folder and select layout. Double click the activity_main.xml file.
5. Now you can see the Graphical layout window.
6. Drag and drop the following components:
 - a. Two EditTexts with hints Enter the first number and Enter the second number
 - b. Four Buttons with labeled as ADD, SUB, MUL and DIV
7. Again go to package explorer in the left hand side. Select the project Ex_No_3.
8. Go to src folder. Double click the MainActivity.java file.
9. In java file write the activities done by the application such as, actions of button.
10. Finally run the android application.

PROGRAMS:

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"
    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="com.example.ex_no_3.MainActivity" >

    <EditText android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentTop="true"
        android:ems="10" android:hint="Enter the
        first number"
        tools:ignore="TextFields,HardcodedText"
    >

    <requestFocus />
</EditText>
```

```
<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentRight="true"
    android:layout_below="@+id/editText1" android:ems="10"
    android:hint="Enter the second number"
    tools:ignore="TextFields,HardcodedText" />

<Button android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentRight="true"
    android:layout_below="@+id/button3"
    android:text="DIV"
    tools:ignore="HardcodedText" />

<Button android:id="@+id/button1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentRight="true"
    android:layout_below="@+id/editText2"
    android:text="ADD"
    tools:ignore="HardcodedText" />
```

```
<Button android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentRight="true"
    android:layout_below="@+id/button1"
    android:text="SUB"
    tools:ignore="HardcodedText" />
```

```
<Button android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentRight="true"
    android:layout_below="@+id/button2"
    android:text="MUL"
    tools:ignore="HardcodedText" />
```

```
<TextView android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/button4"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="22dp"
    android:text=""
```



```
        android:textAppearance="?android:attr/textAppearanceLarge" />
```

```
</RelativeLayout>
```

MainActivity.java:

```
package com.example.ex_no_3;
import
android.support.v7.app.ActionBarActivity;
import android.os.Bundle; 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 ActionBarActivity {
    int n1,n2; float num1,num2; @Override
    protected void onCreate(Bundle savedInstanceState) { su-
        per.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main); final EditText
        e1=(EditText)findViewById(R.id.editText1); final EditText
        e2=(EditText)findViewById(R.id.editText2);
        Button b1=(Button)findViewById(R.id.button1);
        Button b2=(Button)findViewById(R.id.button2);
        Button b3=(Button)findViewById(R.id.button3); Button
        b4=(Button)findViewById(R.id.button4);
        final TextView t=(TextView)findViewById(R.id.textView1);
        b1.setOnClickListener( new OnClickListener()
            {
                @Override
                public void onClick(View arg0) {
                    // TODO Auto-generated method stub
                    n1=Integer.parseInt(e1.getText().toString());
                    n2=Integer.parseInt(e2.getText().toString());
                    t.setText(e1.getText().toString()+"
+e2.getText().toString()+" = "+(n1+n2));
                }
            });
        b2.setOnClickListener( new
            OnClickListener()
            {
                @Override
                public void onClick(View arg0) {
                    // TODO Auto-generated method stub
                    n1=Integer.parseInt(e1.getText().toString());
                    n2=Integer.parseInt(e2.getText().toString());
                    t.setText(e1.getText().toString()+"
+e2.getText().toString()+" = "+(n1-n2));
                }
            });
    }
```

```
b3.setOnClickListener( new  
    OnClickListener()  
    {  
        @Override  
        public void onClick(View arg0) {
```



```

// TODO Auto-generated method stub n1=Integer.parseInt(e1.getText().toString());
n2=Integer.parseInt(e2.getText().toString());

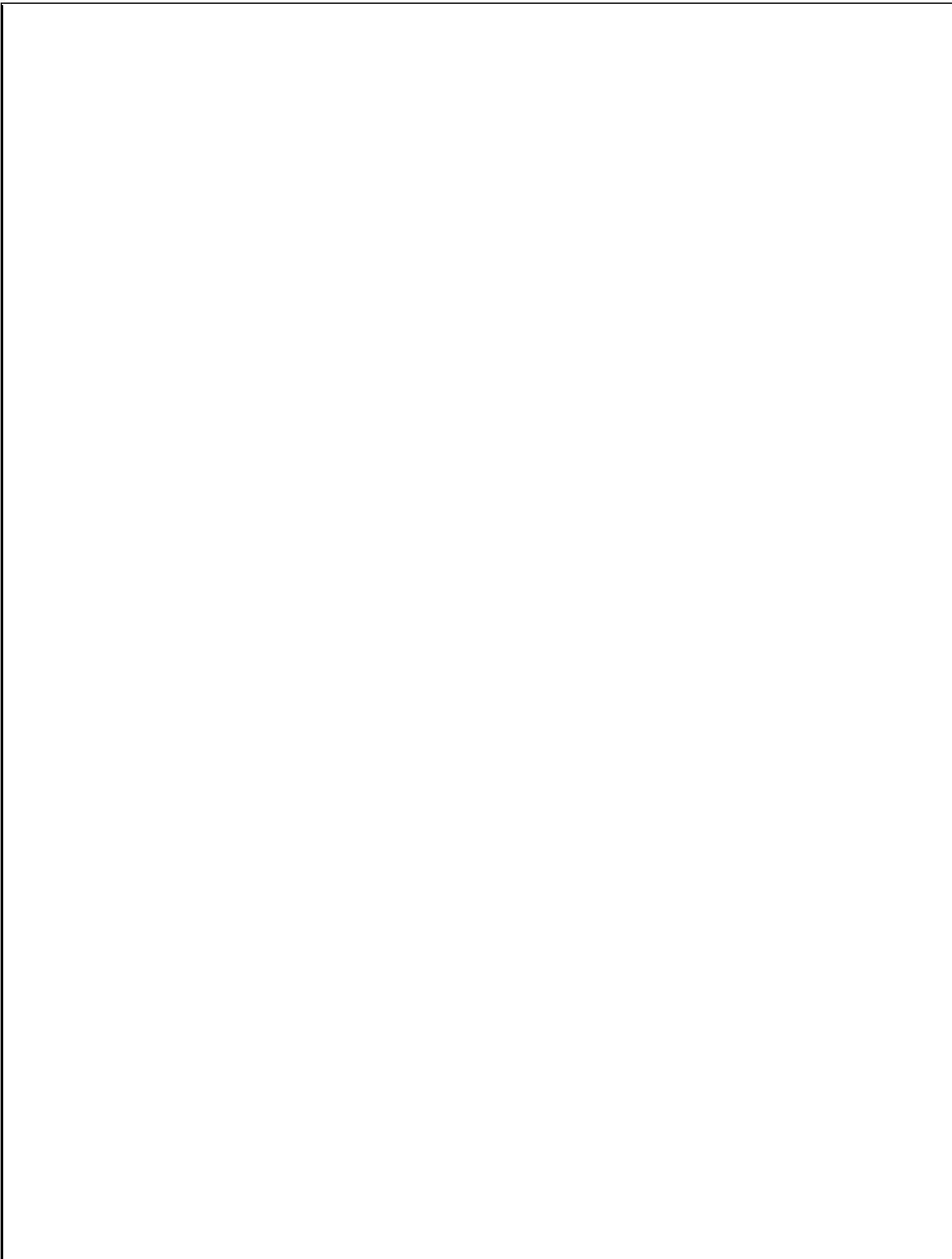
        t.setText(e1.getText().toString()+"
"+e2.getText().toString()+" = "+(n1*n2));
    }
});
b4.setOnClickListener( new
    OnClickListener()
    {
        @Override
        public void onClick(View arg0) {
            // TODO Auto-generated method stub
            num1=Float.parseFloat(e1.getText().toString());
            num2=Float.parseFloat(e2.getText().toString());
            t.setText(e1.getText().toString()+"
"+e2.getText().toString()+" = "+(num1/num2));
        }
    });
}
}

```




OUTPUT:

Ex_No_3	Ex_No_3	Ex_No_3	Ex_No_3
<div>7</div> <div>5</div> <div>ADD</div> <div>SUB</div> <div>MUL</div> <div>DIV</div> <div>7 + 5 = 12</div>	<div>7</div> <div>5</div> <div>ADD</div> <div>SUB</div> <div>MUL</div> <div>DIV</div> <div>7 - 5 = 2</div>	<div>7</div> <div>5</div> <div>ADD</div> <div>SUB</div> <div>MUL</div> <div>DIV</div> <div>7 * 5 = 35</div>	<div>7</div> <div>5</div> <div>ADD</div> <div>SUB</div> <div>MUL</div> <div>DIV</div> <div>7 / 5 = 1.4</div>



RESULT:

Thus the native calculator application has been developed and the output was verified.