Arithmetic Calculator

package com.example.mrj.calculator10;  
  
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.Toast;  
  
public class MainActivity extends AppCompatActivity implements View.OnClickListener{  
  
 Button add,sub,mul,divide;  
 Double result1;  
 EditText first,second,result,operator,equalto;  
 **@Override** protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 add=findViewById(R.id.*add*);  
 sub=findViewById(R.id.*sub*);  
 mul=findViewById(R.id.*multiply*);  
 divide=findViewById(R.id.*divide*);  
 first=findViewById(R.id.*first*);  
 second=findViewById(R.id.*second*);  
 operator=findViewById(R.id.*operator*);  
 equalto=findViewById(R.id.*equals*);  
 result=findViewById(R.id.*result*);  
 add.setOnClickListener(this);  
 sub.setOnClickListener(this);  
 mul.setOnClickListener(this);  
 divide.setOnClickListener(this);  
  
 }  
  
 **@Override** public void onClick(View v) {  
 double op1=Double.*parseDouble*(first.getText().toString());  
 double op2=Double.*parseDouble*(second.getText().toString());  
 double result1;  
 switch(v.getId()){  
 case R.id.*add*:  
 result1=op1+op2;  
 equalto.setText(**"="**);  
 operator.setText(**"+"**);  
 result.setText(String.*valueOf*(result1));  
 Toast.*makeText*(this, **"The result is: "**+String.*valueOf*(result1), Toast.*LENGTH\_SHORT*).show();  
 break;  
 case R.id.*sub*:  
 result1=op1-op2;  
 equalto.setText(**"="**);  
 operator.setText(**"-"**);  
 result.setText(String.*valueOf*(result1));  
 Toast.*makeText*(this, **"The result is: "**+String.*valueOf*(result1), Toast.*LENGTH\_LONG*).show();  
 break;  
 case R.id.*multiply*:  
 result1=op1\*op2;  
 equalto.setText(**"="**);  
 operator.setText(**"\*"**);  
 result.setText(String.*valueOf*(result1));  
 Toast.*makeText*(this, **"The result is: "**+String.*valueOf*(result1), Toast.*LENGTH\_LONG*).show();  
 break;  
 case R.id.*divide*:  
 result1=op1/op2;  
 equalto.setText(**"="**);  
 operator.setText(**"/"**);  
 result.setText(String.*valueOf*(result1));  
 Toast.*makeText*(this, **"The result is: "**+String.*valueOf*(result1), Toast.*LENGTH\_SHORT*).show();  
 break;  
 }  
 }  
}

activity\_main.xml

<?xml version=**"1.0"** encoding=**"utf-8"**?>  
<android.support.constraint.ConstraintLayout 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"** android:background=**"@drawable/background"** tools:context=**"com.example.mrj.calculator10.MainActivity"**>  
  
  
 <TextView  
 android:id=**"@+id/textView"** android:layout\_width=**"160dp"** android:layout\_height=**"40dp"** android:layout\_marginBottom=**"404dp"** android:layout\_marginEnd=**"163dp"** android:layout\_marginStart=**"163dp"** android:layout\_marginTop=**"88dp"** android:text=**"Enter 2 Numbers"** android:textAlignment=**"center"** android:textColor=**"@android:color/background\_light"** android:textSize=**"18sp"** app:layout\_constraintBottom\_toBottomOf=**"parent"** app:layout\_constraintEnd\_toEndOf=**"parent"** app:layout\_constraintStart\_toStartOf=**"parent"** app:layout\_constraintTop\_toTopOf=**"parent"** app:layout\_constraintVertical\_bias=**"1.0"** />  
  
 <RelativeLayout  
 android:id=**"@+id/relativeLayout"** android:layout\_width=**"368dp"** android:layout\_height=**"49dp"** android:layout\_marginBottom=**"350dp"** android:layout\_marginEnd=**"8dp"** android:layout\_marginStart=**"8dp"** android:layout\_marginTop=**"8dp"** app:layout\_constraintBottom\_toBottomOf=**"parent"** app:layout\_constraintEnd\_toEndOf=**"parent"** app:layout\_constraintHorizontal\_bias=**"1.0"** app:layout\_constraintStart\_toStartOf=**"parent"** app:layout\_constraintTop\_toBottomOf=**"@+id/textView"** app:layout\_constraintVertical\_bias=**"1.0"**>  
  
 <EditText  
 android:id=**"@+id/first"** android:layout\_width=**"70dp"** android:layout\_height=**"match\_parent"** android:layout\_alignParentLeft=**"true"** android:layout\_alignParentStart=**"true"** android:layout\_alignParentTop=**"true"** android:ems=**"10"** android:textColorHint=**"#FFFFFF"** android:hint=**"No.1"** android:inputType=**"textPersonName|numberDecimal"** android:textColor=**"@android:color/background\_light"** />  
  
 <EditText  
 android:id=**"@+id/operator"** android:layout\_width=**"60dp"** android:layout\_height=**"match\_parent"** android:layout\_alignParentTop=**"true"** android:layout\_toEndOf=**"@+id/first"** android:layout\_toRightOf=**"@+id/first"** android:ems=**"10"** android:inputType=**"textPersonName"** android:textColor=**"@android:color/background\_light"** />  
  
 <EditText  
 android:id=**"@+id/second"** android:layout\_width=**"70dp"** android:layout\_height=**"match\_parent"** android:layout\_alignParentBottom=**"true"** android:layout\_toEndOf=**"@+id/operator"** android:layout\_toRightOf=**"@+id/operator"** android:ems=**"10"** android:hint=**"No.2"** android:inputType=**"textPersonName|numberDecimal"** android:textColor=**"@android:color/background\_light"** android:textColorHint=**"#FFFFFF"** />  
  
 <EditText  
 android:id=**"@+id/equals"** android:layout\_width=**"60dp"** android:layout\_height=**"match\_parent"** android:layout\_alignParentTop=**"true"** android:layout\_toEndOf=**"@+id/second"** android:layout\_toRightOf=**"@+id/second"** android:ems=**"10"** android:inputType=**"textPersonName"** android:textColor=**"@android:color/background\_light"** />  
  
 <EditText  
 android:id=**"@+id/result"** android:layout\_width=**"70dp"** android:layout\_height=**"match\_parent"** android:layout\_alignParentEnd=**"true"** android:layout\_alignParentRight=**"true"** android:layout\_alignParentTop=**"true"** android:ems=**"10"** android:hint=**"Result"** android:inputType=**"textPersonName"** android:textColor=**"@android:color/background\_light"** android:textColorHint=**"#FFFFFF"** />  
 </RelativeLayout>  
  
 <TextView  
 android:id=**"@+id/textView2"** android:layout\_width=**"match\_parent"** android:layout\_height=**"40dp"** android:layout\_marginBottom=**"25dp"** android:layout\_marginEnd=**"8dp"** android:layout\_marginStart=**"8dp"** android:layout\_marginTop=**"21dp"** android:text=**"Select Operation"** android:textAlignment=**"center"** android:textColor=**"@android:color/background\_light"** android:textSize=**"18sp"** app:layout\_constraintBottom\_toTopOf=**"@+id/relativeLayout2"** app:layout\_constraintEnd\_toEndOf=**"parent"** app:layout\_constraintStart\_toStartOf=**"parent"** app:layout\_constraintTop\_toBottomOf=**"@+id/relativeLayout"** tools:text=**"Select Operation"** />  
  
 <RelativeLayout  
 android:id=**"@+id/relativeLayout2"** android:layout\_width=**"368dp"** android:layout\_height=**"46dp"** android:layout\_marginBottom=**"8dp"** android:layout\_marginEnd=**"8dp"** android:layout\_marginStart=**"8dp"** android:layout\_marginTop=**"8dp"** app:layout\_constraintBottom\_toBottomOf=**"parent"** app:layout\_constraintEnd\_toEndOf=**"parent"** app:layout\_constraintHorizontal\_bias=**"0.0"** app:layout\_constraintStart\_toStartOf=**"parent"** app:layout\_constraintTop\_toBottomOf=**"@+id/relativeLayout"** app:layout\_constraintVertical\_bias=**"0.218"**>  
  
 <Button  
 android:id=**"@+id/add"** android:layout\_width=**"wrap\_content"** android:layout\_height=**"wrap\_content"** android:layout\_alignParentLeft=**"true"** android:layout\_alignParentStart=**"true"** android:layout\_alignParentTop=**"true"** android:background=**"@android:color/background\_dark"** android:textColor=**"@android:color/background\_light"** android:textSize=**"24sp"** tools:text=**"+"** />  
  
 <Button  
 android:id=**"@+id/sub"** android:layout\_width=**"wrap\_content"** android:layout\_height=**"wrap\_content"** android:layout\_alignParentTop=**"true"** android:layout\_toEndOf=**"@+id/add"** android:layout\_toRightOf=**"@+id/add"** android:background=**"@android:color/background\_dark"** android:textColor=**"@android:color/background\_light"** android:textSize=**"24sp"** tools:text=**"-"** />  
  
 <Button  
 android:id=**"@+id/multiply"** android:layout\_width=**"wrap\_content"** android:layout\_height=**"wrap\_content"** android:layout\_alignParentTop=**"true"** android:layout\_toLeftOf=**"@+id/divide"** android:layout\_toStartOf=**"@+id/divide"** android:background=**"@android:color/background\_dark"** android:textColor=**"@android:color/background\_light"** android:textSize=**"24sp"** tools:text=**"\*"** />  
  
 <Button  
 android:id=**"@+id/divide"** android:layout\_width=**"wrap\_content"** android:layout\_height=**"wrap\_content"** android:layout\_alignParentBottom=**"true"** android:layout\_alignParentEnd=**"true"** android:layout\_alignParentRight=**"true"** android:background=**"@android:color/background\_dark"** android:textColor=**"@android:color/background\_light"** android:textSize=**"24sp"** tools:text=**"/"** />  
 </RelativeLayout>  
  
</android.support.constraint.ConstraintLayout>

Background.xml

<?xml version=**"1.0"** encoding=**"utf-8"**?>  
<shape android:shape=**"rectangle"** xmlns:android=**"http://schemas.android.com/apk/res/android"**>  
 <gradient  
 android:startColor=**"#270249"** android:endColor=**"#7608e2"** android:angle=**"90"** />  
</shape>