```java
package com.lab2;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.text.Editable;
import android.view.View;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    boolean isEmpty= true;
    String numOld = "";
    String op="";
    EditText edt;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        edt = findViewById(R.id.editText);
    }

    /*
        NAME    :   lab2.Java
        TASK    :   Perform Backend Operations of calculator app in android
    */

    //THIS IS USED TO SET THE STRING AS "0" IN CALCULATOR EDITTEXT
    public void clearEvent(View view) {
        edt.setText("0");
        isEmpty = true;
    }

    //THIS IS USEDD TO INSERT NUMBER WHENEVER NUMBER BUTTON IS CLICKED IN CALCULATOR
    public void numberEvent(View view) {
        if(isEmpty) //IF TEXT IS 0.0(EMPTY) IN CALCULATOR IT WILL HELP TO SET OTHER NUMBER BY REPLACING WITH EMPTY string("")
            edt.setText("");
        isEmpty = false;
        String number= edt.getText().toString();
        switch (view.getId()){  //CONCATINATES PARTICULAR NUMBER BASED ON THE NUMBER BUTTONS
            case R.id.btn9: number += "9"; break;
            case R.id.btn8: number += "8"; break;
            case R.id.btn7: number += "7"; break;
            case R.id.btn6: number += "6"; break;
            case R.id.btn5: number += "5"; break;
            case R.id.btn4: number += "4"; break;
            case R.id.btn3: number += "3"; break;
            case R.id.btn2: number += "2"; break;
            case R.id.btn1: number += "1"; break;
            case R.id.btn0: number += "0"; break;
            case R.id.btnDot: number += "."; break;
            case R.id.btnPlusMinus:     //USED TO SWITCH THE SIGN OF THE NUMBER
```

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            Float num;
            num = Float.parseFloat(number);
            num *= -1;
            number = num.toString();
            break;
        }
        edt.setText(number);    //PRINTS THE UPDATED NUMBER IN CALCULATOR
    }

    //USED TO PERFORM THE OPERATIONS
    public void operationEvent(View view) {
        if(!op.isEmpty()){      //VERIFYING WEATHER THERE IS PREVIOUS OPERATION
PRESENT BEFORE SETTING OP VARIABLE
            Double ans=0.0;
            switch(op){     //PERFORM PREVIOUS OPERATION BY REFERING THE OP
VARIABLE VALUE
                case "+":   ans = Double.parseDouble(numOld) +
Double.parseDouble(edt.getText().toString()); break;
                case "-":   ans = Double.parseDouble(numOld) -
Double.parseDouble(edt.getText().toString()); break;
                case "*":   ans = Double.parseDouble(numOld) *
Double.parseDouble(edt.getText().toString()); break;
                case "/":   ans = Double.parseDouble(numOld) /
Double.parseDouble(edt.getText().toString()); break;
                default :   ans = Double.parseDouble(edt.getText().toString());
            }
            edt.setText(ans.toString());    //UPDATE PREVIOUS OPERATION RESULTS TO
CALCULATOR TEXT
        }
        numOld = edt.getText().toString();
        Double ans=0.0;
        switch(view.getId()){       //SET OP TO CURRENT OPERATION BASED ON BUTTON-
ID
            case R.id.btnPlus: op="+"; break;
            case R.id.btnSub: op="-"; break;
            case R.id.btnMultiply: op="*"; break;
            case R.id.btnDivide: op="/"; break;
            case R.id.btnSquared:   ans = Double.parseDouble(numOld.toString()) *
Double.parseDouble(edt.getText().toString());
                edt.setText(ans.toString());
                return;     //PERFORM INSTANT OPERATION AND RETURN
            case R.id.btnPercent:   ans = Double.parseDouble(numOld.toString()) / 100;
                edt.setText(ans.toString());
                return;     //PERFORM INSTANT OPERATION AND RETURN
        }
        edt.setText("");        //CLEAR TEXT AFTER RECEIVING THE OPERATION TO
STORE NEXT NUMBER
    }


    //USED TO PERFORM FINAL OPERATION AND TRANSFER RESULT TO
CALCULATOR
    public void equalEvent(View view) {
        if(edt.getText().toString().isEmpty()){
            switch(op){     //TO AVOID EXCEPTIONS (2 *= ) TO STOP OUR CALCULATOR
```

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APP
            case "+":
            case "-":edt.setText("0"); break;
            case "*":
            case "/":edt.setText("1"); break;
        }
    }

    Double ans=0.0;
    switch(op){     //TO PERFORM OPERATOR SPECIFIC OPERATION
        case "+":   ans = Double.parseDouble(numOld) +
Double.parseDouble(edt.getText().toString()); break;
        case "-":   ans = Double.parseDouble(numOld) -
Double.parseDouble(edt.getText().toString()); break;
        case "*":   ans = Double.parseDouble(numOld) *
Double.parseDouble(edt.getText().toString()); break;
        case "/":   ans = Double.parseDouble(numOld) /
Double.parseDouble(edt.getText().toString()); break;
        default :   ans = Double.parseDouble(edt.getText().toString());
    }
    edt.setText(ans.toString());        //TO DISPLAY FINAL RESULT ON CALCULATOR
    op="";
  }
}
```