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//CALCULATOR

import java.awt.event.*;
import javax.swing.*;
import java.awt.*;
class CalculatorSwingProgram extends JFrame implements ActionListener {
    static JFrame f;
    static JTextField l;
    String first, op, second;
    JButton b0, b1, b2, b3, b4, b5, b6, b7, b8, b9, ba, bs, bd, bm, bpoint, bcancel, beq1;
    int eq;
    CalculatorSwingProgram() {
        first = op = second = "";
        f = new JFrame("calculator");
        eq = 0; // equals is not pressed
        l = new JTextField(16);
        l.setEditable(false);
        b0 = new JButton("0");
        b1 = new JButton("1");
        b2 = new JButton("2");
        b3 = new JButton("3");
        b4 = new JButton("4");
        b5 = new JButton("5");
        b6 = new JButton("6");
        b7 = new JButton("7");
        b8 = new JButton("8");
        b9 = new JButton("9");
        beq1 = new JButton("=");
        ba = new JButton("+");
        bs = new JButton("-");
        bd = new JButton("/");
        bm = new JButton("*");
        bcancel = new JButton("C");
        bpoint = new JButton(".");
        JPanel p = new JPanel();
        bm.addActionListener(this);
        bd.addActionListener(this);
        bs.addActionListener(this);
        ba.addActionListener(this);
        b9.addActionListener(this);
        b8.addActionListener(this);
        b7.addActionListener(this);
        b6.addActionListener(this);
        b5.addActionListener(this);
        b4.addActionListener(this);
        b3.addActionListener(this);
        b2.addActionListener(this);
        b1.addActionListener(this);
        b0.addActionListener(this);
        bpoint.addActionListener(this);
        bcancel.addActionListener(this);
        beq1.addActionListener(this);
        p.add(l);
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        p.add(ba);
        p.add(b1);
        p.add(b2);
        p.add(b3);
        p.add(bs);
        p.add(b4);
        p.add(b5);
        p.add(b6);
        p.add(bm);
        p.add(b7);
        p.add(b8);
        p.add(b9);
        p.add(bd);
        p.add(bpoint);
        p.add(b0);
        p.add(bcancel);
        p.add(beq1);
        p.setBackground(Color.blue);
        f.add(p);
        f.setSize(200, 220);
        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        f.setVisible(true);
    }

    public void actionPerformed(ActionEvent e) {
        String s = e.getActionCommand();
        if ((s.charAt(0) >= '0' && s.charAt(0) <= '9') || s.charAt(0) == '.') {
            if (eq == 1)// if equal to is pressed
            {
                eq = 0;
                first = "";
                op = "";
                second = "";
                first = first + s;
            } else {
                if (!op.equals("")) // if operator is pressed {
                    second = second + s;
                } else // if operator or equal to is not pressed
                    first = first + s; }
            l.setText(first + op + second);
        } else if (s.charAt(0) == 'C') {
            first = op = second = "";
            l.setText(first + op + second);
        } else if (s.charAt(0) == '=') {
            double result = 0;
            if (op.equals("+"))
                result = (Double.parseDouble(first) + Double.parseDouble(second));
            else if (op.equals("-"))
                result = (Double.parseDouble(first) - Double.parseDouble(second));
            else if (op.equals("/"))
                try {
                    result = (Double.parseDouble(first) /
                            Double.parseDouble(second));
                } catch (ArithmeticException ae) {
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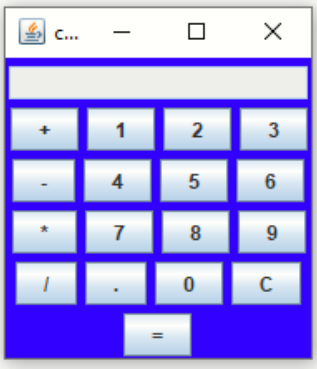
                }
            else
                result = (Double.parseDouble(first) * Double.parseDouble(second));
            l.setText("" + result);
            first = Double.toString(result);
            op = second = "";
            eq = 1;
        } else {
            if (op.equals("") || second.equals(""))
                op = s;
            else {
                double result = 0;
                if (op.equals("+"))
                    result = (Double.parseDouble(first) + Double.parseDouble(second));
                else if (op.equals("-"))
                    result = (Double.parseDouble(first) - Double.parseDouble(second));
                else if (op.equals("/"))
                    try {
                        result = (Double.parseDouble(first) / Double.parseDouble(second));
                    } catch (ArithmeticException ae) {
                    }
                else
                    result = (Double.parseDouble(first) * Double.parseDouble(second));
                first = Double.toString(result);
                op = s;
                second = "";
            }
            l.setText(first + op + second);
        }
    }
    public static void main(String args[]) {
        new CalculatorSwingProgram();
    }
}
```

OUTPUT:



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//JDBC

import java.sql.*;

public class Disp {
    public static void main(String args[]) throws ClassNotFoundException {
        try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection con = DriverManager.getConnection( "jdbc:mysql://localhost:3306/oop", "root",
"root123");
            Statement stmt = con.createStatement();
            ResultSet rs = stmt.executeQuery("select * from student where mark<50");
            while (rs.next()) {
                System.out.println("Rol l= " + rs.getInt(1) + " Name  = " + rs.getString(2) + "Mark = " +
rs.getInt(3));
            }
            con.close();
        } catch (SQLException e) {
            System.out.println(e);
        }
    }
}
```

OUTPUT:

```
Roll = 1        Name = John         Mark = 45
Roll =3         Name = Bob          Mark = 30
```