ASSIGNMENT NO:- 07

**PROGRAM:**

**import java.awt.event.\*;**

**import javax.swing.\*;**

**import java.awt.\*;**

**class Calculator extends JFrame implements ActionListener {**

**static JFrame f;**

**static JTextField l;**

**String s0, s1, s2;**

**Calculator() {**

**s0 = s1 = s2 = "";**

**}**

**public static void main(String args[]) {**

**f = new JFrame("My Calculator");**

**try {**

**UIManager.setLookAndFeel(UIManager.getSystemLookAndFeelClassName());**

**} catch (Exception e) {**

**System.err.println(e.getMessage());**

**}**

**Calculator c = new Calculator();**

**l = new JTextField(22);**

**l.setEditable(false);**

**JButton b0, b1, b2, b3, b4, b5, b6, b7, b8, b9, add, subtract, multiply, divide, dot, clear, equals;**

**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");**

**equals = new JButton("=");**

**add = new JButton("+");**

**subtract = new JButton("-");**

**divide = new JButton("/");**

**multiply = new JButton("\*");**

**clear = new JButton("C");**

**dot = new JButton(".");**

**JPanel p = new JPanel();**

**p.add(l);**

**p.add(b1);**

**p.add(b2);**

**p.add(b3);**

**p.add(b4);**

**p.add(b5);**

**p.add(b6);**

**p.add(b7);**

**p.add(b8);**

**p.add(b9);**

**p.add(b0);**

**p.add(dot);**

**p.add(add);**

**p.add(subtract);**

**p.add(multiply);**

**p.add(divide);**

**p.add(clear);**

**p.add(equals);**

**p.setBackground(Color.lightGray);**

**f.add(p);**

**f.setSize(300, 300);**

**f.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);**

**f.setVisible(true);**

**add.addActionListener(c);**

**subtract.addActionListener(c);**

**multiply.addActionListener(c);**

**divide.addActionListener(c);**

**b9.addActionListener(c);**

**b8.addActionListener(c);**

**b7.addActionListener(c);**

**b6.addActionListener(c);**

**b5.addActionListener(c);**

**b4.addActionListener(c);**

**b3.addActionListener(c);**

**b2.addActionListener(c);**

**b1.addActionListener(c);**

**b0.addActionListener(c);**

**dot.addActionListener(c);**

**clear.addActionListener(c);**

**equals.addActionListener(c);**

**}**

**public void actionPerformed(ActionEvent e) {**

**String s = e.getActionCommand();**

**if ((s.charAt(0) >= '0' && s.charAt(0) <= '9') || s.charAt(0) == '.') {**

**if (!s1.equals(""))**

**s2 = s2 + s;**

**else**

**s0 = s0 + s;**

**l.setText(s0 + s1 + s2);**

**} else if (s.charAt(0) == 'C') {**

**s0 = s1 = s2 = "";**

**l.setText(s0 + s1 + s2);**

**} else if (s.charAt(0) == '=') {**

**double result;**

**if (s1.equals("+"))**

**result = (Double.parseDouble(s0) + Double.parseDouble(s2));**

**else if (s1.equals("-"))**

**result = (Double.parseDouble(s0) - Double.parseDouble(s2));**

**else if (s1.equals("/"))**

**result = (Double.parseDouble(s0) / Double.parseDouble(s2));**

**else**

**result = (Double.parseDouble(s0) \* Double.parseDouble(s2));**

**l.setText(s0 + s1 + s2 + "=" + result);**

**s0 = Double.toString(result);**

**s1 = s2 = "";**

**} else {**

**if (s1.equals("") || s2.equals(""))**

**s1 = s;**

**else {**

**double result;**

**if (s1.equals("+"))**

**result = (Double.parseDouble(s0) + Double.parseDouble(s2));**

**else if (s1.equals("-"))**

**result = (Double.parseDouble(s0) - Double.parseDouble(s2));**

**else if (s1.equals("/"))**

**result = (Double.parseDouble(s0) /**

**Double.parseDouble(s2));**

**else**

**result = (Double.parseDouble(s0) \* Double.parseDouble(s2));**

**s0 = Double.toString(result);**

**s1 = s;**

**s2 = "";**

**}**

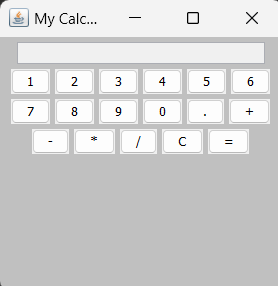
**l.setText(s0 + s1 + s2);**

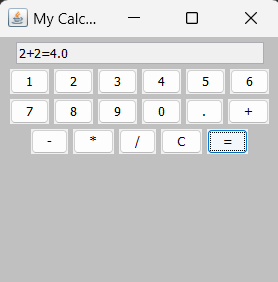
**}**

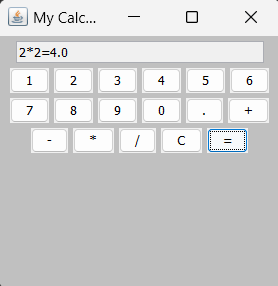
**}**

**}**

**OUTPUT:**

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