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SUBJECT: PPL
ASSIGNMENT NO:-07

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**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.getSystemLookAndFeelClassNa
me());
      } 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");
```

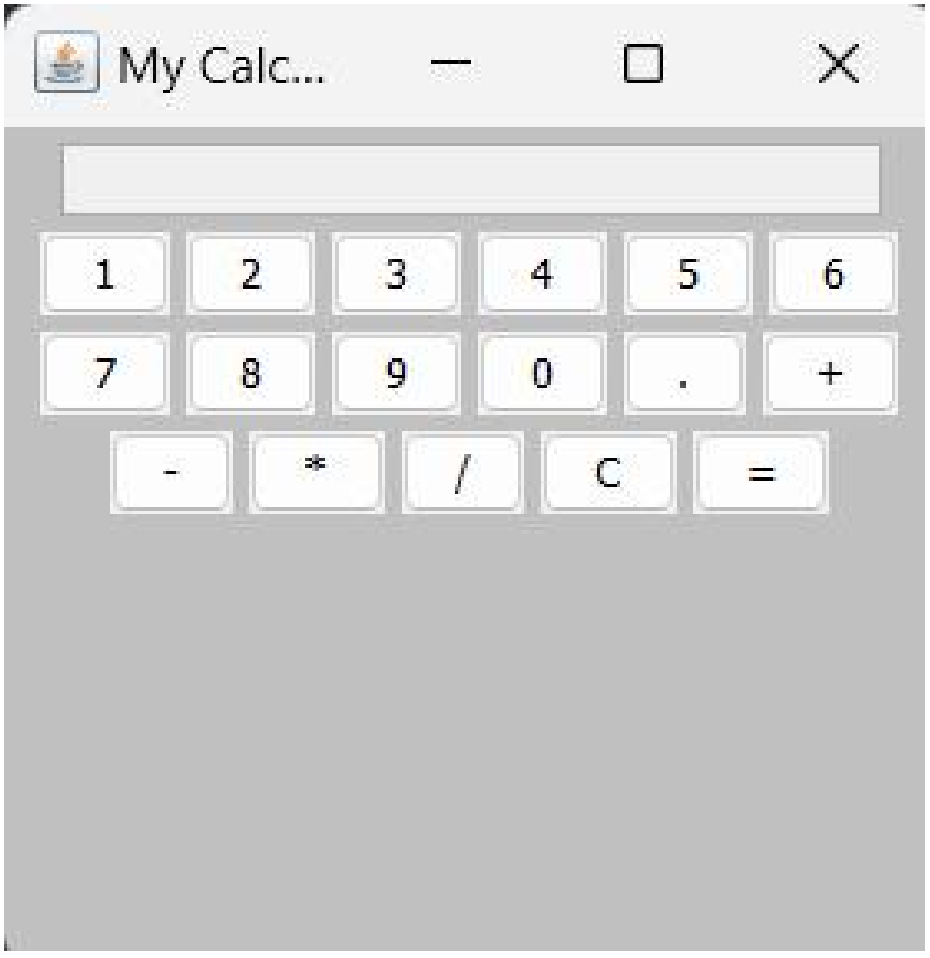
```
 b1 = new JButton("1");
b2 = new JButton("2");
b3 = new JButton("3");
b4 = new JButton("4");
b5 = new JButton("5");
b6 = new JButton("6");
b7 = new JButton("7");
b8 = new JButton("8");
b9 = new JButton("9");
equals = new JButton("=");
add = new JButton("+");
subtract = new JButton("-");
divide = 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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