```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
public class CalculatorNoArray extends JFrame implements ActionListener
{
JTextField display;
    JButton b0, b1, b2, b3, b4, b5, b6, b7, b8, b9;
    JButton add, sub, mul, div, equ, clr;
```

```
    double num1 = 0, num2 = 0, result = 0;
    char operator;
```

```
    CalculatorNoArray() {
        setTitle("Simple Calculator");
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setSize(350, 450);
        setLayout(null);
```

```
        display = new JTextField();
        display.setBounds(30, 40, 270, 40);
        display.setEditable(false);
        add(display);
```

```
        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");
```

```
        add = new JButton("+");
        sub = new JButton("-");
        mul = new JButton("*");
        div = new JButton("/");
        equ = new JButton("=");
        clr = new JButton("C");
```

```
        JPanel panel = new JPanel();
        panel.setBounds(30, 100, 270, 300);
        panel.setLayout(new GridLayout(4, 4, 10, 10));
```

```
        panel.add(b7); panel.add(b8); panel.add(b9); panel.add(add);
        panel.add(b4); panel.add(b5); panel.add(b6); panel.add(sub);
        panel.add(b1); panel.add(b2); panel.add(b3); panel.add(mul);
        panel.add(b0); panel.add(clr); panel.add(equ); panel.add(div);
```

```
        add(panel);
```

```
        b0.addActionListener(this);
        b1.addActionListener(this);
        b2.addActionListener(this);
        b3.addActionListener(this);
        b4.addActionListener(this);
        b5.addActionListener(this);
        b6.addActionListener(this);
        b7.addActionListener(this);
        b8.addActionListener(this);
        b9.addActionListener(this);
```

```
        add.addActionListener(this);
        sub.addActionListener(this);
        mul.addActionListener(this);
        div.addActionListener(this);
        equ.addActionListener(this);
        clr.addActionListener(this);
```

```
        setVisible(true);
        setResizable(true);
    }
```

```
    public void actionPerformed(ActionEvent e) {
        if (e.getSource() == b0) display.setText(display.getText() +
"0");
        if (e.getSource() == b1) display.setText(display.getText() +
"1");
        if (e.getSource() == b2) display.setText(display.getText() +
"2");
        if (e.getSource() == b3) display.setText(display.getText() +
"3");
        if (e.getSource() == b4) display.setText(display.getText() +
"4");
        if (e.getSource() == b5) display.setText(display.getText() +
"5");
        if (e.getSource() == b6) display.setText(display.getText() +
"6");
        if (e.getSource() == b7) display.setText(display.getText() +
"7");
        if (e.getSource() == b8) display.setText(display.getText() +
"8");
        if (e.getSource() == b9) display.setText(display.getText() +
"9");
```

```
        if (e.getSource() == add) {
            num1 = Double.parseDouble(display.getText());
            operator = '+';
```

```
            display.setText("");
        }
        if (e.getSource() == sub) {
            num1 = Double.parseDouble(display.getText());
            operator = '-';
            display.setText("");
        }
        if (e.getSource() == mul) {
            num1 = Double.parseDouble(display.getText());
            operator = '*';
            display.setText("");
        }
        if (e.getSource() == div) {
            num1 = Double.parseDouble(display.getText());
            operator = '/';
            display.setText("");
        }
        if (e.getSource() == equ) {
            num2 = Double.parseDouble(display.getText());
            switch (operator) {
                case '+': result = num1 + num2; break;
                case '-': result = num1 - num2; break;
                case '*': result = num1 * num2; break;
                case '/':
                    if (num2 == 0) {
                        display.setText("Error");
                        return;
                    }
                    result = num1 / num2;
                    break;
            }
            display.setText(String.valueOf(result));
            num1 = result;
        }
```

```
        if (e.getSource() == clr) {
            display.setText("");
            num1 = num2 = result = 0;
        }
    }
```

```
    public static void main(String[] args) {
        new CalculatorNoArray();
    }
}
```