

```
// SimpleCalculator
//IntelliJ IDEA 2023.1

import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class SimpleCalculator extends JFrame implements ActionListener {

    private JTextField firstNumberField;
    private JTextField secondNumberField;
    private JTextField answerField;
    private char operator;

    public SimpleCalculator() {
        setTitle("Simple Calculator");
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLayout(new BorderLayout());

        // Panels
        JPanel topPanel = new JPanel();
        topPanel.setLayout(new GridLayout(3, 2, 10, 10));

        JPanel centerPanel = new JPanel();
        centerPanel.setLayout(new GridLayout(4, 4, 10, 10));

        // Labels and Text Fields
        JLabel firstNumberLabel = new JLabel("Enter first number:");
```

```
firstNumberField = new JTextField(10);

JLabel secondNumberLabel = new JLabel("Enter second number:");
secondNumberField = new JTextField(10);

JLabel answerLabel = new JLabel("Answer:");
answerField = new JTextField(10);
answerField.setEditable(false);

// Buttons
JButton addButton = new JButton("+");
JButton subtractButton = new JButton("-");
JButton multiplyButton = new JButton("*");
JButton divideButton = new JButton("/");
JButton clearButton = new JButton("Clear");

addButton.setFont(new Font("Arial", Font.PLAIN, 20));
subtractButton.setFont(new Font("Arial", Font.PLAIN, 20));
multiplyButton.setFont(new Font("Arial", Font.PLAIN, 20));
divideButton.setFont(new Font("Arial", Font.PLAIN, 20));
clearButton.setFont(new Font("Arial", Font.PLAIN, 20));

addButton.addActionListener(this);
subtractButton.addActionListener(this);
multiplyButton.addActionListener(this);
divideButton.addActionListener(this);
clearButton.addActionListener(this);

centerPanel.add(addButton);
```

```
centerPanel.add(subtractButton);
centerPanel.add(multiplyButton);
centerPanel.add(divideButton);
centerPanel.add(clearButton);
```

```
// Add components to panels
topPanel.add(firstNumberLabel);
topPanel.add(firstNumberField);
topPanel.add(secondNumberLabel);
topPanel.add(secondNumberField);
topPanel.add(answerLabel);
topPanel.add(answerField);
```

```
// Add panels to frame
add(topPanel, BorderLayout.NORTH);
add(centerPanel, BorderLayout.CENTER);
```

```
pack();

setLocationRelativeTo(null); // Center the frame on the screen
}
```

```
@Override
```

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

```
    String actionCommand = e.getActionCommand();
```

```
    if (actionCommand.equals("+") || actionCommand.equals("-") || actionCommand.equals("*") ||
        actionCommand.equals("/")) {
```

```
        operator = actionCommand.charAt(0);
```

```
        calculate();
```

```
    } else if (actionCommand.equals("Clear")) {  
        clear();  
    }  
}
```

```
private void calculate() {  
    try {  
        double firstNumber = Double.parseDouble(firstNumberField.getText());  
        double secondNumber = Double.parseDouble(secondNumberField.getText());  
  
        double result = 0;  
  
        switch (operator) {  
            case '+':  
                result = firstNumber + secondNumber;  
                break;  
            case '-':  
                result = firstNumber - secondNumber;  
                break;  
            case '*':  
                result = firstNumber * secondNumber;  
                break;  
            case '/':  
                result = firstNumber / secondNumber;  
                break;  
        }  
  
        answerField.setText(String.valueOf(result));  
    } catch (NumberFormatException e) {
```

```
        answerField.setText("Error: Invalid input");
    }
}
```

```
private void clear() {
    firstNumberField.setText("");
    secondNumberField.setText("");
    answerField.setText("");
    operator = ' ';
}
```

```
public static void main(String[] args) {
    SwingUtilities.invokeLater(() -> {
        SimpleCalculator calculator = new SimpleCalculator();
        calculator.setVisible(true);
    });
}
}
```