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

public class SimpleCalculator extends JFrame implements ActionListener {
    private JButton[] numberButtons;
    private JButton[] operationButtons;
    private JButton equalsButton;
    private JButton clearButton;
    private JTextField textField;
    private JButton decimalButton;

    private double num1, num2, result;
    private char operator;

    public SimpleCalculator() {

        setTitle("Simple Calculator");
        setSize(300, 400);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLocationRelativeTo(null);
        setLayout(new BorderLayout());
        textField = new JTextField();
        add(textFie d, BorderLayout.NORTH);
        textField.setPreferredSize(new Dimension(300, 50));
```

```
JPanel buttonPanel = new JPanel();
buttonPanel.setLayout(new GridLayout(5, 4));

numberButtons = new JButton[10];
for (int i = 0; i < 10; i++) {
    numberButtons[i] = new JButton(String.valueOf(i));
    numberButtons[i].addActionListener(this);
    buttonPanel.add(numberButtons[i]);
}

operationButtons = new JButton[4];
operationButtons[0] = new JButton("+");
operationButtons[1] = new JButton("-");
operationButtons[2] = new JButton("*");
operationButtons[3] = new JButton("/");
for (int i = 0; i < 4; i++) {
    operationButtons[i].addActionListener(this);
    buttonPanel.add(operationButtons[i]);
}

equalsButton = new JButton("=");
equalsButton.addActionListener(this);
buttonPanel.add(equalsButton);

clearButton = new JButton("C");
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        clearButton.addActionListener(this);
        buttonPane1.add(clearButton);
        decimalButton = new JButton(".");
        decimalButton.addActionListener(this);
        buttonPanel.add(decimalButton);

        add(buttonPanel, BorderLayout.CENTER);
    }

    public void actionPerformed(ActionEvent e) {
        String command = e.getActionCommand();
        if (Character.isDigit(command.charAt(0)) || command.charAt(0) == '.') {
            textField.setText(textField.getText() + command);
        } else if (command.charAt(0) == 'C') {
            textField.setText("");
            num1 = num2 = result = 0;
            operator = ' ';
        } else if (command.charAt(0) == '=') {
            num2 = Double.parseDouble(textField.getText());
            switch (operator) {
                case '+':
                    result = num1 + num2;
                    break;
                case '-':
                    result = num1 - num2;
                    break;
                case '*':
                    result = num1 * num2;
                    break;
```

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            case '/':
                    1
                resu t = num1 / num2;
                break;
            }
            textField.setText(String.valueOf(result));
        } else {
            num1 = Double.parseDouble(textField.getText());
            operator = command.charAt(0);
            textField.setText("");
        }
    }

    public static void main(String[] args) {
        SimpleCalculator frame = new SimpleCalculator();
        frame.setVisible(true);
    }
}
```