SIMPLE CALCULATION

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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 display;
    private JButton[] numberButtons;
    private JButton[] functionButtons;
    private JButton addButton, subButton, mulButton, divButton;
    private JButton decButton, equButton, delButton, clrButton;
    private JPanel panel;

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

    public SimpleCalculator() {
        setTitle("Calculator");
        setSize(420, 550);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLayout(null);

        display = new JTextField();
        display.setBounds(50, 25, 300, 50);
        display.setEditable(false);
        add(display);

        addButton = new JButton("+");
        subButton = new JButton("-");
        mulButton = new JButton("*");
        divButton = new JButton("/");
        decButton = new JButton(".");
        equButton = new JButton("=");
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delButton = new JButton("Del");
clrButton = new JButton("Clr");

functionButtons = new JButton[8];
functionButtons[0] = addButton;
functionButtons[1] = subButton;
functionButtons[2] = mulButton;
functionButtons[3] = divButton;
functionButtons[4] = decButton;
functionButtons[5] = equButton;
functionButtons[6] = delButton;
functionButtons[7] = clrButton;

for (int i = 0; i < 8; i++) {
    functionButtons[i].addActionListener(this);
    functionButtons[i].setFont(new Font("Arial", Font.BOLD, 24));
    functionButtons[i].setFocusable(false);
}

numberButtons = new JButton[10];
for (int i = 0; i < 10; i++) {
    numberButtons[i] = new JButton(String.valueOf(i));
    numberButtons[i].addActionListener(this);
    numberButtons[i].setFont(new Font("Arial", Font.BOLD, 24));
    numberButtons[i].setFocusable(false);
}

delButton.setBounds(50, 430, 145, 50);
clrButton.setBounds(205, 430, 145, 50);

panel = new JPanel();
panel.setBounds(50, 100, 300, 300);
panel.setLayout(new GridLayout(4, 4, 10, 10));
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    panel.add(numberButtons[1]);
    panel.add(numberButtons[2]);
    panel.add(numberButtons[3]);
    panel.add(addButton);
    panel.add(numberButtons[4]);
    panel.add(numberButtons[5]);
    panel.add(numberButtons[6]);
    panel.add(subButton);
    panel.add(numberButtons[7]);
    panel.add(numberButtons[8]);
    panel.add(numberButtons[9]);
    panel.add(mulButton);
    panel.add(decButton);
    panel.add(numberButtons[0]);
    panel.add(equButton);
    panel.add(divButton);

    add(panel);
    add(delButton);
    add(clrButton);

    setVisible(true);
}

@Override
public void actionPerformed(ActionEvent e) {
    for (int i = 0; i < 10; i++) {
        if (e.getSource() == numberButtons[i]) {
            display.setText(display.getText().concat(String.valueOf(i)));
        }
    }
    if (e.getSource() == decButton) {
        display.setText(display.getText().concat("."));
    }
```

```
if (e.getSource() == addButton) {
    num1 = Double.parseDouble(display.getText());
    operator = '+';
    display.setText("");
}
if (e.getSource() == subButton) {
    num1 = Double.parseDouble(display.getText());
    operator = '-';
    display.setText("");
}
if (e.getSource() == mulButton) {
    num1 = Double.parseDouble(display.getText());
    operator = '*';
    display.setText("");
}
if (e.getSource() == divButton) {
    num1 = Double.parseDouble(display.getText());
    operator = '/';
    display.setText("");
}
if (e.getSource() == equButton) {
    num2 = Double.parseDouble(display.getText());

    switch (operator) {
        case '+' -> result = num1 + num2;
        case '-' -> result = num1 - num2;
        case '*' -> result = num1 * num2;
        case '/' -> result = num1 / num2;
    }
    display.setText(String.valueOf(result));
    num1 = result;
}
if (e.getSource() == clrButton) {
    display.setText("");
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        }
        if (e.getSource() == delButton) {
            String str = display.getText();
            display.setText("");
            for (int i = 0; i < str.length() - 1; i++) {
                display.setText(display.getText() + str.charAt(i));
            }
        }
    }

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