Calculator Code

```
package simplecalculatorjava;


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


public class SimpleCalculator extends JFrame implements ActionListener {
    JLabel lblNum1;
    JLabel lblNum2;
    JLabel lblResult;
    JTextField txtNum1;
    JTextField txtNum2;
    JTextField txtResult;


    JButton[] numButtons = new JButton[10];
    JButton add;
    JButton sub;
    JButton mul;
    JButton div;
    JButton clr;
    JButton eq;
    JPanel panelNumbers;
    JPanel panelOps;
    JTextField activeField;
```

```
public SimpleCalculator() {
    setTitle("Simple Calculator");
    setSize(400, 500);
    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    setLayout(new BorderLayout(10, 10));

    JPanel topPanel = new JPanel(new GridLayout(3, 2, 10, 10));

    lblNum1 = new JLabel("Num1:");
    lblNum2 = new JLabel("Num2:");
    lblResult = new JLabel("Result:");

    txtNum1 = new JTextField();
    txtNum2 = new JTextField();
    txtResult = new JTextField();
    txtResult.setEditable(false);

    txtNum1.addMouseListener(new MouseAdapter() {
        public void mouseClicked(MouseEvent e) {
            activeField = txtNum1;
        }
    });
    txtNum2.addMouseListener(new MouseAdapter() {
        public void mouseClicked(MouseEvent e) {
            activeField = txtNum2;
        }
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});

topPanel.add(lblNum1);
topPanel.add(txtNum1);
topPanel.add(lblNum2);
topPanel.add(txtNum2);
topPanel.add(lblResult);
topPanel.add(txtResult);

add(topPanel, BorderLayout.NORTH);

panelNumbers = new JPanel(new GridLayout(4, 3, 10, 10));

for (int i = 1; i <= 9; i++) {
    numButtons[i] = new JButton(String.valueOf(i));
    numButtons[i].setFont(new Font("Arial", Font.BOLD, 22));
    numButtons[i].addActionListener(this);
    panelNumbers.add(numButtons[i]);
}

numButtons[0] = new JButton("0");
numButtons[0].setFont(new Font("Arial", Font.BOLD, 22));
numButtons[0].addActionListener(this);

clr = new JButton("C");
clr.setFont(new Font("Arial", Font.BOLD, 22));
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clr.addActionListener(this);

eq = new JButton("=");
eq.setFont(new Font("Arial", Font.BOLD, 22));
eq.addActionListener(this);

panelNumbers.add(numButtons[0]);
panelNumbers.add(clr);
panelNumbers.add(eq);

add(panelNumbers, BorderLayout.CENTER);

panelOps = new JPanel(new GridLayout(1, 4, 10, 10));

add = new JButton("+");
sub = new JButton("-");
mul = new JButton("*");
div = new JButton("/");

JButton[] ops = { add, sub, mul, div };
for (JButton b : ops) {
    b.setFont(new Font("Arial", Font.BOLD, 22));
    b.addActionListener(this);
    panelOps.add(b);
}
```

```
    add(panelOps, BorderLayout.SOUTH);

    setVisible(true);
}

public void actionPerformed(ActionEvent e) {
    Object src = e.getSource();

    for (int i = 0; i <= 9; i++) {
        if (src == numButtons[i] && activeField != null) {
            activeField.setText(activeField.getText() + i);
            return;
        }
    }

    if (src == clr) {
        txtNum1.setText("");
        txtNum2.setText("");
        txtResult.setText("");
        activeField = null;
        return;
    }

    try {
        double num1 = Double.parseDouble(txtNum1.getText());
        double num2 = Double.parseDouble(txtNum2.getText());
```

```
            double result = 0;
if (src == add) result = num1 + num2;
            else if (src == sub) result = num1 - num2;
            else if (src == mul) result = num1 * num2;
            else if (src == div) {
                if (num2 == 0) throw new ArithmeticException("Divide by zero!");
                result = num1 / num2;
            } else if (src == eq) {
                result = Double.parseDouble(txtResult.getText());
            }

            txtResult.setText(String.valueOf(result));

        } catch (NumberFormatException ex) {
            JOptionPane.showMessageDialog(this, "Please enter valid numbers!");
        } catch (ArithmeticException ex) {
            JOptionPane.showMessageDialog(this, ex.getMessage());
        }
    }

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