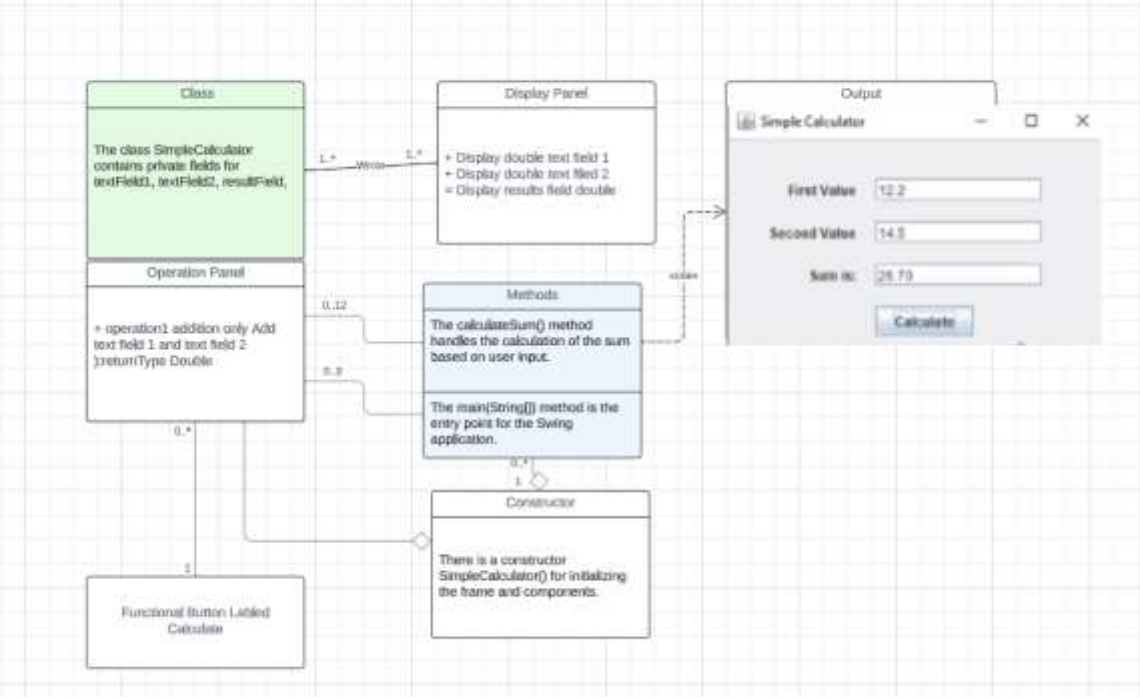
//Design



// Code

```
import javax.swing.*;

import java.awt.*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;


/**

 * Represents a simple calculator application with a Swing GUI.

 */

public class SimpleCalculator extends JFrame {

   private JTextField textField1, textField2, resultField;


   /**

    * Constructs a SimpleCalculator GUI.
```

```
 */
public SimpleCalculator() {
    // Set up the JFrame
    setTitle("Simple Calculator");
    setSize(400, 250); // Increased height to accommodate the button
    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    setLocationRelativeTo(null);

    // Create components
    textField1 = new JTextField(10);
    textField2 = new JTextField(10);
    JButton calculateButton = new JButton("Calculate");
    resultField = new JTextField(10);
    resultField.setEditable(false); // Make it non-editable
    resultField.setBackground(Color.WHITE); // Set background color to white

    // Create a JPanel for input components with GridLayout
    JPanel inputPanel = new JPanel(new GridLayout(2, 2, 5, 1)); // 2 rows, 2 columns, gaps
    inputPanel.add(new JLabel("First Value"));
    inputPanel.add(textField1);
    inputPanel.add(new JLabel("Second Value"));
    inputPanel.add(textField2);

    // Create a JPanel for the result with GridLayout
    JPanel resultPanel = new JPanel(new GridLayout(1, 2, 5, 5)); // 1 row, 2 columns, gaps
```

```
    resultPanel.add(new JLabel("Sum is"));
    resultPanel.add(resultField);

    // Create a JPanel for the button
    JPanel buttonPanel = new JPanel();
    buttonPanel.add(calculateButton);

    // Add panels to the frame
    add(inputPanel, BorderLayout.PAGE_START); // PAGE_START to make it above the resultPanel
    add(resultPanel, BorderLayout.CENTER);
    add(buttonPanel, BorderLayout.PAGE_END); // PAGE_END corresponds to bottom center

    // Add action listener to the Calculate button
    calculateButton.addActionListener(new ActionListener() {
        @Override
        public void actionPerformed(ActionEvent e) {
            calculateSum();
        }
    });

    pack();
    setLocationRelativeTo(null);
}

/**
```

```
 * Calculates the sum of the values in textField1 and textField2 and updates resultField.
 */
private void calculateSum() {
    try {
        double value1 = Double.parseDouble(textField1.getText());
        double value2 = Double.parseDouble(textField2.getText());

        double sum = value1 + value2;
        resultField.setText(String.valueOf(sum));
    } catch (NumberFormatException ex) {
        // Handle the case where input is not a valid double
        JOptionPane.showMessageDialog(this, "Please enter valid numbers for calculation.",
                "Invalid Input", JOptionPane.ERROR_MESSAGE);
    }
}

/**
 * The entry point of the SimpleCalculator application.
 *
 * @param args Command-line arguments (not used in this application).
 */
public static void main(String[] args) {
    SwingUtilities.invokeLater(new Runnable() {
        @Override
        public void run() {
```

```
            new SimpleCalculator().setVisible(true);
        }
    });
  }
}
```

//Output