Lab Experiment – 5

Aim: Implementation of Event driven programming.

Problem Statement: Write a java program to demonstrate the use of textfields, radiobuttons, and button.

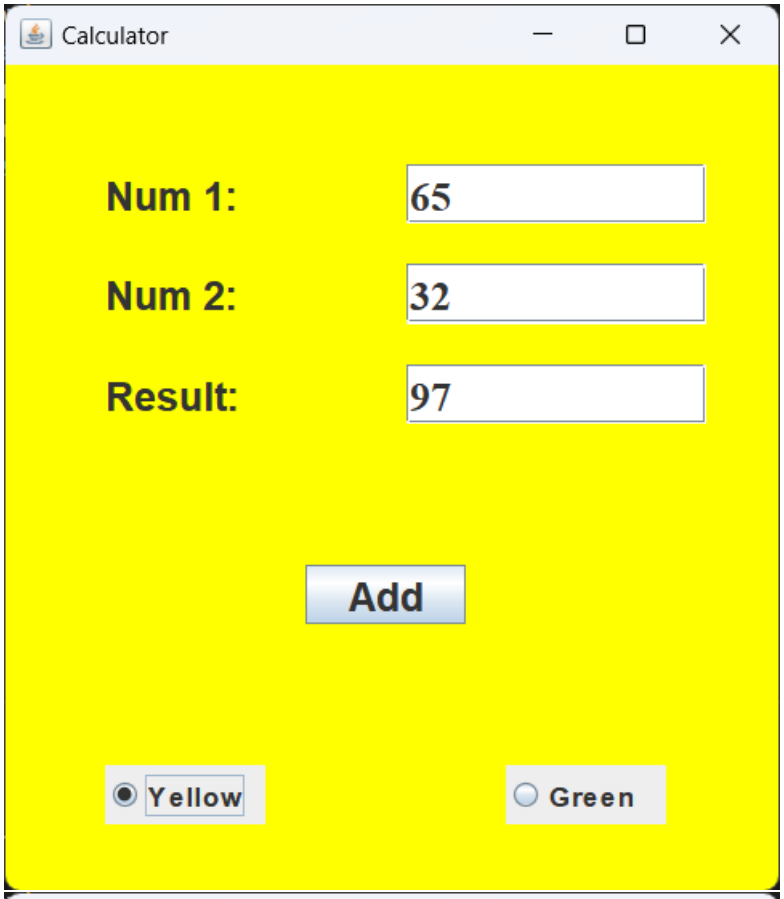
Code:

```
import java.awt.Color;
import java.awt.Font;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JRadioButton;
import javax.swing.JTextField;

class Calculator implements ActionListener {
   // Create a JFrame to hold the calculator components
   JFrame frame = new JFrame("Calculator");

   // Create labels for input and output fields
   JLabel input1Label = new JLabel("Num 1:");
   JLabel input2Label = new JLabel("Num 2:");
   JLabel resultLabel = new JLabel("Result:");

   // Create input and output fields
   JTextField input1Field = new JTextField();
   JTextField input2Field = new JTextField();
   JTextField resultField = new JTextField();

   // Create buttons
   JButton addButton = new JButton("Add");

   // Create panel to hold the components
   JPanel panel = new JPanel();

   // Create radio buttons for background color
   JRadioButton yellowButton = new JRadioButton("Yellow");
   JRadioButton greenButton = new JRadioButton("Green");

   // Create fonts for labels, input and output fields, and buttons
   Font sansSerif = new Font("SansSerif", Font.BOLD, 20);
```

```
Font serif = new Font("Serif", Font.BOLD, 20);
Font bgFont = new Font("SansSerif", Font.BOLD, 14);

Calculator() {
   // Set the layout for the panel
   panel.setLayout(null);

   // Set the size of the JFrame
   frame.setSize(400, 450);

   // Make the JFrame exit on close
   frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

   // Make the JFrame visible
   frame.setVisible(true);

   // Set the position of the labels and input and output fields
   input1Label.setBounds(50, 50, 150, 30);
   input2Label.setBounds(50, 100, 150, 30);
   resultLabel.setBounds(50, 150, 150, 30);
   input1Field.setBounds(200, 50, 150, 30);
   input2Field.setBounds(200, 100, 150, 30);
   resultField.setBounds(200, 150, 150, 30);

   // Set the position of the buttons
   addButton.setBounds(150, 250, 80, 30);

   // Set the position of the radio buttons
   yellowButton.setBounds(50, 350, 80, 30);
   greenButton.setBounds(250, 350, 80, 30);

   // Set the font of the labels, input and output fields, and buttons
   input1Label.setFont(sansSerif);
   input2Label.setFont(sansSerif);
   resultLabel.setFont(sansSerif);
   input1Field.setFont(serif);
   input2Field.setFont(serif);
   resultField.setFont(serif);
   addButton.setFont(sansSerif);
   yellowButton.setFont(bgFont);
   greenButton.setFont(bgFont);

   // Add components to the panel
   panel.add(input1Label);
   panel.add(input2Label);
   panel.add(resultLabel);
```

```
        panel.add(input1Field);
        panel.add(input2Field);
        panel.add(resultField);
        panel.add(addButton);
        panel.add(yellowButton);
        panel.add(greenButton);

        // Add the panel to the JFrame
        frame.add(panel);

        // Register listeners for buttons and radio buttons
        addButton.addActionListener(this);
        yellowButton.addActionListener(this);
        greenButton.addActionListener(this);
    }

    // Handle button clicks
    @Override
    public void actionPerformed(ActionEvent e) {
        if (e.getSource() == addButton) {
            int x = Integer.parseInt(input1Field.getText());
            int y = Integer.parseInt(input2Field.getText());
            int sum = x + y;
            resultField.setText(Integer.toString(sum));
        } else if (e.getSource() == yellowButton) {
            panel.setBackground(Color.yellow);
            greenButton.setSelected(false);
        } else if (e.getSource() == greenButton) {
            panel.setBackground(Color.green);
            yellowButton.setSelected(false);
        }
    }
}

public class UI_demo {
    public static void main(String[] args) {
        new Calculator();
    }
}
```

Output(s):


Calculator
Num 1:
65
Num 2:
32
Result:
97
Add
Yellow
Green


Calculator
Num 1:
12
Num 2:
32
Result:
44
Add
Yellow
Green