

CS433P Programming Paradigm Lab

DATE: 17-02-2023

EXPERIMENT NO 5

REGISTER NO: 2162014

EVENT DRIVEN PROGRAMMING

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

PROGRAM:

```
/**
 *
 * @author 2162014
 */
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");
```

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```
// 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
```

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```
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();
    }
}
```

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RESULTS: