

R. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING
Department of Computer Engineering

Experiment 7- Based on Swing

1. Course Details:

Academic Year	2023 - 24	Estimated Time	Experiment No. 7– 02 Hours
Course & Semester	S.E. (COMP) – Sem. III	Subject Name	Skill based lab Course-OOP with Java
Module No.	06	Chapter Title	GUI programming in Java
Experiment Type	Software Performance	Subject Code	CSL304

Name of Student	Mark Lopes	Roll No.	9913
Date of Performance:	27/09/2023	Date of Submission:	04/10/2023
CO Mapping	CSL304.5 Develop real world application using libraries/GUI, Database in Java		

Timeline	Preparedness	Effort	Result	Total (10)
(2)	(2)	(3)	(3)	

Problem statement:

- 1) Write a Java program that creates a user interface to perform integer addition, subtraction, multiplication, divisions. The user enters two numbers in the text fields, Num1 and Num2. The answer of Num1 and Num 2 operation should display as message dialog box when the button is clicked.

CODE:

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

class MyFrame extends JFrame implements ActionListener {
    private int count = 0;
    private JTextField input1, input2;
```

```

private JButton add, sub, div, mul;
private JLabel title1, title2;

MyFrame() {
    // creating the instances
    title1 = new JLabel("First Number");
    input1 = new JTextField(20);
    title2 = new JLabel("Second Number");
    input2 = new JTextField(20);
    add = new JButton("Add");
    sub = new JButton("Sub");
    mul = new JButton("Mul");
    div = new JButton("Div");

    // adding event listeners
    add.addActionListener(this);
    sub.addActionListener(this);
    mul.addActionListener(this);
    div.addActionListener(this);

    // setting the layout so they don't overlap
    setLayout(new FlowLayout());

    // adding to the frame
    add(title1);
    add(input1);
    add(title2);
    add(input2);
    add(add);
    add(sub);
    add(mul);
    add(div);
}

// setting the output based on the clicked button
@Override
public void actionPerformed(ActionEvent ae) {
    int n1 = Integer.parseInt(input1.getText());
    int n2 = Integer.parseInt(input2.getText());
    int result;
    // getActionCommand returns Uppercase Characters

```

```

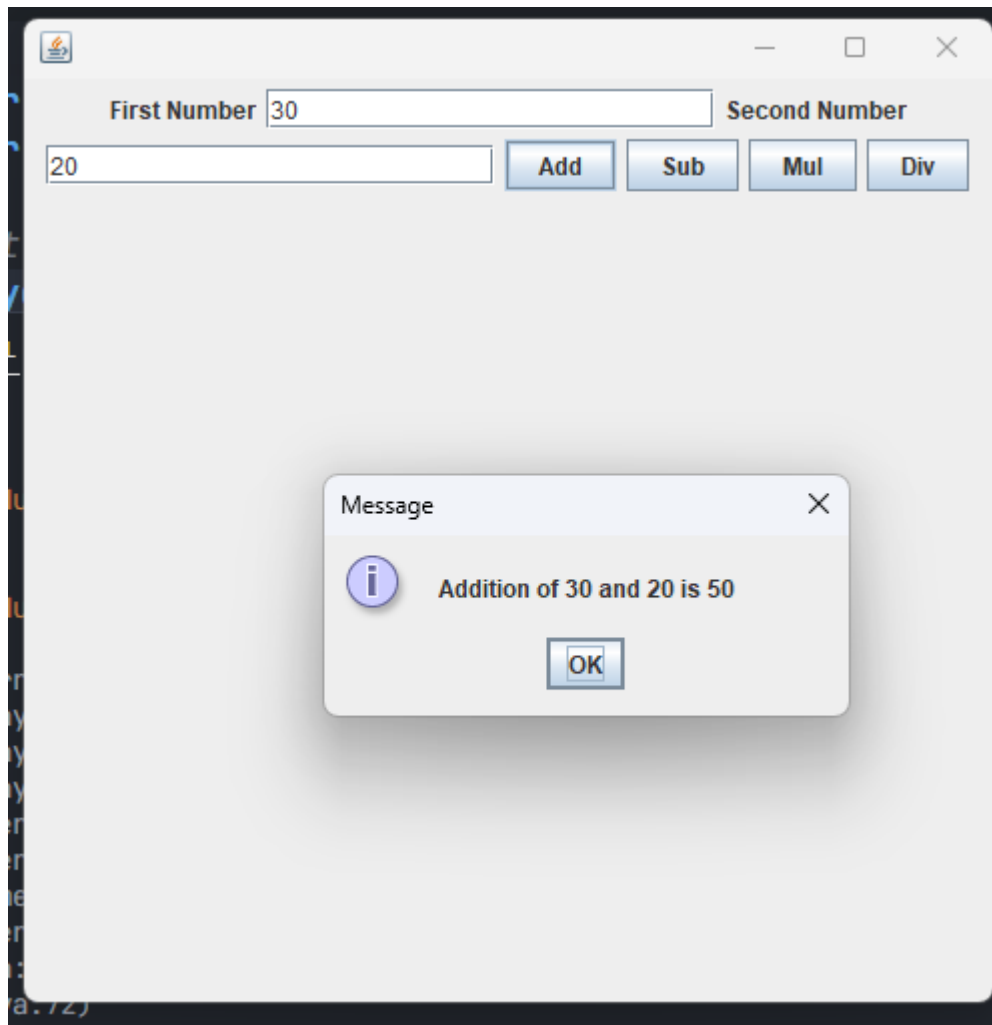
        switch (ae.getActionCommand().toLowerCase()) {
            case "add":
                result = n1 + n2;
                JOptionPane.showMessageDialog(null, "Addition of " + n1
+ " and " + n2 + " is " + result);
                break;
            case "sub":
                result = n1 - n2;
                JOptionPane.showMessageDialog(null, "Subtraction of " +
n1 + " from " + n2 + " is " + result);
                break;
            case "mul":
                result = n1 * n2;
                JOptionPane.showMessageDialog(null, "Multiplication of
" + n1 + " and " + n2 + " is " + result);
                break;
            case "div":
                result = n1 / n2;
                JOptionPane.showMessageDialog(null, "Division of " + n1
+ " and " + n2 + " is " + result);
                break;
        }
    }
}

public class Calculator {
    public static void main(String[] args) {
        MyFrame frame = new MyFrame();
        frame.setSize(500, 500);
        frame.setVisible(true);

        frame.setDefaultCloseOperation(frame.EXIT_ON_CLOSE);
    }
}

```

OUTPUT:



- 2) Write a Java program that creates a user interface to perform number of times, a button clicked.

CODE:

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

class MyFrame extends JFrame implements ActionListener {

    private int count = 0;
    private JLabel label;
    private JButton button;

    MyFrame() {
        super("Counter");
        label = new JLabel(Integer.toString(count));
```

```

        button = new JButton("increment");
        button.addActionListener(this);

        // create the layout
        setLayout(new FlowLayout());
        add(label);
        add(button);
    }

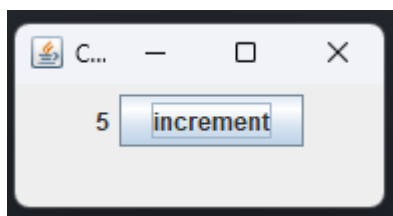
    // to make sure overridden method exists
    @Override
    public void actionPerformed(ActionEvent e) {
        // for any action performed the count will be incremented
        // by one
        count++;
        label.setText(Integer.toString(count)); // this is used to
        // update the value of the label
    }
}

public class Counter {

    public static void main(String[] args) {
        // initialize the frame
        MyFrame frame = new MyFrame();
        frame.setSize(200, 100);
        frame.setVisible(true);
        frame.setDefaultCloseOperation(frame.EXIT_ON_CLOSE);
    }
}

```

OUTPUT:



- 3) Write a Java program that creates a user interface to perform create username and password field for fix set of value. If username and password matches create new frame with message “welcome to My world” and if doesn’t match display message “Something went wrong” as a message dialog box.

CODE:

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

class SuccessFrame extends JFrame {
    private JLabel l1;

    SuccessFrame() {
        l1 = new JLabel("Welcome to my World");
        setLayout(new FlowLayout());
        add(l1);
    }
}

class MyFrame extends JFrame implements ActionListener {

    private String username = "universe";
    private String password = "universe";
    private JLabel l1, l2;
    private JTextField tf1, tf2;
    private JButton btn;

    MyFrame() {
        l1 = new JLabel("Username : ");
        tf1 = new JTextField(20);

        l2 = new JLabel("Password : ");
        tf2 = new JTextField(20);

        btn = new JButton("Submit");

        btn.addActionListener(this);
    }
}
```

```

        setLayout(new FlowLayout());

        add(l1);
        add(tf1);
        add(l2);
        add(tf2);
        add(btn);
    }

    @Override
    public void actionPerformed(ActionEvent e) {
        if (username.equals(tf1.getText()) &&
password.equals(tf2.getText())) {
            this.setVisible(false);
            SuccessFrame frame = new SuccessFrame();
            frame.setSize(500, 500);
            frame.setVisible(true);
            frame.setDefaultCloseOperation(frame.EXIT_ON_CLOSE);
        } else {
            // l1.setText(tf1.getText());
            // l2.setText(tf2.getText());

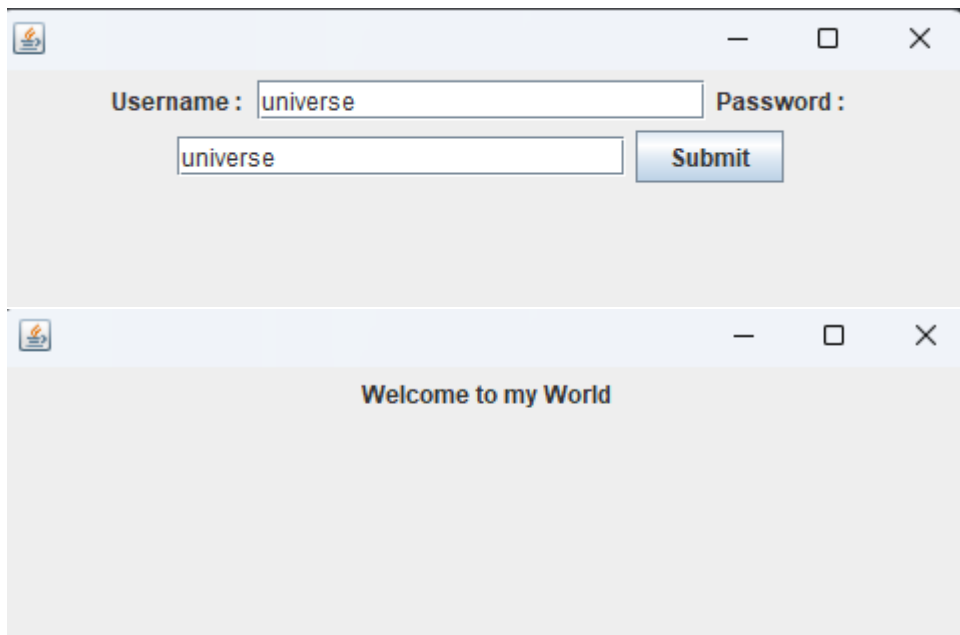
            JOptionPane.showMessageDialog(this, "Incorrect input. Please
recheck your username and password");
        }
    }
}

public class Validation {
    public static void main(String[] args) {
        MyFrame frame = new MyFrame();
        frame.setSize(500, 500);
        frame.setVisible(true);
        frame.setDefaultCloseOperation(frame.EXIT_ON_CLOSE);

    }
}

```

OUTPUT:



The image displays two sequential screenshots of a web application interface. The top screenshot shows a login form with a light gray background. It features a title bar with a small icon and standard window controls. The form contains two input fields: 'Username : universe' and 'Password : universe'. A blue 'Submit' button is positioned to the right of the password field. The bottom screenshot shows the same application after a successful login. The title bar remains, but the main content area now displays the text 'Welcome to my World' in a bold, black font.