Lab Test_ 6-11-2025

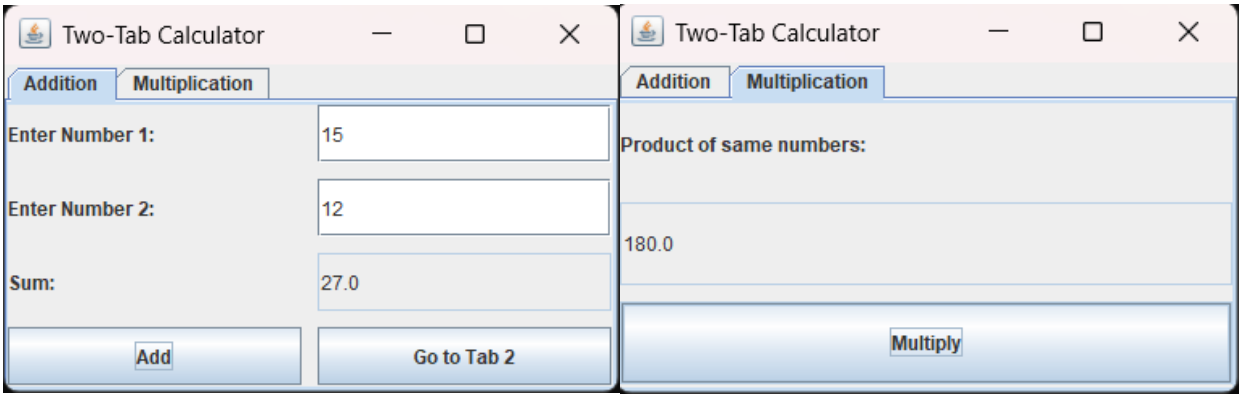
Lab Test

Q1: Write a Java program to create a GUI with two tabs:
Accept two numbers as input from the user.
i. Perform of the two numbers and display the result.
ii. Provide a button to navigate to the second tab.
iii Use the entered in the first tab.
iv. Perform multiply of those numbers and display the result.
Code:-

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

public class TwoTabCalculator extends JFrame implements ActionListener {

    JTextField num1Field, num2Field, result1Field;
    JButton addButton, nextButton;

    JTextField result2Field;
    JButton multiplyButton;

    JTabbedPane tabbedPane;

    double num1, num2;

    public TwoTabCalculator() {
        setTitle("Two-Tab Calculator");
        setSize(400, 250);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        tabbedPane = new JTabbedPane();

        JPanel tab1 = new JPanel();
        tab1.setLayout(new GridLayout(4, 2, 10, 10));

        tab1.add(new JLabel("Enter Number 1:"));
        num1Field = new JTextField();
        tab1.add(num1Field);
```

```
        tab1.add(new JLabel("Enter Number 2:"));
        num2Field = new JTextField();
        tab1.add(num2Field);

        tab1.add(new JLabel("Sum:"));
        result1Field = new JTextField();
        result1Field.setEditable(false);
        tab1.add(result1Field);

        addButton = new JButton("Add");
        addButton.addActionListener(this);
        tab1.add(addButton);

        nextButton = new JButton("Go to Tab 2");
        nextButton.addActionListener(this);
        tab1.add(nextButton);

        JPanel tab2 = new JPanel();
        tab2.setLayout(new GridLayout(3, 2, 10, 10));

        tab2.add(new JLabel("Product of same numbers:"));
        result2Field = new JTextField();
        result2Field.setEditable(false);
        tab2.add(result2Field);

        multiplyButton = new JButton("Multiply");
        multiplyButton.addActionListener(this);
        tab2.add(multiplyButton);

        tabbedPane.addTab("Addition", tab1);
        tabbedPane.addTab("Multiplication", tab2);

        add(tabbedPane);

        setVisible(true);
    }

    public void actionPerformed(ActionEvent e) {
        try {
            if (e.getSource() == addButton || e.getSource() == multiplyButton || e.getSource() ==
nextButton) {
                num1 = Double.parseDouble(num1Field.getText());
                num2 = Double.parseDouble(num2Field.getText());
            }
```

```
            if (e.getSource() == addButton) {
                double sum = num1 + num2;
                result1Field.setText(String.valueOf(sum));
            }

            else if (e.getSource() == multiplyButton) {
                double product = num1 * num2;
                result2Field.setText(String.valueOf(product));
            }

            else if (e.getSource() == nextButton) {
                tabbedPane.setSelectedIndex(1);
            }
        } catch (NumberFormatException ex) {
            JOptionPane.showMessageDialog(this, "Please enter valid numbers!");
        }
    }

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



Q2: Draw the Pic_g3_Q2 diagram in java Applet.

Code:-

```
import java.io.*;
import java.awt.*;
import java.applet.Applet;
/*
<applet code ="quiz" width=400 height=300> </applet>
```

```
*/
public class quiz extends Applet {
	public void paint(Graphics g){

	g.setColor(Color.red);
	g.drawArc(100,100,200,200,180,-180);
	g.setColor(Color.black);
	g.drawLine(100,200,300,200);
	g.drawArc(150,150,100,100,180,-180);
	g.drawLine(130,130,165,165);
	g.drawLine(200,100,200,150);
	g.drawLine(270,130,235,165);



	g.setColor(Color.yellow);
	g.fillArc(100,100,200,200,180,-45);
	g.setColor(Color.green);
	g.fillArc(100,100,200,200,135,-45);
	g.setColor(Color.blue);
	g.fillArc(100,100,200,200,90,-45);
	g.setColor(Color.magenta);
	g.fillArc(100,100,200,200,45,-45);
	g.setColor(Color.pink);
	g.fillArc(150,150,100,100,180,-180);

}
}
```