Nzambuli Daniel

665721

Individual Exercise

Monday 5th March 2024

***Task:*** *• Write a program that use Jframe the user enters three numbers, the program multiplies the numbers and puts result in product field.*

*• The program add the three numbers to a Jtable*

*• Copy the button events of code you have written. Copy and paste interface in MS word*

## The Code

import javax.swing.\*;

import java.awt.\*;

import javax.swing.table.DefaultTableModel;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

public class Calculator extends JFrame{

// private Jframe frame;

private JTextField num1, num2, num3;

private JButton calculate;

private JTable results;

public Calculator(){

// Create input fields

JLabel num1Label = new JLabel("Num a:");

JLabel num2Label = new JLabel("Num b:");

JLabel num3Label = new JLabel("Num c:");

num1 = new JTextField(10);

num2 = new JTextField(10);

num3 = new JTextField(10);

// Create button

calculate = new JButton("Calculate");

calculate.addActionListener(new ActionListener() {

@*Override*

public *void* actionPerformed(ActionEvent *e*) {

calculate();

}

});

// Create table

results = new JTable(new DefaultTableModel(

new Object[]{"Three Numbers", "Sum", "Multiplication"}, 0));

// Add components to the frame

JPanel inputPanel = new JPanel(new GridLayout(3, 2));

inputPanel.add(num1Label);

inputPanel.add(num1);

inputPanel.add(num2Label);

inputPanel.add(num2);

inputPanel.add(num3Label);

inputPanel.add(num3);

JPanel buttonPanel = new JPanel();

buttonPanel.add(calculate);

getContentPane().setLayout(new BorderLayout());

getContentPane().add(inputPanel, BorderLayout.NORTH);

getContentPane().add(new JScrollPane(results), BorderLayout.CENTER);

getContentPane().add(buttonPanel, BorderLayout.SOUTH);

}

private *void* calculate() {

try {

// Get input values

*double* a = Double.parseDouble(num1.getText());

*double* b = Double.parseDouble(num2.getText());

*double* c = Double.parseDouble(num3.getText());

// Calculate sum and multiplication

*double* sum = a + b + c;

*double* multiplication = a \* b \* c;

// Update table model

String numbers = a + ", " + b + ", " + c;

DefaultTableModel model = (DefaultTableModel) results.getModel();

model.setRowCount(0);

model.addRow(new Object[]{numbers , sum, multiplication});

} catch (NumberFormatException e) {

JOptionPane.showMessageDialog(this, "Please enter valid numbers.");

}

}

public static *void* main(String[] *args*) {

SwingUtilities.invokeLater(new Runnable() {

@*Override*

public *void* run() {

new Calculator().setVisible(true);

}

});

}

}

## The Output

