

LABTASK 2

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

public class CarTaxCalculator extends JFrame implements ActionListener {

    // Declare components
    private JLabel lblTitle, lblPrice, lblRate, lblAmount, lblTotal, lblLoan, lblMonthly;
    private JTextField txtPrice, txtRate, txtAmount, txtTotal, txtLoan, txtMonthly;
    private JButton btnCalculate, btnClear;

    public CarTaxCalculator() {
        // setting frame
        setTitle("Car Tax Calculator");
        setSize(650, 420);
        setLocationRelativeTo(null);
        setDefaultCloseOperation(EXIT_ON_CLOSE);

        // main panel
        JPanel mainPanel = new JPanel();
        mainPanel.setBorder(BorderFactory.createEmptyBorder(20, 40, 20, 40));
        mainPanel.setLayout(new GridLayout(8, 2, 10, 10));
```

```
// label
lblTitle = new JLabel("Car Tax Calculator", SwingConstants.CENTER);
lblTitle.setFont(new Font("Arial", Font.BOLD, 16));

lblPrice = new JLabel("Car Price:");
lblRate = new JLabel("Tax Rate (%):");
lblAmount = new JLabel("Tax Amount:");
lblTotal = new JLabel("Total Price:");
lblLoan = new JLabel("Loan Term (months):");
lblMonthly = new JLabel("Monthly Payment:");

//Text Fields
txtPrice = new JTextField();
txtRate = new JTextField();
txtAmount = new JTextField();
txtTotal = new JTextField();
txtLoan = new JTextField();
txtMonthly = new JTextField();

// Output fields supaya tak boleh diedit
txtAmount.setEditable(false);
txtTotal.setEditable(false);
txtMonthly.setEditable(false);
```

```

// Buttons
btnCalculate = new JButton("Calculate");
btnClear = new JButton("Clear");

btnCalculate.addActionListener(this);
btnClear.addActionListener(this);

//Tambah semua ke mainPanel
mainPanel.add(lblTitle);
mainPanel.add(new JLabel("")); // kosong supaya tajuk duduk tengah

mainPanel.add(lblPrice); mainPanel.add(txtPrice);
mainPanel.add(lblRate); mainPanel.add(txtRate);
mainPanel.add(lblAmount); mainPanel.add(txtAmount);
mainPanel.add(lblTotal); mainPanel.add(txtTotal);
mainPanel.add(lblLoan); mainPanel.add(txtLoan);
mainPanel.add(lblMonthly); mainPanel.add(txtMonthly);
mainPanel.add(btnCalculate); mainPanel.add(btnClear);

// Add mainPanel ke JFrame
add(mainPanel);

setVisible(true);
}

```

```

@Override
public void actionPerformed(ActionEvent e) {
    if (e.getSource() == btnCalculate) {
        try {
            double carPrice = Double.parseDouble(txtPrice.getText());
            double taxRate = Double.parseDouble(txtRate.getText());
            int loanTerm = Integer.parseInt(txtLoan.getText());

            double taxAmount = carPrice * (taxRate / 100);
            double totalPrice = carPrice + taxAmount;
            double monthlyPayment = totalPrice / loanTerm;

            txtAmount.setText(String.format("%.2f", taxAmount));
            txtTotal.setText(String.format("%.2f", totalPrice));
            txtMonthly.setText(String.format("%.2f", monthlyPayment));

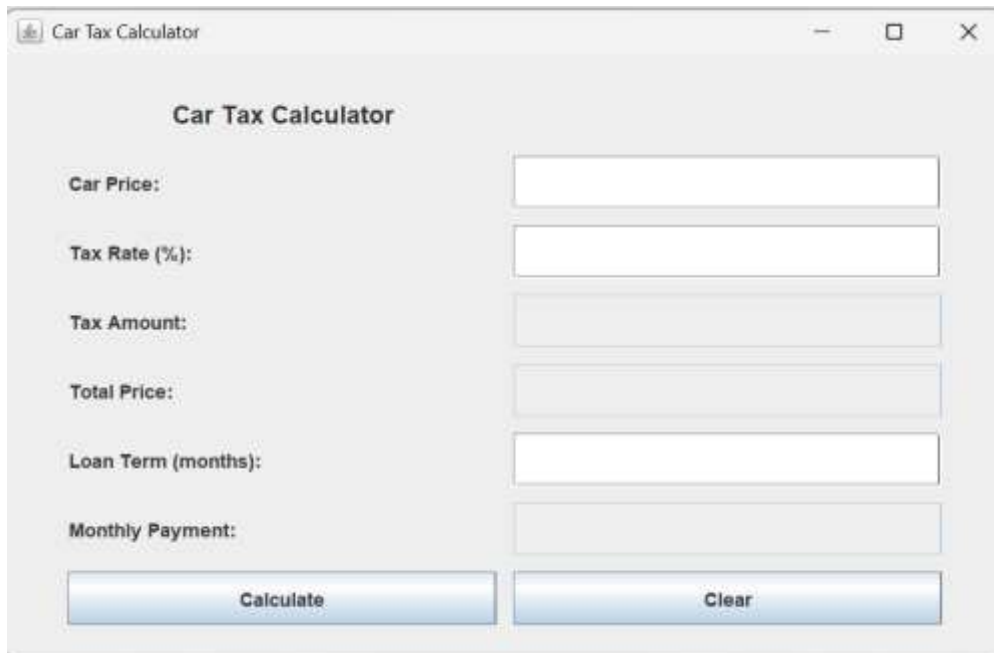
        } catch (NumberFormatException ex) {
            JOptionPane.showMessageDialog(this, "A Please enter valid numbers for all input fields.");
        }

    } else if (e.getSource() == btnClear) {
        txtPrice.setText("");
        txtRate.setText("");
        txtAmount.setText("");
        txtTotal.setText("");
        txtLoan.setText("");
        txtMonthly.setText("");
    }
}

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


```

Output:



A screenshot of a Windows application window titled "Car Tax Calculator". The window has a standard title bar with minimize, maximize, and close buttons. The main content area is titled "Car Tax Calculator" and contains six input fields arranged vertically. The first two fields, "Car Price:" and "Tax Rate (%)", are empty. The next three fields, "Tax Amount:", "Total Price:", and "Loan Term (months):", are also empty. The last field, "Monthly Payment:", is empty. At the bottom of the window, there are two buttons: "Calculate" and "Clear".

Field	Value
Car Price:	
Tax Rate (%)	
Tax Amount:	
Total Price:	
Loan Term (months):	
Monthly Payment:	



A screenshot of the same "Car Tax Calculator" window, but now with calculated values. The "Car Price:" field contains "100000". The "Tax Rate (%)" field contains "10". The "Tax Amount:" field contains "10000.00". The "Total Price:" field contains "110000.00". The "Loan Term (months):" field contains "12". The "Monthly Payment:" field contains "9166.67". The "Calculate" and "Clear" buttons are still present at the bottom.

Field	Value
Car Price:	100000
Tax Rate (%)	10
Tax Amount:	10000.00
Total Price:	110000.00
Loan Term (months):	12
Monthly Payment:	9166.67