import javax.swing.\*;

import java.awt.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

public class SmartBudgetApp {

public static void main(String[] args) {

JFrame frame = new JFrame("Smart Budget - Student Expense Management");

frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

frame.setSize(600, 600);

JPanel panel = new JPanel(new GridLayout(13, 2, 10, 10));

panel.setBorder(BorderFactory.createEmptyBorder(20, 20, 20, 20));

JLabel titleLabel = new JLabel("SMART BUDGET - STUDENT EXPENSE MANAGER", JLabel.CENTER);

titleLabel.setFont(new Font("Arial", Font.BOLD, 18));

frame.add(titleLabel, BorderLayout.NORTH);

// Input labels and fields

JTextField nameField = new JTextField();

JTextField incomeField = new JTextField();

JTextField rentField = new JTextField();

JTextField foodField = new JTextField();

JTextField transportField = new JTextField();

JTextField utilityField = new JTextField();

JTextField internetField = new JTextField();

JTextField studyField = new JTextField();

JTextField entertainmentField = new JTextField();

JTextField othersField = new JTextField();

panel.add(new JLabel("Your Name:"));

panel.add(nameField);

panel.add(new JLabel("Total Monthly Income (VND):"));

panel.add(incomeField);

panel.add(new JLabel("Rent:"));

panel.add(rentField);

panel.add(new JLabel("Food:"));

panel.add(foodField);

panel.add(new JLabel("Transportation:"));

panel.add(transportField);

panel.add(new JLabel("Utilities (Electricity, Water, Gas):"));

panel.add(utilityField);

panel.add(new JLabel("Internet and Phone:"));

panel.add(internetField);

panel.add(new JLabel("Study (Books, Tuition):"));

panel.add(studyField);

panel.add(new JLabel("Entertainment:"));

panel.add(entertainmentField);

panel.add(new JLabel("Other Expenses:"));

panel.add(othersField);

// Buttons

JButton calculateBtn = new JButton("Calculate");

JButton resetBtn = new JButton("Reset");

panel.add(calculateBtn);

panel.add(resetBtn);

frame.add(panel, BorderLayout.CENTER);

// Calculate button action

calculateBtn.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent e) {

try {

String name = nameField.getText();

double income = Double.parseDouble(incomeField.getText());

double rent = Double.parseDouble(rentField.getText());

double food = Double.parseDouble(foodField.getText());

double transport = Double.parseDouble(transportField.getText());

double utility = Double.parseDouble(utilityField.getText());

double internet = Double.parseDouble(internetField.getText());

double study = Double.parseDouble(studyField.getText());

double entertainment = Double.parseDouble(entertainmentField.getText());

double others = Double.parseDouble(othersField.getText());

double totalExpenses = rent + food + transport + utility + internet + study + entertainment + others;

double balance = income - totalExpenses;

String message = "Hello " + name + ",\n\n"

+ "Your total monthly expenses: " + String.format("%,.0f", totalExpenses) + " VND\n"

+ "Remaining balance after expenses: " + String.format("%,.0f", balance) + " VND";

JOptionPane.showMessageDialog(frame, message, "Calculation Result", JOptionPane.INFORMATION\_MESSAGE);

} catch (NumberFormatException ex) {

JOptionPane.showMessageDialog(frame, "Please enter valid numbers in all fields.",

"Input Error", JOptionPane.ERROR\_MESSAGE);

}

}

});

// Reset button action

resetBtn.addActionListener(e -> {

nameField.setText("");

incomeField.setText("");

rentField.setText("");

foodField.setText("");

transportField.setText("");

utilityField.setText("");

internetField.setText("");

studyField.setText("");

entertainmentField.setText("");

othersField.setText("");

});

frame.setVisible(true);

}

}