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package TEST;

import java.awt.Color;
import java.awt.Dimension;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;

public class HelloWorldFrame {
    public static void main(String[] args) {
        // Label and dimension declaration
        JFrame frame = new JFrame("Example");
        JLabel Schoolname = new JLabel("Saint Vincent Ferrer College");
        Dimension SchoolnameSize = Schoolname.getPreferredSize();
        JLabel ProgramName = new JLabel("<<<Tuition Fee Computation>>>");
        Dimension ProgramNameSize = ProgramName.getPreferredSize();
        JLabel UnitLabel = new JLabel("No. of units enrolled");
        Dimension UnitLabelSize = UnitLabel.getPreferredSize();
        JLabel YearLevelLabel = new JLabel("Year Level");
        Dimension YearLevelLabelSize = YearLevelLabel.getPreferredSize();
        JLabel StudentCodeLabel = new JLabel("Student code");
        Dimension StudentCodeLabelSize = StudentCodeLabel.getPreferredSize();
        JLabel StudentDiscountLabel = new JLabel("Student discount");
        Dimension StudentDiscountLabelSize = StudentDiscountLabel.getPreferredSize();
        JLabel RatePerUnitLabel = new JLabel("Rate per unit");
        Dimension RatePerUnitLabelSize = RatePerUnitLabel.getPreferredSize();
        JLabel MiscFeeLabel = new JLabel("Miscellaneous fee");
        Dimension MiscFeeLabelSize = MiscFeeLabel.getPreferredSize();
        JLabel TotalTuitionFeeLabel = new JLabel("Total Tuition fee");
        Dimension TotalTuitionFeeLabelSize = TotalTuitionFeeLabel.getPreferredSize();
        JLabel StudentClassificationLabel = new JLabel("Student classification");
        Dimension StudentClassificationLabelSize =
StudentClassificationLabel.getPreferredSize();
        JLabel TotalMatriculationFeeLabel = new JLabel("Total Matriculation fee");
        Dimension TotalMatriculationFeeLabelSize =
TotalMatriculationFeeLabel.getPreferredSize();

        // Text field
        JTextField UnitField = new JTextField();
    }
}

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JTextField YearLevelField = new JTextField();
JTextField StudentCodeField = new JTextField();
JTextField StudentDiscountField = new JTextField();
JTextField RatePerUnitField = new JTextField();
JTextField MiscFeeField = new JTextField();
JTextField TotalTuitionFeeField = new JTextField();
JTextField StudentClassificationField = new JTextField();
JTextField TotalMatriField = new JTextField();

// Button
JButton computeButton = new JButton("Compute");
JButton clearButton = new JButton("Clear");
JButton exitButton = new JButton("Exit");

// Position and sizing variables
int ContainerHeight = 500;
int ContainerWidth = 700;
int LeftLabelPositionX = 80;
int FirstLabelPositionY = 100;
int SecondLabelPositionY = 140;
int ThirdLabelPositionY = 180;
int FourthLabelPositionY = 300;
int RightLabelPositionX = ContainerWidth - 300;
int RightFieldPositionX = RightLabelPositionX + MiscFeeLabelSize.width + 20;
int LeftFieldPositionX = LeftLabelPositionX + UnitLabelSize.width + 20;
int SchoolnameX = (ContainerWidth - SchoolnameSize.width) / 2;
int ProgramNameX = (ContainerWidth - ProgramNameSize.width) / 2;
int textFieldWidth = 80;
int textFieldHeight = 20;
int buttonPositionY = ContainerHeight - 100;

// JFrame initialization
frame.setSize(ContainerWidth, ContainerHeight);
frame.setLayout(null);
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setVisible(true);

// Label positioning
Schoolname.setBounds(SchoolnameX, 20, SchoolnameSize.width,
SchoolnameSize.height);
ProgramName.setBounds(ProgramNameX, 40, ProgramNameSize.width,
ProgramNameSize.height);

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        UnitLabel.setBounds(LeftLabelPositionX, FirstLabelPositionY, UnitLabelSize.width,
UnitLabelSize.height);
        YearLevelLabel.setBounds(LeftLabelPositionX, SecondLabelPositionY,
YearLevelLabelSize.width, YearLevelLabelSize.height);
        StudentCodeLabel.setBounds(LeftLabelPositionX, ThirdLabelPositionY,
StudentCodeLabelSize.width, StudentCodeLabelSize.height);
        StudentDiscountLabel.setBounds(LeftLabelPositionX, 220,
StudentDiscountLabelSize.width, StudentDiscountLabelSize.height);
        RatePerUnitLabel.setBounds(RightLabelPositionX, FirstLabelPositionY,
RatePerUnitLabelSize.width, RatePerUnitLabelSize.height);
        MiscFeeLabel.setBounds(RightLabelPositionX, SecondLabelPositionY,
MiscFeeLabelSize.width, MiscFeeLabelSize.height);
        TotalTuitionFeeLabel.setBounds(RightLabelPositionX, ThirdLabelPositionY,
TotalTuitionFeeLabelSize.width, TotalTuitionFeeLabelSize.height);
        StudentClassificationLabel.setBounds(LeftLabelPositionX, FourthLabelPositionY,
StudentClassificationLabelSize.width, StudentClassificationLabelSize.height);
        TotalMatriculationFeeLabel.setBounds(RightLabelPositionX, FourthLabelPositionY,
TotalMatriculationFeeLabelSize.width, TotalMatriculationFeeLabelSize.height);

// Text field positioning
        UnitField.setBounds(RightFieldPositionX, FirstLabelPositionY, textFieldWidth,
textFieldHeight);
        UnitField.setBounds(LeftFieldPositionX, FirstLabelPositionY, textFieldWidth,
textFieldHeight);
        YearLevelField.setBounds(LeftFieldPositionX, SecondLabelPositionY, textFieldWidth,
textFieldHeight);
        StudentCodeField.setBounds(LeftFieldPositionX, ThirdLabelPositionY, textFieldWidth,
textFieldHeight);
        StudentDiscountField.setBounds(LeftFieldPositionX, 220, textFieldWidth, textFieldHeight);
        StudentClassificationField.setBounds(LeftFieldPositionX, FourthLabelPositionY,
textFieldWidth + 70, textFieldHeight);
        RatePerUnitField.setBounds(RightFieldPositionX, FirstLabelPositionY, textFieldWidth,
textFieldHeight);
        MiscFeeField.setBounds(RightFieldPositionX, SecondLabelPositionY, textFieldWidth,
textFieldHeight);
        TotalTuitionFeeField.setBounds(RightFieldPositionX, ThirdLabelPositionY, textFieldWidth,
textFieldHeight);
        TotalMatriField.setBounds(RightFieldPositionX + 30, FourthLabelPositionY, textFieldWidth,
textFieldHeight);

// Button positioning
        computeButton.setBounds(100, buttonPositionY, 100, 30);
        clearButton.setBounds(300, buttonPositionY, 100, 30);
        exitButton.setBounds(500, buttonPositionY, 100, 30);

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// Button Styles
computeButton.setBackground(Color.BLUE);
computeButton.setForeground(Color.YELLOW);
clearButton.setBackground(Color.BLUE);
clearButton.setForeground(Color.YELLOW);
exitButton.setBackground(Color.BLUE);
exitButton.setForeground(Color.YELLOW);

// Labels amd fields added to the frame
frame.add(Schoolname);
frame.add(ProgramName);
frame.add(UnitLabel);
frame.add(YearLevelLabel);
frame.add(StudentCodeLabel);
frame.add(StudentDiscountLabel);
frame.add(RatePerUnitLabel);
frame.add(MiscFeeLabel);
frame.add(TotalTuitionFeeLabel);
frame.add(StudentClassificationLabel);
frame.add(TotalMatriculationFeeLabel);
frame.add(UnitField);
frame.add(YearLevelField);
frame.add(StudentCodeField);
frame.add(StudentDiscountField);
frame.add(RatePerUnitField);
frame.add(MiscFeeField);
frame.add(TotalTuitionFeeField);
frame.add(StudentClassificationField);
frame.add(TotalMatriField);
frame.add(computeButton);
frame.add(clearButton);
frame.add(exitButton);

computeButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        try {
            int units = Integer.parseInt(UnitField.getText());
            int year = Integer.parseInt(YearLevelField.getText());
            int code = Integer.parseInt(StudentCodeField.getText());

            int ratePerUnit = 0;
            int miscFee = 0;

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// Year Level Table
switch (year) {
    case 1: ratePerUnit = 500; miscFee = 4000; break;
    case 2: ratePerUnit = 600; miscFee = 5000; break;
    case 3: ratePerUnit = 700; miscFee = 6000; break;
    case 4: ratePerUnit = 800; miscFee = 7000; break;
    default:
        JOptionPane.showMessageDialog(frame, "Invalid Year Level");
        return;
}

// Calculate Tuition Fee
double tuitionFee = units * ratePerUnit;

// Student Code Discounts and Classification
String studentClassification = "";
double discountRate = 0.0;
switch (code) {
    case 1:
        studentClassification = "Ordinary student";
        discountRate = 0.0;
        break;
    case 2:
        studentClassification = "Student scholar";
        discountRate = 0.50;
        break;
    case 3:
        studentClassification = "Student athlete";
        discountRate = 1.00;
        break;
    default:
        studentClassification = "Invalid student code";
        discountRate = 0.0;
        break;
}

double discountAmount = tuitionFee * discountRate;
double totalMatric = (tuitionFee - discountAmount) + miscFee;

TotalTuitionFeeField.setText(String.format("%.2f", tuitionFee));
StudentDiscountField.setText(String.format("%.2f", discountAmount));
TotalMatriField.setText(String.format("%.2f", totalMatric));
StudentClassificationField.setText(studentClassification);
RatePerUnitField.setText(Integer.toString(ratePerUnit));

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        MiscFeeField.setText(Integer.toString(miscFee));

    } catch (NumberFormatException ex) {
        JOptionPane.showMessageDialog(frame, "Please enter valid numbers.");
    }
}

});

clearButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        UnitField.setText("");
        YearLevelField.setText("");
        StudentCodeField.setText("");
        StudentDiscountField.setText("");
        RatePerUnitField.setText("");
        MiscFeeField.setText("");
        TotalTuitionFeeField.setText("");
        StudentClassificationField.setText("");
        TotalMatriField.setText("");
    }
});

exitButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        System.exit(0);
    }
});

}
}

```