**Experiment No 3**

**Grade calculator GUI using Swing**

**import** javax.swing.\*;

**import** java.awt.\*;

**import** java.awt.event.\*;

**import** java.io.\*;

**public** **class** StudentMarks {

// Function to write a student information in JFrame and storing it in a file

**public** **static** **void** StudentInfo()

{

// Creating a new frame using JFrame

JFrame f = **new** JFrame("Student Grade Calculator");

// Creating the labels

JLabel l1, l2, l3, l4, l5,l6, l7, l8;

// Creating three text fields for student name, college mail ID and for Mobile No

JTextField t1, t2, t3, t4, t5, t6, t7, t8;

// Creating two JComboboxes for Branch and for Section

// JComboBox j1, j2;

// Creating two buttons

JButton b1, b2;

// Naming the labels and setting

// the bounds for the labels

l1 = **new** JLabel("Student Name:");

l1.setBounds(50, 50, 450, 30);

l2 = **new** JLabel("Enter Marks of Subject 1");

l2.setBounds(50, 90, 450, 30);

l3 = **new** JLabel("Enter Marks of Subject 2");

l3.setBounds(50, 120, 450, 30);

l4 = **new** JLabel("Enter Marks of Subject 3");

l4.setBounds(50, 150, 450, 30);

l5 = **new** JLabel("Enter Marks of Subject 4");

l5.setBounds(50, 180, 450, 30);

b1 = **new** JButton("Calculate Total and Grade");

b1.setBounds(50, 230, 450, 30);

l6 = **new** JLabel("Total");

l6.setBounds(50, 270, 250, 30);

l7 = **new** JLabel("Percentage");

l7.setBounds(50, 300, 450, 30);

l8 = **new** JLabel("Grade");

l8.setBounds(50, 330, 450, 30);

// Creating the textfields and

// setting the bounds for textfields

t1 = **new** JTextField();

t1.setBounds(300, 50, 170, 30);

t2 = **new** JTextField();

t2.setBounds(300, 90, 70, 30);

t3 = **new** JTextField();

t3.setBounds(300, 120, 70, 30);

t4 = **new** JTextField();

t4.setBounds(300, 150, 70, 30);

t5 = **new** JTextField();

t5.setBounds(300, 180, 70, 30);

t6 = **new** JTextField();

t6.setBounds(300, 270, 70, 30);

t7 = **new** JTextField();

t7.setBounds(300, 300, 70, 30);

t8 = **new** JTextField();

t8.setBounds(300, 330, 70, 30);

// Creating one button for Saving and other button to close

// and setting the bounds

b2 = **new** JButton("Close");

b2.setBounds(450, 350, 70, 30);

// Adding action listener

b1.addActionListener(**new** ActionListener() {

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

{

// Getting the text from text fields

// and JComboboxes

// and copying it to a strings

**if** (e.getSource() == b1) {

**try** {

**int** i2 = Integer.*parseInt*(t2.getText());

**int** i3 = Integer.*parseInt*(t3.getText());

**int** i4 = Integer.*parseInt*(t4.getText());

**int** i5 = Integer.*parseInt*(t5.getText());

**double** total = i2+i3+i4+i5;

t6.setText("" + total);

// Calculates percentage

**double** per = (total / 400) \* 100;

t7.setText("" + per);

String grade = **null**;

// Grade calculation

**if** (per > 90)

{ grade = "A+";

} **else** **if** ((per > 85) && (per < 90)) {

grade = "A";

} **else** **if** ((per > 80) && (per < 85)) {

grade = "B+";

} **else** **if** ((per > 70) && (per < 80)) {

grade = "B";

} **else** **if** ((per > 60) && (per < 70)) {

grade = "C+";

} **else** **if** ((per > 50) && (per < 60)) {

grade = "C";

}

**else** **if** ((per > 40) && (per < 50)) {

grade = "D";

}

**else** **if** ((per > 00) && (per < 40)) {

grade = "Fail";

}

// Displays result in TextField

t8.setText("" + grade);

}

**catch** (Exception ae) {

System.***out***.println(ae);

}

}

}

});

// Action listener to close the form

b2.addActionListener(**new** ActionListener() {

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

{

f.dispose();

}

});

// Default method for closing the frame

f.addWindowListener(**new** WindowAdapter() {

**public** **void** windowClosing(WindowEvent e)

{

System.*exit*(0);

}

});

// Adding the created objects

// to the frame

f.add(l1);

f.add(t1);

f.add(l2);

f.add(t2);

f.add(l3);

f.add(t3);

f.add(l4);

f.add(t4);

f.add(l5);

f.add(t5);

f.add(l6);

f.add(t6);

f.add(l7);

f.add(t7);

f.add(l8);

f.add(t8);

f.add(b1);

f.add(b2);

f.setLayout(**null**);

f.setSize(1700, 1600);

f.setVisible(**true**);

}

// Driver code

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

{

*StudentInfo*();

}

}