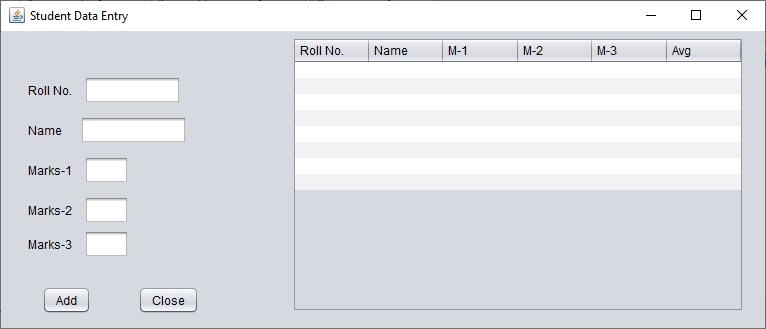
##### Name: Shradha Mallikarjun Patil

##### USN:2GI20CS144

##### TermWork 10:

##### Practice problem10.1:

Design and develop a GUI application to accepts student details as shown in the GUI below. Allow the user to add records one after the other. Once the user clicks on close, compute the average score and display the details using JTable component.



Rename close as “Summarize”

**Program:**

package tw10;

import java.util.ArrayList;

public class StudentData extends

javax.swing.JFrame { class StudentRecord {

//Inner class

String name;

int rNo, m1, m2,m3;

StudentRecord(int rNo, String name, int m1, int m2,

int m3)

{ this.name = name;

this.rNo=rN; this.m1=m1; this.m2 =m2;

this.m3 =m3;

}

ArrayList<StudentRecord> records = new ArrayList<StudentRecord>();

/\*\*

* Creates new form StudentData

\*/

public StudentData() { initComponents();

}

/\*\*

* This method is called from within the constructor to initialize the form.
* WARNING: Do NOT modify this code. The content of this method is always
* regenerated by the Form Editor.

\*/ @SuppressWarnings("uncheck)

// <editor-fold defaultstate="collapsed" desc="Generated Code"> private void initComponents() {

jLabel1 = new

javax.swing.JLabel(); jLabel2 =

new javax.swing.JLabel(); jLabel3

= new javax.swing.JLabel();

jLabel4 = new

javax.swing.JLabel(); jLabel5 =

new javax.swing.JLabel();

jTextField1 = new

javax.swing.JTextField();

jTextField2 = new

javax.swing.JTextField();

jTextField3 = new

javax.swing.JTextField();

jTextField4 = new

javax.swing.JTextField();

jTextField5 = new

javax.swing.JTextField(); jButton1

= new javax.swing.JButton();

jButton2 = new

javax.swing.JButton();

jScrollPane1 = new javax.swing.JScrollPane();

jTable1 = new javax.swing.JTable();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_

CLOSE); setTitle("Student Details");

jLabel1.setText(" Roll No. :");

jLabel2.setText("Name :");

jLabel3.setText("Marks 1 :");

jLabel4.setText(" Marks 2 :");

jLabel5.setText(" Marks 3 :");

jTextField4.addActionListener(new

java.awt.event.ActionListener() {

public void actionPerformed(java.awt.event.ActionEvent evt) {

jTextField4ActionPerformed(evt);

}

});

jButton1.setText("Add");

jButton1.addActionListener(new

java.awt.event.ActionListener() {

public void actionPerformed(java.awt.event.ActionEvent evt)

{

jButton1ActionPerformed(evt);

}

};

jButton2.setText("Summarize");

jButton2.addActionListener(new

java.awt.event.ActionListener() {

public void actionPerformed(java.awt.event.ActionEvent evt)

}

jButton2ActionPerformed(evt);

}

};

jTable1.setFont(new java.awt.Font("Calibri", 0, 16));

// NOI18N jTable1.setModel(new

javax.swing.table.DefaultTableModel(

new Object [][] {

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null},

{null, null, null, null, null, null}

},

new String [] {

"Roll No.", "Name", "M-1", "M-2", "M-3", "Average"

}

));

jScrollPane1.setViewportView(jTable1);

javax.swing.GroupLayout layout = new

javax.swing.GroupLayout(getContentPane());

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup()

.addGap(38, 38, 38)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup()

.addComponent(jButton1)

.addGap(41, 41, 41)

.addComponent(jButton2))

.addGroup(layout.createSequentialGroup()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

.addComponent(jLabel5)

.addComponent(jLabel4)

.addComponent(jLabel3)

.addComponent(jLabel2)

.addComponent(jLabel1))

.addGap(33, 33, 33)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,

false)

.addComponent(jTextField2,

javax.swing.GroupLayout.DEFAULT\_SIZE, 76, Short.MAX\_VALUE)

.addComponent(jTextField3)

.addComponent(jTextField4)

.addComponent(jTextField5))

.addComponent(jTextField1,

javax.swing.GroupLayout.PREFERRED\_SIZE, 93,

javax.swing.GroupLayout.PREFERRED\_SIZE))))

.addGap(18, 18, 18)

.

addComponent(jScrollPane1,

javax.swing.GroupLayout.PREFERRED\_SIZE, 626,

javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap(96, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.

addGroup(layout.createSequentialGroup()

.addGap(47, 47, 47)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jLabel1)

.addComponent(jTextField1,

javax.swing.GroupLayout.PREFERRED\_SIZE,

javax.swing.GroupLayout.DEFAULT\_SIZE,

javax.swing.GroupLayout.PREFERRED\_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jLabel2)

.addComponent(jTextField2,

javax.swing.GroupLayout.PREFERRED\_SIZE,

javax.swing.GroupLayout.DEFAULT\_SIZE,

javax.swing.GroupLayout.PREFERRED\_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel3)

.addComponent(jTextField3,

javax.swing.GroupLayout.PREFERRED\_SIZE,

javax.swing.GroupLayout.DEFAULT\_SIZE,

javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel4)

.addComponent(jTextField4,

javax.swing.GroupLayout.PREFERRED\_SIZE,

javax.swing.GroupLayout.DEFAULT\_SIZE,

javax.swing.GroupLayout.PREFERRED\_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel5)

.addComponent(jTextField5

, javax.swing.GroupLayout.PREFERRED\_SIZE,

javax.swing.GroupLayout.DEFAULT\_SIZE,

javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(99, 99, 99)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jButton1)

.addComponent(jButton2))

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

.addGroup(layout.createSequentialGroup()

.addComponent(jScrollPane1,

javax.swing.GroupLayout.PREFERRED\_SIZE,

javax.swing.GroupLayout.DEFAULT\_SIZE,

javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 103, Short.MAX\_VALUE))

)

pack();

}// </editor-fold>

private void jTextField4ActionPerformed(java.awt.event.ActionEvent evt) {

// TODO add your handling code here:

}

private void

jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

int rowCount = 0;

for(StudentRecord s : records) {

jTable1.setValueAt(s.rNo,

rowCount, 0);

jTable1.setValueAt(s.name, rowCount, 1);

jTable1.setValueAt(s.m1, rowCount, 2);

jTable1.setValueAt(s.m2, rowCount, 3);

jTable1.setValueAt(s.m3,

rowCount, 4); float avg =

(s.m1+s.m2+s.m3) / 3.0f;

jTable1.setValueAt(String.format("%.2f",avg),

rowCount, 5); rowCount++;

}

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

StudentRecord S1=snewStudentRecord(Integer.parseInt(jTextField1.getText()),

jTextField2.getText(),

Integer.parseInt(jTextField3.getText()),

Integer.parseInt(jTextField4.getText()),

Integer.parseInt(jTextField5.getText()));

records.add(s1);

jTextField1.setText("");

jTextField2.setText("");

jTextField3.setText(""); jTextField4.setText(""); jTextField5.setText("");

}

/\*\*

* @param args the command line arguments

\*/

public static void main(String args[]) {

/\* Set the Nimbus look and feel \*/

//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">

/\* If

Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.

\*For details see <http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html>

\*/ try {

for

(javax.swing.UIManager.LookAndFeelInfo info :

javax.swing.UIManager.getInstalledLookAndFeels()) {

if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClass

Name()); break;

}

}

}

catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(StudentData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(StudentData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(StudentData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

}

catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(StudentData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

}

//</editor-fold>

/\* Create and display the form \*/ java.awt.EventQueue.invokeLater(new

Runnable() {

public void run() {

new StudentData().setVisible(true);

}

});

}

// Variables declaration - do not modify private

javax.swing.JButton jButton1;

private javax.swing.JButton

jButton2; private

javax.swing.JLabel jLabel1;

private javax.swing.JLabel

jLabel2; private

javax.swing.JLabel jLabel3;

private javax.swing.JLabel

jLabel4; private

javax.swing.JLabel jLabel5;

private javax.swing.JScrollPane

jScrollPane1; private

javax.swing.JTable jTable1;

private javax.swing.JTextField

jTextField1; private

javax.swing.JTextField jTextField2;

private

javax.swing.JTextField jTextField3; private

javax.swing.JTextField jTextField4; private

javax.swing.JTextField jTextField5;

// End of variables declaration

}

##### Output :

