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**J17-3681-2023**

**Event Driven Programming**

**Sco 202**

Question one

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

public class EventDrivenApp extends JFrame {

private JTextField txtName, txtEmail, txtPhone;

private JTextArea displayArea;

private JButton btnSave, btnShow;

private final String DB\_URL = "jdbc:mysql://localhost:3306/event\_db";

private final String DB\_USER = "root";

private final String DB\_PASSWORD = "password";

public EventDrivenApp() {

setTitle("Event-Driven Programming Application");

setSize(600, 400);

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

setLayout(new BorderLayout());

JPanel inputPanel = new JPanel(new GridLayout(4, 2));

inputPanel.add(new JLabel("Name:"));

txtName = new JTextField();

inputPanel.add(txtName);

inputPanel.add(new JLabel("Email:"));

txtEmail = new JTextField();

inputPanel.add(txtEmail);

inputPanel.add(new JLabel("Phone:"));

txtPhone = new JTextField();

inputPanel.add(txtPhone);

btnSave = new JButton("Save");

inputPanel.add(btnSave);

btnShow = new JButton("Show All");

inputPanel.add(btnShow);

add(inputPanel, BorderLayout.NORTH);

displayArea = new JTextArea();

JScrollPane scrollPane = new JScrollPane(displayArea);

add(scrollPane, BorderLayout.CENTER);

btnSave.addActionListener(e -> saveData());

btnShow.addActionListener(e -> showData());

}

private void saveData() {

String name = txtName.getText();

String email = txtEmail.getText();

String phone = txtPhone.getText();

if (name.isEmpty() || email.isEmpty() || phone.isEmpty()) {

JOptionPane.showMessageDialog(this, "Please fill all fields", "Error", JOptionPane.ERROR\_MESSAGE);

return;

}

try (Connection conn = DriverManager.getConnection(DB\_URL, DB\_USER, DB\_PASSWORD)) {

String query = "INSERT INTO users (name, email, phone) VALUES (?, ?, ?)";

PreparedStatement pstmt = conn.prepareStatement(query);

pstmt.setString(1, name);

pstmt.setString(2, email);

pstmt.setString(3, phone);

pstmt.executeUpdate();

JOptionPane.showMessageDialog(this, "Data saved successfully");

clearFields();

} catch (SQLException ex) {

JOptionPane.showMessageDialog(this, "Database Error: " + ex.getMessage(), "Error", JOptionPane.ERROR\_MESSAGE);

}

}

private void showData() {

try (Connection conn = DriverManager.getConnection(DB\_URL, DB\_USER, DB\_PASSWORD)) {

String query = "SELECT \* FROM users";

Statement stmt = conn.createStatement();

ResultSet rs = stmt.executeQuery(query);

displayArea.setText("");

while (rs.next()) {

displayArea.append("Name: " + rs.getString("name") + "\n");

displayArea.append("Email: " + rs.getString("email") + "\n");

displayArea.append("Phone: " + rs.getString("phone") + "\n");

displayArea.append("-----------------------\n");

}

} catch (SQLException ex) {

JOptionPane.showMessageDialog(this, "Database Error: " + ex.getMessage(), "Error", JOptionPane.ERROR\_MESSAGE);

}

}

private void clearFields() {

txtName.setText("");

txtEmail.setText("");

txtPhone.setText("");

}

public static void main(String[] args) {

SwingUtilities.invokeLater(() -> {

EventDrivenApp app = new EventDrivenApp();

app.setVisible(true);

});

}

}

**Question two**

/\*

\* To change this license header, choose License Headers in Project Properties.

\* To change this template file, choose Tools | Templates

\* and open the template in the editor.

\*/

package takeaway2;

import javax.swing.\*;

import java.sql.\*;

import javax.swing.table.DefaultTableModel;

@author PC

public class RegistrationTwo extends javax.swing.JFrame {

\* Creates new form RegistrationTwo

public RegistrationTwo() {

initComponents();

}

@SuppressWarnings("unchecked")

// <editor-fold defaultstate="collapsed" desc="Generated Code">

private void initComponents() {

bindingGroup = new org.jdesktop.beansbinding.BindingGroup();

buttonGroup1 = new javax.swing.ButtonGroup();

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();

jLabel6 = new javax.swing.JLabel();

jRadioButton1 = new javax.swing.JRadioButton();

jRadioButton2 = new javax.swing.JRadioButton();

jTextField1 = new javax.swing.JTextField();

jTextField2 = new javax.swing.JTextField();

jTextField3 = new javax.swing.JTextField();

jTextField4 = 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);

jLabel1.setText("Registration Form");

jLabel2.setText("ID");

jLabel3.setText("Name");

jLabel4.setText("Gender");

jLabel5.setText("Address");

jLabel6.setText("Contact");

buttonGroup1.add(jRadioButton1);

jRadioButton1.setText("Male");

org.jdesktop.beansbinding.Binding binding = org.jdesktop.beansbinding.Bindings.createAutoBinding(org.jdesktop.beansbinding.AutoBinding.UpdateStrategy.READ\_WRITE, jRadioButton1, org.jdesktop.beansbinding.ELProperty.create("${actionCommand}"), jRadioButton1, org.jdesktop.beansbinding.BeanProperty.create("actionCommand"));

bindingGroup.addBinding(binding);

buttonGroup1.add(jRadioButton2);

jRadioButton2.setText("Female");

binding = org.jdesktop.beansbinding.Bindings.createAutoBinding(org.jdesktop.beansbinding.AutoBinding.UpdateStrategy.READ\_WRITE, jRadioButton2, org.jdesktop.beansbinding.ELProperty.create("${actionCommand}"), jRadioButton2, org.jdesktop.beansbinding.BeanProperty.create("actionCommand"));

bindingGroup.addBinding(binding);

jButton1.setText("Exit");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt);

}

});

jButton2.setText("Register");

jButton2.addActionListener(new java.awt.event.ActionListener() {

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

jButton2ActionPerformed(evt);

}

});

jTable1.setModel(new javax.swing.table.DefaultTableModel(

new Object [][] {

},

new String [] {

"ID", "Name", "Gender", "Address", "Contact"

}

) {

Class[] types = new Class [] {

java.lang.String.class, java.lang.String.class, java.lang.String.class, java.lang.String.class, java.lang.String.class

};

public Class getColumnClass(int columnIndex) {

return types [columnIndex];

}

});

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()

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

.addGroup(layout.createSequentialGroup()

.addContainerGap()

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

.addGroup(layout.createSequentialGroup()

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

.addComponent(jLabel6)

.addComponent(jLabel5))

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

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

.addComponent(jTextField3)

.addComponent(jTextField4)))

.addGroup(layout.createSequentialGroup()

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

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel4)

.addGap(18, 18, 18)

.addComponent(jRadioButton1)

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

.addComponent(jRadioButton2))

.addGroup(layout.createSequentialGroup()

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

.addComponent(jLabel2)

.addComponent(jLabel3))

.addGap(11, 11, 11)

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

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel1)

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

.addGroup(layout.createSequentialGroup()

.addGap(10, 10, 10)

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

.addComponent(jTextField2)

.addComponent(jTextField1))))))

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

.addGroup(layout.createSequentialGroup()

.addGap(44, 44, 44)

.addComponent(jButton1)

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

.addComponent(jButton2)))

.addGap(31, 31, 31)

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 452, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(68, 68, 68))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addContainerGap()

.addComponent(jLabel1)

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

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

.addComponent(jLabel2)

.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.BASELINE)

.addComponent(jLabel3)

.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(jLabel4)

.addComponent(jRadioButton1)

.addComponent(jRadioButton2))

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

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

.addComponent(jLabel5)

.addComponent(jTextField3, 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(jLabel6)

.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(jButton1)

.addComponent(jButton2))

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

.addGroup(layout.createSequentialGroup()

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 275, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 25, Short.MAX\_VALUE))

);

bindingGroup.bind();

pack();

}// </editor-fold>

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

// TODO add your handling code here:

String id=jTextField1.getText();

String name=jTextField2.getText();

String gender=buttonGroup1.getSelection().getActionCommand();

String address=jTextField3.getText();

String contact=jTextField4.getText();

String jdbcURL = "jdbc:mysql://localhost:3306/registrationtwo";

String dbUsername = "root";

try (Connection connection = DriverManager.getConnection(jdbcURL, dbUsername, "");

PreparedStatement preparedStatement = connection.prepareStatement(

"INSERT INTO record (id, name, gender, address, contact) VALUES (?, ?, ?, ?, ?)")) {

preparedStatement.setString(1, id);

preparedStatement.setString(2, name);

preparedStatement.setString(3, gender);

preparedStatement.setString(4, address);

preparedStatement.setString(5, contact);

int rowsInserted = preparedStatement.executeUpdate();

if (rowsInserted > 0) {

refreshTable();

}

} catch (SQLException ex) {

ex.printStackTrace();

JOptionPane.showMessageDialog(this, "Error: " + ex.getMessage());

}

}

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

// TODO add your handling code here:

int confirm = JOptionPane.showConfirmDialog(this, "Are you sure you want to exit?", "Exit", JOptionPane.YES\_NO\_OPTION);

if (confirm == JOptionPane.YES\_OPTION) {

System.exit(0);

}

}

/\*\*

\* @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.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

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

} catch (InstantiationException ex) {

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

} catch (IllegalAccessException ex) {

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

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(RegistrationTwo.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 RegistrationTwo().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.ButtonGroup buttonGroup1;

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.JLabel jLabel6;

private javax.swing.JRadioButton jRadioButton1;

private javax.swing.JRadioButton jRadioButton2;

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 org.jdesktop.beansbinding.BindingGroup bindingGroup;

// End of variables declaration

private void refreshTable() {

DefaultTableModel model = (DefaultTableModel) jTable1.getModel();

model.setRowCount(0);

String jdbcURL = "jdbc:mysql://localhost:3306/registrationtwo";

String dbUsername = "root";

try (Connection connection = DriverManager.getConnection(jdbcURL, dbUsername, "");

Statement statement = connection.createStatement();

ResultSet resultSet = statement.executeQuery("SELECT \* FROM record")) {

while (resultSet.next()) {

String id = resultSet.getString("id");

String name = resultSet.getString("name");

String gender = resultSet.getString("gender");

String address = resultSet.getString("address");

String contact = resultSet.getString("contact");

model.addRow(new Object[]{id, name, gender, address, contact});

}

} catch (SQLException ex) {

ex.printStackTrace();

JOptionPane.showMessageDialog(this, "Error: " + ex.getMessage());

}

}

}