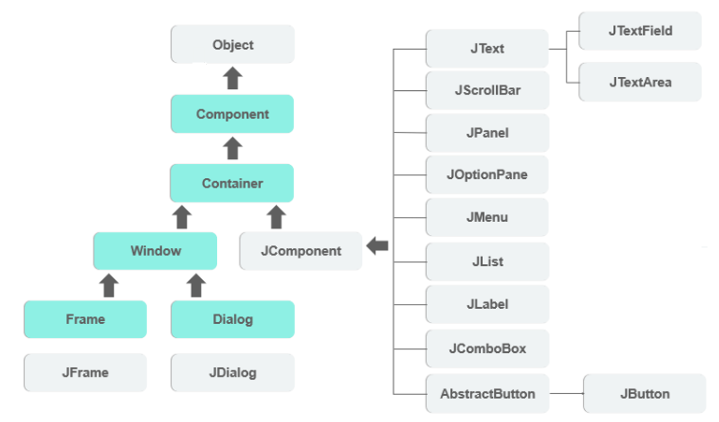
**PRACTICAL 5**

**SWING**

**Introduction:**

1. Swing API is a set of extensible GUI components to ease the life of developers in creating Java based Front end/GUI applications
2. It is built on top of AWT API and acts as a replacement for AWT API, since it has every control corresponding to AWT controls
3. Swing components follow a Model-View-Controller (MVC) architecture to fulfil the following criteria:
   1. A single API is to be sufficient to support multiple look and feel
   2. API is to be model driven so that the highest level API is not required to have data.
4. MVC architecture:
   1. Model represents component’s data
   2. View represents visual presentation of the component’s data
   3. Controller acts as an interface between model and view
5. Swing has **Model** as a separate element, **View** and **Controller** are clubbed in the **User Interface elements**.
6. Due to this approach, Swing has a pluggable look-and-feel architecture
7. Features of Swing include:
   1. Light Weight:
      1. Swing is independent of the native Operation System and is run using pure Java code, unlike AWT which uses Operating System calls
   2. Rich controls
      1. It has a rich set of advanced controls like:
         1. T:ree
         2. TabbedPane
         3. Slider
         4. Colorpicker
         5. Table controls
   3. Highly Customizable:
      1. The controls can be easily customized because the look of the components is independent of the operating system
   4. Pluggable look-and-feel
      1. SWING GUI application’s look and feel can be changed at run-time

**Figure: Class hierarchy of Swing components**

**Q1. Write a program to create a Swing GUI and handle event display the dialog box when item selected**

**CODE:**

/\*

\* 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 practical\_5;

import javax.swing.JOptionPane;

/\*\*

\*

\* @author shalmon

\*/

public class question\_1 extends javax.swing.JFrame {

/\*\*

\* Creates new form question\_1

\*/

public question\_1() {

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("unchecked")

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

private void initComponents() {

jLabel1 = new javax.swing.JLabel();

jComboBox1 = new javax.swing.JComboBox<>();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

jLabel1.setText("SELECT YOUR COUNTRY:");

jComboBox1.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Afghanistan", "Albania", "Algeria", "Andorra", "Angola", "Antigua and Barbuda", "Argentina", "Armenia", "Australia", "Austria", "Azerbaijan", "Bahamas", "Bahrain", "Bangladesh", "Barbados", "Belarus", "Belgium", "Belize", "Benin", "Bhutan", "Bolivia", "Bosnia and Herzegovina", "Botswana", "Brazil", "Brunei", "Bulgaria", "Burkina Faso", "Burundi", "Cabo Verde", "Cambodia", "Cameroon", "Canada", "Central African Republic (CAR)", "Chad", "Chile", "China", "Colombia", "Comoros", "Congo, Democratic Republic of the", "Congo, Republic of the", "Costa Rica", "Cote d'Ivoire", "Croatia", "Cuba", "Cyprus", "Czechia", "Denmark", "Djibouti", "Dominica", "Dominican Republic", "Ecuador", "Egypt", "El Salvador", "Equatorial Guinea", "Eritrea", "Estonia", "Eswatini", "Ethiopia", "Fiji", "Finland", "France", "Gabon", "Gambia", "Georgia", "Germany", "Ghana", "Greece", "Grenada", "Guatemala", "Guinea", "Guinea-Bissau", "Guyana", "Haiti", "Honduras", "Hungary", "Iceland", "India", "Indonesia", "Iran", "Iraq", "Ireland", "Israel", "Italy", "Jamaica", "Japan", "Jordan", "Kazakhstan", "Kenya", "Kiribati", "Kosovo", "Kuwait", "Kyrgyzstan", "Laos", "Latvia", "Lebanon", "Lesotho", "Liberia", "Libya", "Liechtenstein", "Lithuania", "Luxembourg", "Madagascar", "Malawi", "Malaysia", "Maldives", "Mali", "Malta", "Marshall Islands", "Mauritania", "Mauritius", "Mexico", "Micronesia", "Moldova", "Monaco", "Mongolia", "Montenegro", "Morocco", "Mozambique", "Myanmar", "Namibia", "Nauru", "Nepal", "Netherlands", "New Zealand", "Nicaragua", "Niger", "Nigeria", "North Korea", "North Macedonia", "Norway", "Oman", "Pakistan", "Palau", "Palestine", "Panama", "Papua New Guinea", "Paraguay", "Peru", "Philippines", "Poland", "Portugal", "Qatar", "Romania", "Russia", "Rwanda", "Saint Kitts and Nevis", "Saint Lucia", "Saint Vincent and the Grenadines", "Samoa", "San Marino", "Sao Tome and Principe", "Saudi Arabia", "Senegal", "Serbia", "Seychelles", "Sierra Leone", "Singapore", "Slovakia", "Slovenia", "Solomon Islands", "Somalia", "South Africa", "South Korea", "South Sudan", "Spain", "Sri Lanka", "Sudan", "Suriname", "Sweden", "Switzerland", "Syria", "Taiwan", "Tajikistan", "Tanzania", "Thailand", "Timor-Leste", "Togo", "Tonga", "Trinidad and Tobago", "Tunisia", "Turkey", "Turkmenistan", "Tuvalu", "Uganda", "Ukraine", "United Arab Emirates (UAE)", "United Kingdom (UK)", "United States of America (USA)", "Uruguay", "Uzbekistan", "Vanuatu", "Vatican City (Holy See)", "Venezuela", "Vietnam", "Yemen", "Zambia", "Zimbabwe" }));

jComboBox1.addActionListener(new java.awt.event.ActionListener() {

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

jComboBox1ActionPerformed(evt);

}

});

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(24, 24, 24)

.addComponent(jLabel1)

.addGap(29, 29, 29)

.addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED\_SIZE, 198, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap(27, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addGap(49, 49, 49)

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

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 20, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addContainerGap(231, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

private void jComboBox1ActionPerformed(java.awt.event.ActionEvent evt) {

JOptionPane.showMessageDialog(jComboBox1, jComboBox1.getSelectedItem()+" was selected");

}

/\*\*

\* @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 ("Windows".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(question\_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(question\_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(question\_1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(question\_1.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 question\_1().setVisible(true);

}

});

}

// Variables declaration - do not modify

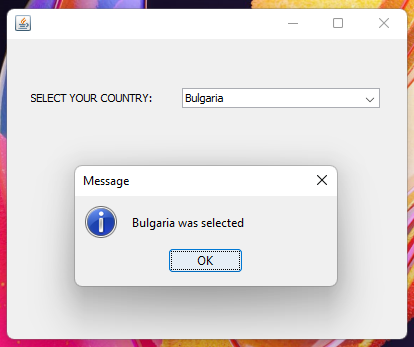
private javax.swing.JComboBox<String> jComboBox1;

private javax.swing.JLabel jLabel1;

// End of variables declaration

}

**OUTPUT:**

****

**Q2. Write a program to create a Swing GUI and handle event when the item is selected**

**CODE:**

/\*

\* 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 practical\_5;

/\*\*

\*

\* @author shalmon

\*/

import javax.swing.JOptionPane;

public class question\_2 extends javax.swing.JFrame {

/\*\*

\* Creates new form question\_2

\*/

public question\_2() {

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("unchecked")

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

private void initComponents() {

jScrollPane1 = new javax.swing.JScrollPane();

jList1 = new javax.swing.JList<>();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

jList1.setModel(new javax.swing.AbstractListModel<String>() {

String[] strings = { "DOG", "CAT", "RABBIT", "BIRD" };

public int getSize() { return strings.length; }

public String getElementAt(int i) { return strings[i]; }

});

jList1.setSelectionMode(javax.swing.ListSelectionModel.SINGLE\_SELECTION);

jList1.setName(""); // NOI18N

jList1.addMouseListener(new java.awt.event.MouseAdapter() {

public void mouseClicked(java.awt.event.MouseEvent evt) {

jList1MouseClicked(evt);

}

});

jScrollPane1.setViewportView(jList1);

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(125, 125, 125)

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 139, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap(136, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addGap(75, 75, 75)

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

.addContainerGap(95, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

private void jList1MouseClicked(java.awt.event.MouseEvent evt) {

JOptionPane.showMessageDialog(jList1, jList1.getSelectedValue()+" was selected!!");

}

/\*\*

\* @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 ("Windows".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(question\_2.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(question\_2.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(question\_2.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(question\_2.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 question\_2().setVisible(true);

}

});

}

// Variables declaration - do not modify

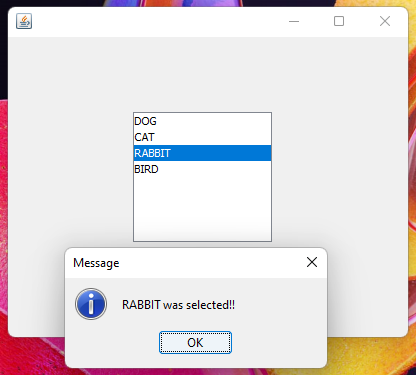
private javax.swing.JList<String> jList1;

private javax.swing.JScrollPane jScrollPane1;

// End of variables declaration

}

**OUTPUT:**

****

**Q3. Write a program to create a Swing GUI and handle event when the item is selected**

**CODE:**

/\*

\* 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 practical\_5;

import javax.swing.JOptionPane;

/\*\*

\*

\* @author shalmon

\*/

public class question\_3 extends javax.swing.JFrame {

/\*\*

\* Creates new form question\_3

\*/

public question\_3() {

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("unchecked")

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

private void initComponents() {

buttonGroup1 = new javax.swing.ButtonGroup();

jRadioButton1 = new javax.swing.JRadioButton();

jRadioButton2 = new javax.swing.JRadioButton();

jRadioButton3 = new javax.swing.JRadioButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

buttonGroup1.add(jRadioButton1);

jRadioButton1.setText("French Fries");

jRadioButton1.addActionListener(new java.awt.event.ActionListener() {

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

jRadioButton1ActionPerformed(evt);

}

});

buttonGroup1.add(jRadioButton2);

jRadioButton2.setText("Onion Rings");

jRadioButton2.addActionListener(new java.awt.event.ActionListener() {

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

jRadioButton2ActionPerformed(evt);

}

});

buttonGroup1.add(jRadioButton3);

jRadioButton3.setText("Ice Cream");

jRadioButton3.addActionListener(new java.awt.event.ActionListener() {

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

jRadioButton3ActionPerformed(evt);

}

});

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(136, 136, 136)

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

.addComponent(jRadioButton1, javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jRadioButton2, javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jRadioButton3, javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

.addContainerGap(179, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addGap(74, 74, 74)

.addComponent(jRadioButton1)

.addGap(18, 18, 18)

.addComponent(jRadioButton2)

.addGap(18, 18, 18)

.addComponent(jRadioButton3)

.addContainerGap(121, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

private void jRadioButton2ActionPerformed(java.awt.event.ActionEvent evt) {

JOptionPane.showMessageDialog(jRadioButton2, "Onion Rings Ordered");

}

private void jRadioButton1ActionPerformed(java.awt.event.ActionEvent evt) {

JOptionPane.showMessageDialog(jRadioButton2, "French Fries Ordered");

}

private void jRadioButton3ActionPerformed(java.awt.event.ActionEvent evt) {

JOptionPane.showMessageDialog(jRadioButton2, "Ice Cream Ordered");

}

/\*\*

\* @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 ("Windows".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(question\_3.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(question\_3.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(question\_3.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(question\_3.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 question\_3().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.ButtonGroup buttonGroup1;

private javax.swing.JRadioButton jRadioButton1;

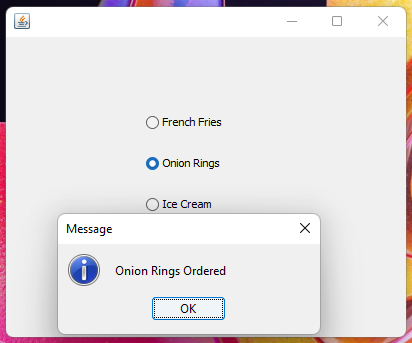
private javax.swing.JRadioButton jRadioButton2;

private javax.swing.JRadioButton jRadioButton3;

// End of variables declaration

}

**OUTPUT:**

****

**Q4. Write a program to create a Swing GUI and handle event.**

**CODE:**

/\*

\* 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 practical\_5;

import java.awt.Color;

import javax.swing.JOptionPane;

/\*\*

\*

\* @author shalmon

\*/

public class question\_4 extends javax.swing.JFrame {

/\*\*

\* Creates new form question\_4

\*/

public question\_4() {

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("unchecked")

// <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();

jTextField1 = new javax.swing.JTextField();

jTextField2 = new javax.swing.JTextField();

jButton1 = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

setBackground(new java.awt.Color(102, 255, 204));

addComponentListener(new java.awt.event.ComponentAdapter() {

public void componentShown(java.awt.event.ComponentEvent evt) {

formComponentShown(evt);

}

});

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N

jLabel1.setText("LOGIN FORM");

jLabel2.setText("Username:");

jLabel3.setText("Password:");

jButton1.setText("Click here to LOGIN");

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

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

jButton1ActionPerformed(evt);

}

});

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()

.addGap(38, 38, 38)

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

.addComponent(jLabel3)

.addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED\_SIZE, 78, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(22, 22, 22)

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

.addComponent(jLabel1)

.addComponent(jTextField1)

.addComponent(jTextField2, javax.swing.GroupLayout.DEFAULT\_SIZE, 211, Short.MAX\_VALUE)))

.addGroup(layout.createSequentialGroup()

.addGap(129, 129, 129)

.addComponent(jButton1)))

.addContainerGap(51, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addGap(37, 37, 37)

.addComponent(jLabel1)

.addGap(23, 23, 23)

.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))

.addGap(18, 18, 18)

.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))

.addGap(36, 36, 36)

.addComponent(jButton1)

.addContainerGap(101, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

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

if(jTextField1.getText().length() > 0 && jTextField2.getText().length() > 0){

JOptionPane.showMessageDialog(jButton1, "LOGIN SUCCESSFULL");

}

else{

JOptionPane.showMessageDialog(jButton1, "ENTER YOUR DETAILS FIRST!");

}

}

private void formComponentShown(java.awt.event.ComponentEvent evt) {

question\_4.this.getContentPane().setBackground(new java.awt.Color(204,255,255));

}

/\*\*

\* @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 ("Windows".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(question\_4.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(question\_4.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(question\_4.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(question\_4.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 question\_4().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.JButton jButton1;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

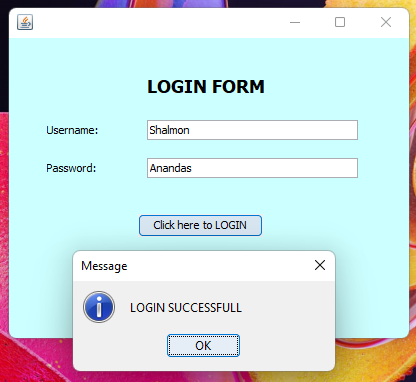
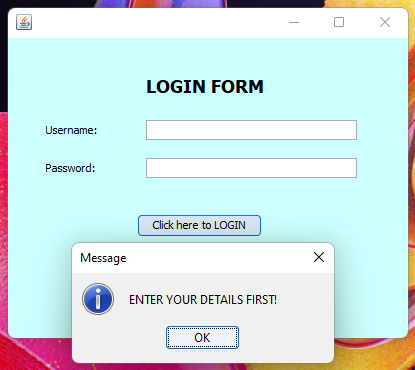
private javax.swing.JTextField jTextField1;

private javax.swing.JTextField jTextField2;

// End of variables declaration

}

**OUTPUT:**

** **

**Q5. Create the following Swing GUI Component in Java, insert an image and after registration it should go to login page which we have already created.**

**CODE:**/\*

\* 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 practical\_5;

import javax.swing.JOptionPane;

/\*\*

\*

\* @author shalmon

\*/

public class question\_5 extends javax.swing.JFrame {

/\*\*

\* Creates new form question\_5

\*/

public question\_5() {

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("unchecked")

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

private void initComponents() {

buttonGroup1 = new javax.swing.ButtonGroup();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

jLabel4 = new javax.swing.JLabel();

jTextField2 = new javax.swing.JTextField();

jLabel5 = new javax.swing.JLabel();

jTextField3 = new javax.swing.JTextField();

jLabel6 = new javax.swing.JLabel();

jRadioButton1 = new javax.swing.JRadioButton();

jRadioButton2 = new javax.swing.JRadioButton();

jButton1 = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

addComponentListener(new java.awt.event.ComponentAdapter() {

public void componentShown(java.awt.event.ComponentEvent evt) {

formComponentShown(evt);

}

});

jLabel1.setIcon(new javax.swing.ImageIcon("D:\\Sem2\_msc\_notes\\rani\_maam\\Practical\_5\\resources\\gnkhalsalogo.png")); // NOI18N

jLabel1.setToolTipText("");

jLabel1.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 2));

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N

jLabel2.setText("REGISTRATION FORM");

jLabel2.setToolTipText("");

jLabel3.setText("Enrollment Number:");

jLabel3.setCursor(new java.awt.Cursor(java.awt.Cursor.DEFAULT\_CURSOR));

jLabel4.setText("Name:");

jLabel5.setText("Course:");

jLabel6.setText("Gender:");

buttonGroup1.add(jRadioButton1);

jRadioButton1.setText("Male");

buttonGroup1.add(jRadioButton2);

jRadioButton2.setText("Female");

jButton1.setText("REGISTER");

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

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

jButton1ActionPerformed(evt);

}

});

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()

.addGap(113, 113, 113)

.addComponent(jLabel2))

.addGroup(layout.createSequentialGroup()

.addGap(19, 19, 19)

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

.addComponent(jLabel1)

.addGroup(layout.createSequentialGroup()

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

.addComponent(jLabel3)

.addComponent(jLabel4)

.addComponent(jLabel5)

.addComponent(jLabel6))

.addGap(44, 44, 44)

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

.addComponent(jTextField1)

.addComponent(jTextField2)

.addComponent(jTextField3)

.addGroup(layout.createSequentialGroup()

.addComponent(jRadioButton1)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jRadioButton2)

.addGap(71, 71, 71))))))

.addGroup(layout.createSequentialGroup()

.addGap(110, 110, 110)

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 194, javax.swing.GroupLayout.PREFERRED\_SIZE)))

.addContainerGap(21, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addGap(21, 21, 21)

.addComponent(jLabel1)

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

.addComponent(jLabel2)

.addGap(18, 18, 18)

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

.addComponent(jLabel3)

.addComponent(jTextField1, 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(jTextField2, 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(jLabel5)

.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(jLabel6)

.addComponent(jRadioButton1)

.addComponent(jRadioButton2))

.addGap(18, 18, 18)

.addComponent(jButton1)

.addContainerGap(32, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

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

new question\_4().setVisible(true);

JOptionPane.showMessageDialog(jButton1, "Registered successfully");

question\_5.this.setVisible(false);

}

private void formComponentShown(java.awt.event.ComponentEvent evt) {

question\_5.this.getContentPane().setBackground(new java.awt.Color(204,255,255));

}

/\*\*

\* @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 ("Windows".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(question\_5.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(question\_5.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(question\_5.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(question\_5.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 question\_5().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.ButtonGroup buttonGroup1;

private javax.swing.JButton jButton1;

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.JTextField jTextField1;

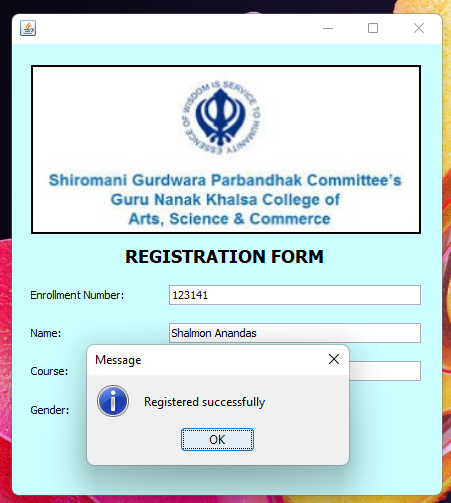
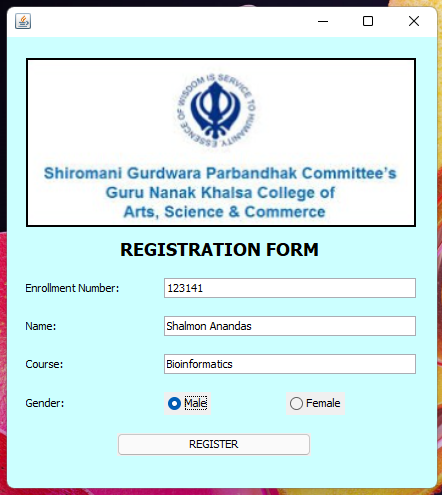
private javax.swing.JTextField jTextField2;

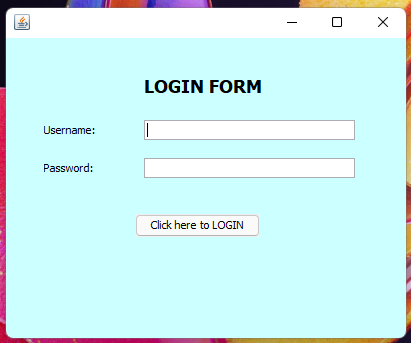
private javax.swing.JTextField jTextField3;

// End of variables declaration

}

**OUTPUT:**

****

****

**Q6. Create a Swing GUI**

**CODE:**

/\*

\* 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 practical\_5;

/\*\*

\*

\* @author shalmon

\*/

public class question\_6 extends javax.swing.JFrame {

/\*\*

\* Creates new form question\_6

\*/

public question\_6() {

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("unchecked")

// <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();

jCheckBox1 = new javax.swing.JCheckBox();

jTextField1 = new javax.swing.JTextField();

jTextField2 = new javax.swing.JTextField();

jCheckBox2 = new javax.swing.JCheckBox();

jCheckBox3 = new javax.swing.JCheckBox();

jButton1 = new javax.swing.JButton();

jLabel5 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

setBackground(new java.awt.Color(102, 255, 204));

addComponentListener(new java.awt.event.ComponentAdapter() {

public void componentShown(java.awt.event.ComponentEvent evt) {

formComponentShown(evt);

}

});

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N

jLabel1.setText("Student Details:");

jLabel2.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jLabel2.setText("Name:");

jLabel3.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jLabel3.setText("Contact Number:");

jLabel4.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jLabel4.setText("Course Opted:");

jCheckBox1.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jCheckBox1.setText("Bioinformatics");

jCheckBox2.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jCheckBox2.setText("Botany");

jCheckBox3.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jCheckBox3.setText("Biochemistry");

jButton1.setText("Submit");

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

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

jButton1ActionPerformed(evt);

}

});

jLabel5.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N

jLabel5.setText("Success!!");

jLabel5.setToolTipText("");

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()

.addGap(128, 128, 128)

.addComponent(jLabel1))

.addGroup(layout.createSequentialGroup()

.addGap(27, 27, 27)

.addComponent(jLabel2)

.addGap(101, 101, 101)

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 195, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGroup(layout.createSequentialGroup()

.addGap(27, 27, 27)

.addComponent(jLabel3)

.addGap(34, 34, 34)

.addComponent(jTextField2, javax.swing.GroupLayout.PREFERRED\_SIZE, 195, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGroup(layout.createSequentialGroup()

.addGap(27, 27, 27)

.addComponent(jLabel4)

.addGap(51, 51, 51)

.addComponent(jCheckBox1))

.addGroup(layout.createSequentialGroup()

.addGap(168, 168, 168)

.addComponent(jCheckBox2))

.addGroup(layout.createSequentialGroup()

.addGap(168, 168, 168)

.addComponent(jCheckBox3))

.addGroup(layout.createSequentialGroup()

.addGap(27, 27, 27)

.addComponent(jLabel5)

.addGap(134, 134, 134)

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 145, javax.swing.GroupLayout.PREFERRED\_SIZE)))

.addContainerGap(28, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addGap(11, 11, 11)

.addComponent(jLabel1)

.addGap(18, 18, 18)

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

.addComponent(jLabel2)

.addComponent(jTextField1, 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.LEADING)

.addComponent(jLabel3)

.addComponent(jTextField2, 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.LEADING)

.addGroup(layout.createSequentialGroup()

.addGap(4, 4, 4)

.addComponent(jLabel4))

.addComponent(jCheckBox1))

.addGap(3, 3, 3)

.addComponent(jCheckBox2)

.addGap(3, 3, 3)

.addComponent(jCheckBox3)

.addGap(18, 18, 18)

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

.addGroup(layout.createSequentialGroup()

.addGap(6, 6, 6)

.addComponent(jLabel5))

.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED\_SIZE, 33, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addContainerGap(28, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

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

jLabel5.setVisible(true);

}

private void formComponentShown(java.awt.event.ComponentEvent evt) {

jLabel5.setVisible(false);

}

/\*\*

\* @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 ("Windows".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());

break;

}

}

} catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(question\_6.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(question\_6.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(question\_6.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(question\_6.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 question\_6().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.JButton jButton1;

private javax.swing.JCheckBox jCheckBox1;

private javax.swing.JCheckBox jCheckBox2;

private javax.swing.JCheckBox jCheckBox3;

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;

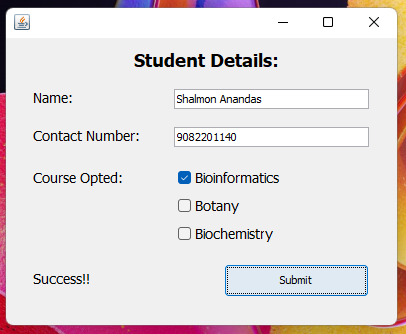
private javax.swing.JTextField jTextField1;

private javax.swing.JTextField jTextField2;

// End of variables declaration

}

**OUTPUT:**

****