## "AÑO DE LA UNIDAD, LA PAZ Y EL DESARROLLO"

## **UNIVERSIDAD PERUANA LOS ANDES**

#### **FACULTAD DE INGENIERÍA**

## **ESCUELA PROFESIONAL DE SISTEMAS Y COMPUTACIÓN**



## PROYECTOS DEL CURSO DE ARQUITECTURA DE SOFTWARE

## Integrantes:

• DIEGO PAOLO BRAVO SORA

Materia: ARQUITECTURA DE SOFTWARE

Sección: B1

Ciclo: VII

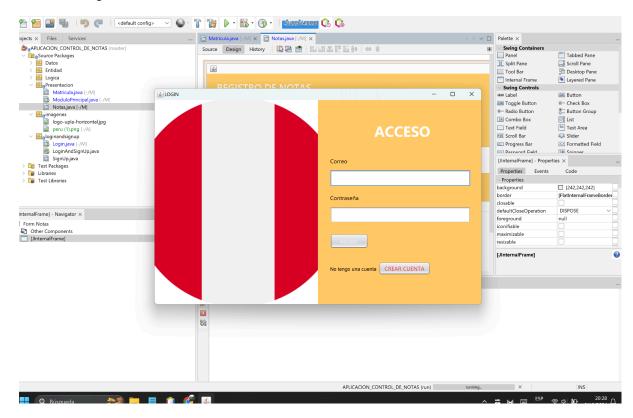
2024 Huancayo-Perú

# PROYECTO 01

#### REQUERIMIENTOS FUNCIONALES

## Módulo de Autenticación (Login)

- RF01: El sistema debe permitir que los profesores inicien sesión con un usuario y contraseña.
- RF02: El sistema debe validar las credenciales de los profesores contra una base de datos de usuarios registrados.
- RF03: El sistema debe bloquear el acceso después de tres intentos fallidos de inicio de sesión.
- RF04: El sistema debe ofrecer una opción para que el profesor cierre sesión de manera segura.



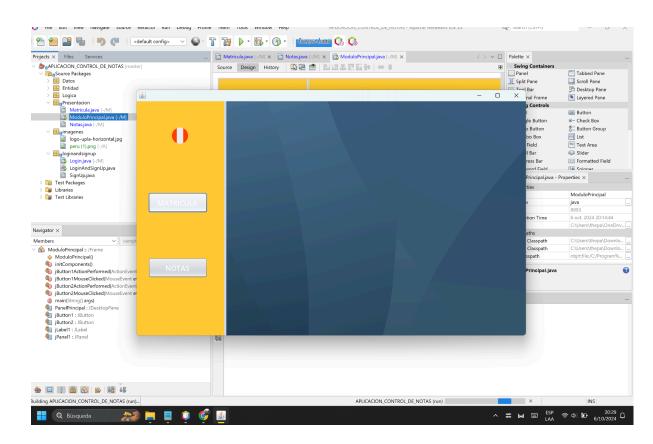
## 2. Módulo Principal

#### 2.1. Registro de Notas

- RF05: El sistema debe permitir a los profesores registrar las notas de los estudiantes.
- **RF06**: El sistema debe permitir visualizar las asignaturas y los estudiantes matriculados en cada una.
- **RF07**: El sistema debe calcular el promedio final del estudiante basado en las notas ingresadas.
- **RF08**: El sistema debe permitir modificar las notas de los estudiantes antes de la fecha límite establecida.
- RF09: El sistema debe generar reportes de calificaciones por estudiante, asignatura o curso.

#### 2.2. Registro de Matrículas

- RF10: El sistema debe permitir registrar la matrícula de los estudiantes a cursos o asignaturas.
- **RF11**: El sistema debe permitir actualizar y eliminar el registro de matrícula.
- **RF12**: El sistema debe validar que los estudiantes no se matriculen en cursos que ya hayan aprobado.
- **RF13**: El sistema debe permitir la visualización del historial de matrículas de los estudiantes.

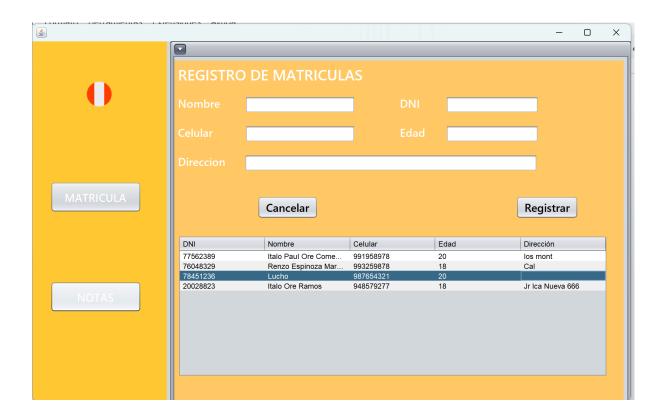


## 3. Gestión de Usuarios

- RF14: El sistema debe permitir gestionar (crear, actualizar, eliminar) los perfiles de los profesores.
- **RF15**: El sistema debe tener roles de usuario, como administrador y profesor, con diferentes niveles de acceso.
- **RF16**: El sistema debe permitir la recuperación de contraseñas a través de preguntas de seguridad o correo electrónico.

#### 4. Gestión de Estudiantes

- RF17: El sistema debe permitir registrar, modificar y eliminar la información de los estudiantes.
- **RF18**: El sistema debe permitir la búsqueda de estudiantes por nombre, identificación o curso matriculado.



## 5. Reportes

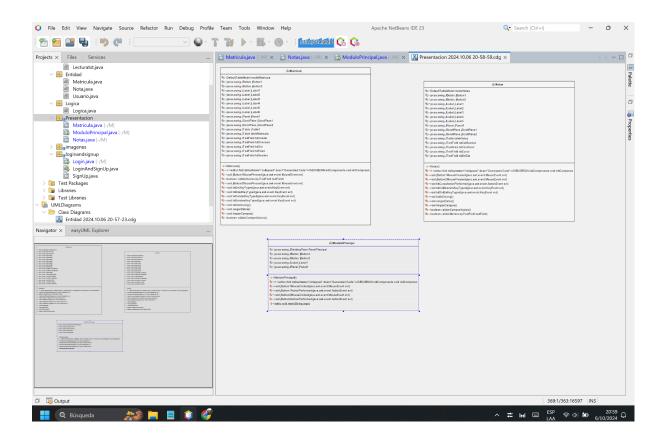
- RF19: El sistema debe permitir generar reportes de notas por curso, por estudiante o por período académico.
- RF20: El sistema debe permitir exportar los reportes en formatos como PDF o Excel.

## 6. Seguridad

- **RF21**: El sistema debe contar con un registro de actividades (logs) que guarde los accesos y acciones importantes realizadas por los usuarios.
- RF22: Las contraseñas deben ser almacenadas de manera segura (hashing) en la base de datos.
- **RF23**: El sistema debe contar con una capa de cifrado para proteger la información sensible, como las notas y datos personales de los estudiantes.



#### DIAGRAMA DE CLASES



#### CÓDIGO DE LA APLICACIÓN

#### PANEL PRINCIPAL

```
import javax.swing.JFrame;
import javax.swing.UIManager;

public class ModuloPrincipal extends javax.swing.JFrame {
    public ModuloPrincipal() {
        initComponents();
        this.setLocationRelativeTo(null);
    }

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

```
¡Panel1 = new javax.swing.JPanel();
    jButton1 = new javax.swing.JButton();
    ¡Button2 = new javax.swing.JButton();
    jLabel1 = new javax.swing.JLabel();
    PanelPrincipal = new javax.swing.JDesktopPane();
    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    jPanel1.setBackground(new java.awt.Color(255, 204, 51));
    jButton1.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
    jButton1.setForeground(new java.awt.Color(255, 255, 255));
    jButton1.setText("MATRICULA");
    jButton1.addMouseListener(new java.awt.event.MouseAdapter() {
       public void mouseClicked(java.awt.event.MouseEvent evt) {
         ¡Button1MouseClicked(evt);
       }
    });
    jButton1.addActionListener(new java.awt.event.ActionListener() {
       public void actionPerformed(java.awt.event.ActionEvent evt) {
         ¡Button1ActionPerformed(evt);
       }
    });
    jButton2.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
    jButton2.setForeground(new java.awt.Color(255, 255, 255));
    ¡Button2.setText("NOTAS");
    ¡Button2.addMouseListener(new java.awt.event.MouseAdapter() {
       public void mouseClicked(java.awt.event.MouseEvent evt) {
         ¡Button2MouseClicked(evt);
      }
    });
    jButton2.addActionListener(new java.awt.event.ActionListener() {
       public void actionPerformed(java.awt.event.ActionEvent evt) {
         jButton2ActionPerformed(evt);
       }
    });
    ¡Label1.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
    jLabel1.setlcon(new
javax.swing.ImageIcon("C:\\Users\\thepa\\Downloads\\icons8-circular-peru-48.png")); //
NOI18N
    javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
    ¡Panel1.setLayout(¡Panel1Layout);
    jPanel1Layout.setHorizontalGroup(
       ¡Panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(jPanel1Layout.createSequentialGroup()
```

```
.addGap(29, 29, 29)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
           .addComponent(jButton1, javax.swing.GroupLayout.DEFAULT_SIZE, 147,
Short.MAX VALUE)
           .addComponent(jButton2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
         .addContainerGap(javax.swing.GroupLayout.DEFAULT SIZE,
Short.MAX VALUE))
       .addGroup(jPanel1Layout.createSequentialGroup()
         .addContainerGap()
         .addComponent(jLabel1, javax.swing.GroupLayout.DEFAULT_SIZE, 205,
Short.MAX_VALUE)
         .addContainerGap())
    );
    jPanel1Layout.setVerticalGroup(
      jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(jPanel1Layout.createSequentialGroup()
         .addGap(26, 26, 26)
         .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 118,
javax.swing.GroupLayout.PREFERRED_SIZE)
         .addGap(82, 82, 82)
         .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 50,
javax.swing.GroupLayout.PREFERRED SIZE)
         .addGap(111, 111, 111)
         .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 50,
javax.swing.GroupLayout.PREFERRED SIZE)
         .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX VALUE))
    );
    PanelPrincipal.setBackground(new java.awt.Color(255, 204, 51));
    javax.swing.GroupLayout PanelPrincipalLayout = new
javax.swing.GroupLayout(PanelPrincipal);
    PanelPrincipal.setLayout(PanelPrincipalLayout);
    PanelPrincipalLayout.setHorizontalGroup(
PanelPrincipalLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGap(0, 743, Short.MAX_VALUE)
    );
    PanelPrincipalLayout.setVerticalGroup(
PanelPrincipalLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGap(0, 580, Short.MAX_VALUE)
```

);

```
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
         .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
         .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
         .addComponent(PanelPrincipal))
    );
    layout.setVerticalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
       .addComponent(PanelPrincipal, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
    );
    pack();
  }// </editor-fold>
  private void jButton1MouseClicked(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    Matricula est = new Matricula();
    PanelPrincipal.add(est);
    est.setVisible(true);
  }
  private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
  }
  private void jButton2MouseClicked(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    Notas estu = new Notas();
    PanelPrincipal.add(estu);
    estu.setVisible(true);
  }
  private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
  }
  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(ModuloPrincipal.class.getName()).log(java.util.logging.Le
vel.SEVERE, null, ex);
    } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(ModuloPrincipal.class.getName()).log(java.util.logging.Le
vel.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(ModuloPrincipal.class.getName()).log(java.util.logging.Le
vel.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(ModuloPrincipal.class.getName()).log(java.util.logging.Le
vel.SEVERE, null, ex);
    }
    //</editor-fold>
    JFrame.setDefaultLookAndFeelDecorated(true);
    /* Create and display the form */
    try{
       UIManager.setLookAndFeel("com.jtattoo.plaf.mcwin.McWinLookAndFeel");
    }catch(Exception e){
    java.awt.EventQueue.invokeLater(new Runnable() {
       public void run() {
         new ModuloPrincipal().setVisible(true);
       }
    });
  }
  // Variables declaration - do not modify
  private javax.swing.JDesktopPane PanelPrincipal;
  private javax.swing.JButton jButton1;
```

```
private javax.swing.JButton jButton2;
  private javax.swing.JLabel jLabel1;
  private javax.swing.JPanel jPanel1;
  // End of variables declaration
}
MATRICULA
import Datos. Escrituratxt;
import Datos.Lecturatxt;
import java.awt.Toolkit;
import java.awt.event.KeyEvent;
import java.util.List;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.table.DefaultTableModel;
/**
* @author USER 17
public class Matricula extends javax.swing.JInternalFrame {
   * Creates new form DueniosFrame
  private DefaultTableModel modelMatricula;
  public Matricula() {
    initComponents();
    tabladessing();
  }
   * 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() {
    jScrollPane2 = new javax.swing.JScrollPane();
    ¡Table1 = new javax.swing.JTable();
    ¡Panel1 = new javax.swing.JPanel();
    jLabel4 = new javax.swing.JLabel();
    txtNombre = new javax.swing.JTextField();
```

```
txtDni = new javax.swing.JTextField();
txtEdad = new javax.swing.JTextField();
jLabel1 = new javax.swing.JLabel();
jLabel3 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
txtCelular = new javax.swing.JTextField();
jLabel6 = new javax.swing.JLabel();
txtDireccion = new javax.swing.JTextField();
jButton1 = new javax.swing.JButton();
¡Button2 = new javax.swing.JButton();
jScrollPane1 = new javax.swing.JScrollPane();
tableMatricula = new javax.swing.JTable();
jLabel2 = new javax.swing.JLabel();
¡Table1.setModel(new javax.swing.table.DefaultTableModel(
  new Object [][] {
     {null, null, null, null},
     {null, null, null, null},
     {null, null, null, null},
     {null, null, null, null}
  },
  new String [] {
     "Title 1", "Title 2", "Title 3", "Title 4"
  }
));
jScrollPane2.setViewportView(jTable1);
¡Panel1.setBackground(new java.awt.Color(255, 204, 102));
jLabel4.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel4.setForeground(new java.awt.Color(255, 255, 255));
jLabel4.setText("Edad");
txtNombre.addKeyListener(new java.awt.event.KeyAdapter() {
  public void keyTyped(java.awt.event.KeyEvent evt) {
     txtNombreKeyTyped(evt);
  }
});
txtDni.addKeyListener(new java.awt.event.KeyAdapter() {
  public void keyTyped(java.awt.event.KeyEvent evt) {
     txtDniKeyTyped(evt);
  }
});
txtEdad.addKeyListener(new java.awt.event.KeyAdapter() {
  public void keyTyped(java.awt.event.KeyEvent evt) {
     txtEdadKeyTyped(evt);
```

```
}
});
jLabel1.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel1.setForeground(new java.awt.Color(255, 255, 255));
jLabel1.setText("Nombre");
jLabel3.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel3.setForeground(new java.awt.Color(255, 255, 255));
¡Label3.setText("DNI");
jLabel5.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel5.setForeground(new java.awt.Color(255, 255, 255));
jLabel5.setText("Celular");
txtCelular.addKeyListener(new java.awt.event.KeyAdapter() {
  public void keyTyped(java.awt.event.KeyEvent evt) {
     txtCelularKeyTyped(evt);
  }
});
jLabel6.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel6.setForeground(new java.awt.Color(255, 255, 255));
jLabel6.setText("Direccion");
jButton1.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
¡Button1.setText("Registrar");
¡Button1.addMouseListener(new java.awt.event.MouseAdapter() {
  public void mousePressed(java.awt.event.MouseEvent evt) {
    ¡Button1MousePressed(evt);
  }
});
jButton2.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jButton2.setText("Cancelar");
¡Button2.addMouseListener(new java.awt.event.MouseAdapter() {
  public void mousePressed(java.awt.event.MouseEvent evt) {
    jButton2MousePressed(evt);
  }
});
tableMatricula.setModel(new javax.swing.table.DefaultTableModel(
  new Object [][] {
     {null, null, null, null},
     {null, null, null, null},
     {null, null, null, null},
     {null, null, null, null}
  },
```

```
new String [] {
         "Title 1", "Title 2", "Title 3", "Title 4"
      }
    ));
    jScrollPane1.setViewportView(tableMatricula);
    jLabel2.setFont(new java.awt.Font("Yu Gothic UI", 1, 24)); // NOI18N
    jLabel2.setForeground(new java.awt.Color(255, 255, 255));
    ¡Label2.setText("REGISTRO DE MATRICULAS");
    javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
    ¡Panel1.setLayout(¡Panel1Layout);
    jPanel1Layout.setHorizontalGroup(
      jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(jPanel1Layout.createSequentialGroup()
         .addGap(134, 134, 134)
         .addComponent(jButton2)
         .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
         .addComponent(jButton1)
         .addGap(73, 73, 73))
       .addGroup(jPanel1Layout.createSequentialGroup()
         .addContainerGap()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
           .addComponent(jLabel2)
           .addGroup(jPanel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
                .addComponent(jLabel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT SIZE, Short.MAX VALUE)
                .addComponent(jLabel5, javax.swing.GroupLayout.PREFERRED_SIZE,
69, javax.swing.GroupLayout.PREFERRED SIZE))
              .addGap(39, 39, 39)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
                .addComponent(txtNombre,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 178,
javax.swing.GroupLayout.PREFERRED SIZE)
                .addComponent(txtCelular,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 178,
javax.swing.GroupLayout.PREFERRED_SIZE))
              .addGap(72, 72, 72)
```

```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
               .addComponent(jLabel3)
               .addComponent(jLabel4))
             .addGap(33, 33, 33)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
               .addComponent(txtEdad, javax.swing.GroupLayout.PREFERRED_SIZE,
150, javax.swing.GroupLayout.PREFERRED SIZE)
               .addComponent(txtDni, javax.swing.GroupLayout.PREFERRED_SIZE,
150, javax.swing.GroupLayout.PREFERRED SIZE)))
           .addGroup(jPanel1Layout.createSequentialGroup()
             .addComponent(jLabel6)
             .addGap(30, 30, 30)
             .addComponent(txtDireccion, javax.swing.GroupLayout.PREFERRED_SIZE,
473, javax.swing.GroupLayout.PREFERRED SIZE))
           .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE,
693, javax.swing.GroupLayout.PREFERRED SIZE))
         .addContainerGap(26, Short.MAX VALUE))
    );
    jPanel1Layout.setVerticalGroup(
      ¡Panel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
      .addGroup(jPanel1Layout.createSequentialGroup()
         .addContainerGap()
         .addComponent(jLabel2)
         .addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
           .addComponent(jLabel1)
           .addComponent(txtNombre, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
           .addComponent(jLabel3)
           .addComponent(txtDni, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
           .addComponent(jLabel4)
           .addComponent(txtEdad, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
           .addComponent(jLabel5)
           .addComponent(txtCelular, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
```

```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
           .addComponent(jLabel6)
           .addComponent(txtDireccion, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(39, 39, 39)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
           .addComponent(jButton2)
           .addComponent(jButton1))
         .addGap(27, 27, 27)
         .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 228,
javax.swing.GroupLayout.PREFERRED SIZE)
         .addContainerGap(54, Short.MAX_VALUE))
    );
    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
      layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
         .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
         .addContainerGap())
    );
    layout.setVerticalGroup(
      layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(layout.createSequentialGroup()
         .addContainerGap()
         .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
         .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
    );
    pack();
  }// </editor-fold>
  private void jButton1MousePressed(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    if (validarCamposVacios() && validarNumeros(txtEdad) && validarNumeros(txtCelular)
&& validarNumeros(txtDni)) {
       Escrituratxt escribir = new Escrituratxt();
      int edad = Integer.parseInt(txtEdad.getText());
      int dni = Integer.parseInt(txtDni.getText());
```

```
int celular = Integer.parseInt(txtCelular.getText());
       Entidad.Matricula estud = new Entidad.Matricula(txtNombre.getText(), celular, edad,
txtDireccion.getText(), dni);
       escribir.registrarEst(estud);
       tabladessing();
    } else {
       JOptionPane.showMessageDialog(this, "Los datos ingresados no son validos");
    }
  }
  private boolean validarNumeros(JTextField textField) {
     String texto = textField.getText().trim(); // Obtener el texto del JTextField y eliminar
espacios en blanco
    // Verificar si el texto contiene solo números
    if (texto.matches("\\d+")) { // El patrón "\\d+" verifica que el texto contenga solo dígitos
       return true; // El texto contiene solo números
    } else {
       return false; // El texto contiene caracteres que no son números
    }
  }
  private void jButton2MousePressed(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    limpiarCampos();
  }
  private void txtDniKeyTyped(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    char key = evt.getKeyChar();
    // Verificar si la tecla presionada es un número o una tecla de borrar
    boolean num = Character.isDigit(key);
    boolean esBorrar = key == KeyEvent.VK_DELETE || key ==
KeyEvent.VK BACK SPACE;
    if (!num && !esBorrar) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese solo números.");
       evt.consume();
    if (txtDni.getText().trim().length() == 8) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese un número de rango 8
digitos");
       evt.consume();
    }
  }
  private void txtEdadKeyTyped(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
```

```
// TODO add your handling code here:
    char key = evt.getKeyChar();
    // Verificar si la tecla presionada es un número o una tecla de borrar
    boolean num = Character.isDigit(key);
    boolean esBorrar = key == KeyEvent.VK DELETE || key ==
KeyEvent.VK_BACK_SPACE;
    if (!num && !esBorrar) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese solo números.");
       evt.consume();
    if (txtEdad.getText().trim().length() == 2) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese un número de rango 2
digitos");
       evt.consume();
    }
  }
  private void txtCelularKeyTyped(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    char key = evt.getKeyChar();
    // Verificar si la tecla presionada es un número o una tecla de borrar
    boolean num = Character.isDigit(key);
    boolean esBorrar = key == KeyEvent.VK_DELETE || key ==
KeyEvent.VK_BACK_SPACE;
    if (!num && !esBorrar) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese solo números.");
       evt.consume();
    if (txtCelular.getText().trim().length() == 9) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese un número de rango 9
digitos");
       evt.consume();
    }
  }
  private void txtNombreKeyTyped(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    char c = evt.getKeyChar();
    if (!(Character.isLetter(c) || c == KeyEvent.VK BACK SPACE || c ==
KeyEvent.VK_DELETE || c == KeyEvent.VK_SPACE)) {
       evt.consume();
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese solo letras.");
    }
```

```
}
  private void tabladessing() {
    // Crear el modelo de la tabla
    modelMatricula = new DefaultTableModel(new Object[]{"DNI", "Nombre", "Celular",
"Edad", "Dirección"}, 0);
    tableMatricula.setModel(modelMatricula);
    cargarDatos();
  }
  private void cargarDatos() {
    Lecturatxt leer = new Lecturatxt();
    List<Entidad.Matricula> listaEstu = leer.leerEst();
    for (Entidad.Matricula estu : listaEstu) {
       modelMatricula.addRow(new Object[]{estu.getDni(), estu.getNombre(),
estu.getCelular(), estu.getEdad(), estu.getDireccion()});
  }
  private void limpiarCampos() {
    txtCelular.setText("");
    txtDireccion.setText("");
    txtDni.setText("");
    txtEdad.setText("");
    txtNombre.setText("");
  }
  private boolean validarCamposVacios() {
    boolean camposVacios = false;
    // Aquí añade todos tus JTextField que quieres validar
    JTextField[] campos = {txtCelular, txtDireccion, txtDni, txtEdad, txtNombre}; // Asume
que tienes estos campos definidos
    for (JTextField campo : campos) {
       if (campo.getText().trim().isEmpty()) { // Comprueba si el texto está vacío o solo
contiene espacios
          camposVacios = true;
          break; // Si encuentras un campo vacío, sales del bucle
       }
    }
    if (camposVacios) {
       JOptionPane.showMessageDialog(this, "Por favor, rellena todos los campos.",
"Campos Vacíos", JOptionPane.WARNING_MESSAGE);
    }
```

```
return !camposVacios; // Retorna true si todos los campos están llenos, false si hay
algún campo vacío
  }
  // 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.JLabel jLabel6;
  private javax.swing.JPanel jPanel1;
  private javax.swing.JScrollPane jScrollPane1;
  private javax.swing.JScrollPane jScrollPane2;
  private javax.swing.JTable jTable1;
  private javax.swing.JTable tableMatricula;
  private javax.swing.JTextField txtCelular;
  private javax.swing.JTextField txtDireccion;
  private javax.swing.JTextField txtDni;
  private javax.swing.JTextField txtEdad;
  private javax.swing.JTextField txtNombre;
  // End of variables declaration
}
NOTAS
import Datos. Escrituratxt;
import Datos.Lecturatxt;
import Entidad.Nota;
import Logica.Logica;
import java.awt.Toolkit;
import java.awt.event.KeyAdapter;
import java.awt.event.KeyEvent;
import java.util.List;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.table.DefaultTableModel;
/**
* @author USER 17
public class Notas extends javax.swing.JInternalFrame {
```

```
/**
* Creates new form MascotaFrame
private DefaultTableModel modelNotas;
public Notas() {
  initComponents();
  tablaDesing();
}
/**
* 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() {
  ¡Panel1 = new javax.swing.JPanel();
  jLabel1 = new javax.swing.JLabel();
  jLabel2 = new javax.swing.JLabel();
  txtCurso = new javax.swing.JTextField();
  txtCalificacion = new javax.swing.JTextField();
  jLabel3 = new javax.swing.JLabel();
  jScrollPane1 = new javax.swing.JScrollPane();
  txtCondicion = new javax.swing.JTextArea();
  jButton1 = new javax.swing.JButton();
  ¡Button2 = new javax.swing.JButton();
  jLabel4 = new javax.swing.JLabel();
  txtDniEst = new javax.swing.JTextField();
  jScrollPane2 = new javax.swing.JScrollPane();
  tableNotas = new javax.swing.JTable();
  jLabel5 = new javax.swing.JLabel();
  jPanel1.setBackground(new java.awt.Color(255, 204, 102));
  jPanel1.setPreferredSize(new java.awt.Dimension(725, 575));
  jLabel1.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
  jLabel1.setForeground(new java.awt.Color(255, 255, 255));
  jLabel1.setText("CURSO");
  jLabel2.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
  jLabel2.setForeground(new java.awt.Color(255, 255, 255));
  jLabel2.setText("CALIFICACION");
  txtCurso.addActionListener(new java.awt.event.ActionListener() {
```

```
public void actionPerformed(java.awt.event.ActionEvent evt) {
    txtCursoActionPerformed(evt);
  }
});
txtCalificacion.addKeyListener(new java.awt.event.KeyAdapter() {
  public void keyTyped(java.awt.event.KeyEvent evt) {
    txtCalificacionKeyTyped(evt);
  }
});
jLabel3.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel3.setForeground(new java.awt.Color(255, 255, 255));
jLabel3.setText("CONDICIÓN DE ESTUDIANTE");
txtCondicion.setColumns(20);
txtCondicion.setRows(5);
jScrollPane1.setViewportView(txtCondicion);
jButton1.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
¡Button1.setText("Registrar");
jButton1.addMouseListener(new java.awt.event.MouseAdapter() {
  public void mousePressed(java.awt.event.MouseEvent evt) {
    jButton1MousePressed(evt);
  }
});
jButton2.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
¡Button2.setText("Cancelar");
¡Button2.addMouseListener(new java.awt.event.MouseAdapter() {
  public void mousePressed(java.awt.event.MouseEvent evt) {
    jButton2MousePressed(evt);
  }
});
jLabel4.setFont(new java.awt.Font("Yu Gothic UI", 1, 18)); // NOI18N
jLabel4.setForeground(new java.awt.Color(255, 255, 255));
jLabel4.setText("DNI DEL EST.");
txtDniEst.addKeyListener(new java.awt.event.KeyAdapter() {
  public void keyTyped(java.awt.event.KeyEvent evt) {
    txtDniEstKeyTyped(evt);
  }
});
tableNotas.setModel(new javax.swing.table.DefaultTableModel(
  new Object [][] {
    {null, null, null, null},
```

```
{null, null, null, null},
         {null, null, null, null},
         {null, null, null, null}
       },
       new String [] {
         "Title 1", "Title 2", "Title 3", "Title 4"
       }
    ));
    jScrollPane2.setViewportView(tableNotas);
    jLabel5.setFont(new java.awt.Font("Yu Gothic UI", 1, 24)); // NOI18N
    jLabel5.setForeground(new java.awt.Color(255, 255, 255));
    jLabel5.setText("REGISTRO DE NOTAS");
    javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
    iPanel1.setLayout(iPanel1Layout);
    jPanel1Layout.setHorizontalGroup(
       jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
         .addGap(82, 82, 82)
         .addComponent(jButton1)
         .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
         .addComponent(jButton2)
         .addGap(196, 196, 196))
       .addGroup(jPanel1Layout.createSequentialGroup()
         .addGap(24, 24, 24)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G)
            .addGroup(jPanel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
G, false)
                .addComponent(jLabel3)
                .addGroup(jPanel1Layout.createSequentialGroup()
                   .addComponent(jLabel4)
                   .addGap(18, 18, 18)
                   .addComponent(txtDniEst,
javax.swing.GroupLayout.PREFERRED_SIZE, 135,
javax.swing.GroupLayout.PREFERRED_SIZE)
                   .addGap(68, 68, 68)
                   .addComponent(jLabel2)
                   .addGap(18, 18, 18)
                   .addComponent(txtCalificacion,
javax.swing.GroupLayout.PREFERRED_SIZE, 126,
javax.swing.GroupLayout.PREFERRED SIZE))
```

```
.addComponent(jLabel5)
               .addGroup(jPanel1Layout.createSequentialGroup()
                  .addComponent(jLabel1)
                  .addGap(53, 53, 53)
                  .addComponent(txtCurso)))
             .addContainerGap(118, Short.MAX VALUE))
           .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
¡Panel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILIN
G)
               .addComponent(jScrollPane1,
javax.swing.GroupLayout.Alignment.LEADING)
               .addComponent(jScrollPane2, javax.swing.GroupLayout.DEFAULT_SIZE,
684, Short.MAX VALUE))
             .addGap(23, 23, 23))))
    jPanel1Layout.setVerticalGroup(
      jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
      .addGroup(jPanel1Layout.createSequentialGroup()
         .addGap(17, 17, 17)
         .addComponent(jLabel5)
         .addGap(12, 12, 12)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
           .addComponent(jLabel1)
           .addComponent(txtCurso, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
           .addComponent(jLabel2)
           .addComponent(txtCalificacion, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT SIZE, javax.swing.GroupLayout.PREFERRED SIZE)
           .addComponent(jLabel4)
           .addComponent(txtDniEst, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
         .addGap(18, 18, 18)
         .addComponent(jLabel3)
         .addGap(11, 11, 11)
         .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 65,
javax.swing.GroupLayout.PREFERRED_SIZE)
         .addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELI
NE)
```

```
.addComponent(jButton2)
            .addComponent(jButton1))
         .addGap(18, 18, 18)
         .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 228,
javax.swing.GroupLayout.PREFERRED SIZE))
    );
    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, 731,
Short.MAX_VALUE)
    );
    layout.setVerticalGroup(
       layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
       .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
         .addGap(0, 0, Short.MAX_VALUE)
         .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    );
    pack();
  }// </editor-fold>
  private void jButton1MousePressed(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    Logica duenio = new Logica();
    if (duenio.buscarEstPorDni(txtDniEst.getText()) && validarCamposVacios() &&
validarNumeros(txtCalificacion) && validarNumeros(txtDniEst)) {
       int dni = Integer.parseInt(txtDniEst.getText());
       int calif = Integer.parseInt(txtCalificacion.getText());
       Nota mascota = new Nota(dni, txtCurso.getText(), calif, txtCondicion.getText());
       Escrituratxt escribir = new Escrituratxt();
       escribir.registrarNota(mascota);
       tablaDesing();
       limpiarCampos();
    } else {
       JOptionPane.showMessageDialog(this, "Los datos ingresados no son validos");
    }
  }
  private void jButton2MousePressed(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
```

```
limpiarCampos();
  }
  private void txtCursoActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
  }
  private void txtCalificacionKeyTyped(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    char key = evt.getKeyChar();
    // Verificar si la tecla presionada es un número o una tecla de borrar
    boolean num = Character.isDigit(key);
    boolean esBorrar = key == KeyEvent.VK_DELETE || key ==
KeyEvent.VK_BACK_SPACE;
    // Convertir el texto actual a un número para verificar el rango
    String textoActual = txtCalificacion.getText() + key;
    int valorIngresado = 0;
    try {
       valorIngresado = Integer.parseInt(textoActual);
    } catch (NumberFormatException e) {
       // Si el texto no se puede convertir a un número, no hacer nada
    }
    if (!num && !esBorrar) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese solo números.");
       evt.consume();
    } else if (valorIngresado < 0 || valorIngresado > 20) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese un número entre 0 y
20.");
       evt.consume();
    }
    if (txtCalificacion.getText().trim().length() == 2) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese un número de rango
vigesimal");
       evt.consume();
    }
  }
  private void txtDniEstKeyTyped(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    char key = evt.getKeyChar();
    // Verificar si la tecla presionada es un número o una tecla de borrar
```

```
boolean num = Character.isDigit(key);
    boolean esBorrar = key == KeyEvent.VK_DELETE || key ==
KeyEvent.VK BACK SPACE;
    if (!num && !esBorrar) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese solo números.");
       evt.consume();
    }
    if (txtDniEst.getText().trim().length() == 8) {
       Toolkit.getDefaultToolkit().beep();
       JOptionPane.showMessageDialog(null, "Por favor, ingrese un número de rango 8
digitos");
       evt.consume();
    }
  }
  /**/
  private void tablaDesing() {
    modelNotas = new DefaultTableModel(new Object[]{"Estudiante", "Curso",
"Calificacion", "Condicion", 0);
    tableNotas.setModel(modelNotas);
    cargarDatos();
  }
  private void cargarDatos() {
    Lecturatxt leer = new Lecturatxt();
    Logica estu = new Logica();
    List<Nota> listaEstu = leer.leerNota();
    for (Nota estud : listaEstu) {
       String dniEstStr = String.valueOf(estud.getDniEst());
       String nombreEst = estu.buscarNombreEstPorDni(dniEstStr);
       modelNotas.addRow(new Object[]{nombreEst, estud.getCurso(),
estud.getCalificacion(), estud.getCondicion()});
    }
  }
  private void limpiarCampos() {
    txtCondicion.setText("");
    txtDniEst.setText("");
    txtCalificacion.setText("");
    txtCurso.setText("");
  }
  private boolean validarCamposVacios() {
    boolean camposVacios = false;
    // Aquí añade todos tus JTextField que quieres validar
```

```
JTextField[] campos = {txtDniEst, txtCalificacion, txtCurso}; // Asume que tienes estos
campos definidos
    for (JTextField campo : campos) {
       if (campo.getText().trim().isEmpty()) { // Comprueba si el texto está vacío o solo
contiene espacios
          camposVacios = true;
          break; // Si encuentras un campo vacío, sales del bucle
    }
    if (camposVacios) {
       JOptionPane.showMessageDialog(this, "Por favor, rellena todos los campos.",
"Campos Vacíos", JOptionPane.WARNING_MESSAGE);
    return !camposVacios; // Retorna true si todos los campos están llenos, false si hay
algún campo vacío
  }
  private boolean validarNumeros(JTextField textField) {
     String texto = textField.getText().trim(); // Obtener el texto del JTextField y eliminar
espacios en blanco
    // Verificar si el texto contiene solo números
    if (texto.matches("\d+")) { // El patrón "\d+" verifica que el texto contenga solo dígitos
       return true; // El texto contiene solo números
    } else {
       return false; // El texto contiene caracteres que no son números
    }
  }
  // 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.JPanel jPanel1;
  private javax.swing.JScrollPane jScrollPane1;
  private javax.swing.JScrollPane jScrollPane2;
  private javax.swing.JTable tableNotas;
  private javax.swing.JTextField txtCalificacion;
  private javax.swing.JTextArea txtCondicion;
  private javax.swing.JTextField txtCurso;
```

```
private javax.swing.JTextField txtDniEst;
// End of variables declaration
}
```