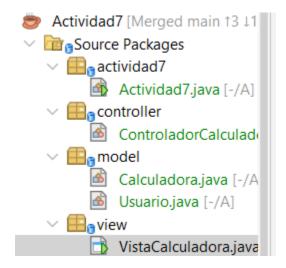# Actividad 7

Paquetes creados:

Suma:

Resta:

CALCULADORA

Numero A   9

Numero B   8

SUMAR   RESTAR

DIVIDIR   MULTIPLICAR

Éxito   ×

(i)   Usuario: Diego realizo una resta. La respuesta es: 1.0

OK

Multiplicacion:

CALCULADORA

Numero A 8

Numero B 9

SUMAR

RESTAR

DIVIDIR

MULTIPLICAR

Éxito

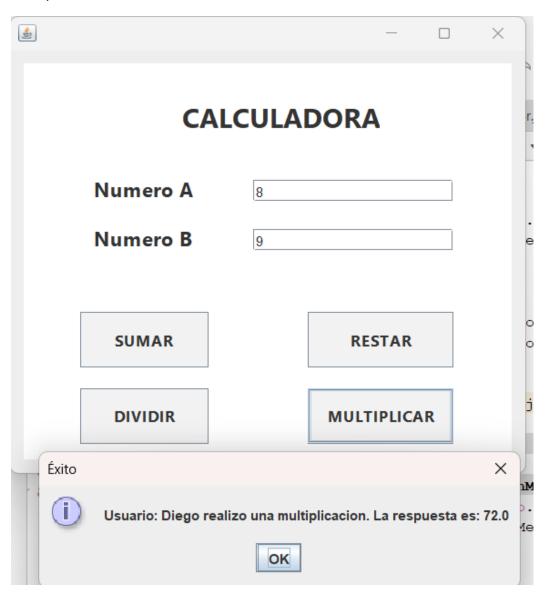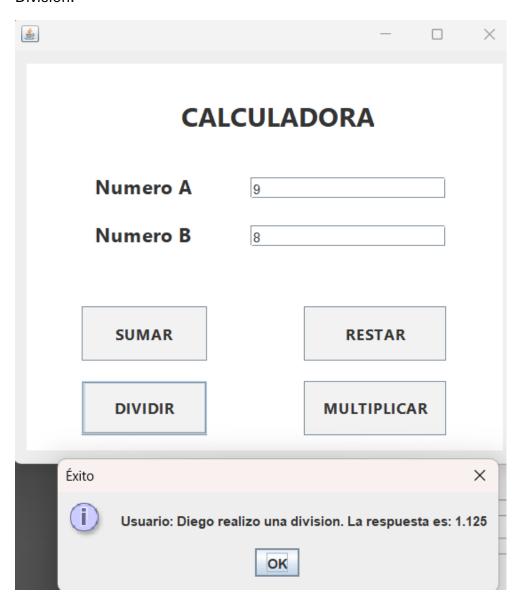Usuario: Diego realizo una multiplicacion. La respuesta es: 72.0

OK

Division:

Modelo:

Clase Usuario

package model;

public class Usuario {

```java
    private String nombre;

    public Usuario(String nombre) {

        this.nombre = nombre;

    }


    public String getNombre() {

        return nombre;

    }


    public void setNombre(String nombre) {

        this.nombre = nombre;

    }


    @Override
    public String toString() {

        return "Usuario: " + nombre;

    }
}
```

Clase Calculadora:

```java
package model;


public class Calculadora {



    public double sumar(double a, double b) {
```

```java
        return a + b;

    }


    public double restar(double a, double b) {

        return a - b;

    }


    public double multiplicar(double a, double b) {

        return a * b;

    }


    public double dividir(double a, double b) throws ArithmeticException {

        if (b == 0) {

            throw new ArithmeticException("Error: División por cero");

        }

        return a / b;

    }

}
```

Controlador:

Clase ControladorCalculadora

```java
package controller;


import model.Calculadora;

import model.Usuario;


public class ControladorCalculadora {

    private Calculadora calculadora;

    private Usuario usuario;
```

```java
    public ControladorCalculadora(Usuario usuario, Calculadora calculadora) {

        this.usuario = usuario;

        this.calculadora = calculadora;

    }

    public double sumar(double a, double b) {

        double res = calculadora.sumar(a, b);

        return res;

    }


    public double restar(double a, double b) {

        return calculadora.restar(a,b);

    }


    public double multiplicar(double a, double b) {

        return calculadora.multiplicar(a,b);

    }


    public double dividir(double a, double b) {

        return calculadora.dividir(a,b);

    }


    public Usuario getUsuario() {

        return usuario;

    }

}
```

Vista:

Clase VistaCalculadora

package view;

import controller.*;

import javax.swing.JOptionPane;

```java
public class VistaCalculadora extends javax.swing.JFrame {

    private ControladorCalculadora controlador;

    private static final java.util.logging.Logger logger =
java.util.logging.Logger.getLogger(VistaCalculadora.class.getName());

    public void setControlador(ControladorCalculadora controlador) {

        this.controlador = controlador;

    }
public void mostrarMensajeExito(String mensaje) {

    JOptionPane.showMessageDialog(

        null,

        mensaje,

        "Éxito",

        JOptionPane.INFORMATION_MESSAGE

    );

}
    public void mostrarMensajeError(String mensaje) {

    JOptionPane.showMessageDialog(

        null,

        mensaje,

        "Error",

        JOptionPane.ERROR_MESSAGE
```

```java
    );
}

private void limpiar(){
    txtCodigo.setText("");
    txtNombre.setText("");
}

/**
 * Creates new form VistaCalduladora
 */
public VistaCalculadora() {
    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() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    txtCodigo = new javax.swing.JTextField();
    txtNombre = new javax.swing.JTextField();
    btnModificarVendedor = new javax.swing.JButton();
```

```java
btnModificarVendedor1 = new javax.swing.JButton();

btnModificarVendedor2 = new javax.swing.JButton();

btnModificarVendedor3 = new javax.swing.JButton();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);


jPanel1.setBackground(new java.awt.Color(255, 255, 255));


jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 24)); // NOI18N

jLabel1.setText("CALCULADORA");


jLabel3.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N

jLabel3.setText("Numero A");


jLabel4.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N

jLabel4.setText("Numero B");


btnModificarVendedor.setBackground(new java.awt.Color(242, 242, 242));

btnModificarVendedor.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N

btnModificarVendedor.setText("RESTAR");

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

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

    btnModificarVendedorActionPerformed(evt);

  }

});


btnModificarVendedor1.setBackground(new java.awt.Color(242, 242, 242));

btnModificarVendedor1.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N

btnModificarVendedor1.setText("MULTIPLICAR");
```

```java
btnModificarVendedor1.addActionListener(new java.awt.event.ActionListener() {

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

        btnModificarVendedor1ActionPerformed(evt);

    }

});


btnModificarVendedor2.setBackground(new java.awt.Color(242, 242, 242));

btnModificarVendedor2.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N

btnModificarVendedor2.setText("SUMAR");

btnModificarVendedor2.addActionListener(new java.awt.event.ActionListener() {

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

        btnModificarVendedor2ActionPerformed(evt);

    }

});


btnModificarVendedor3.setBackground(new java.awt.Color(242, 242, 242));

btnModificarVendedor3.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N

btnModificarVendedor3.setText("DIVIDIR");

btnModificarVendedor3.addActionListener(new java.awt.event.ActionListener() {

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

        btnModificarVendedor3ActionPerformed(evt);

    }

});


javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);

jPanel1.setLayout(jPanel1Layout);

jPanel1Layout.setHorizontalGroup(

    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup()
```

```java
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                            .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 122,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 122,
javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,
false)
                            .addComponent(txtNombre, javax.swing.GroupLayout.DEFAULT_SIZE, 176, Short.MAX_VALUE)
                            .addComponent(txtCodigo)))
                    .addGroup(javax.swing.GroupLayout.Alignment.LEADING, jPanel1Layout.createSequentialGroup()
                        .addGap(50, 50, 50)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addComponent(btnModificarVendedor3, javax.swing.GroupLayout.PREFERRED_SIZE, 113,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(btnModificarVendedor2, javax.swing.GroupLayout.PREFERRED_SIZE, 113,
javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 87,
Short.MAX_VALUE)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,
false)
                            .addComponent(btnModificarVendedor, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                            .addComponent(btnModificarVendedor1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))))
                    .addGap(51, 51, 51))
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup()
                    .addGap(0, 0, Short.MAX_VALUE)
                    .addComponent(jLabel1)
```

```java
            .addGap(116, 116, 116))
    );
    jPanel1Layout.setVerticalGroup(
        jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(30, 30, 30)
            .addComponent(jLabel1)
            .addGap(35, 35, 35)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel3)
                .addComponent(txtCodigo, 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.BASELINE)
                .addComponent(jLabel4)
                .addComponent(txtNombre, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(53, 53, 53)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(btnModificarVendedor2, javax.swing.GroupLayout.PREFERRED_SIZE, 49,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(btnModificarVendedor, javax.swing.GroupLayout.PREFERRED_SIZE, 49,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(btnModificarVendedor1, javax.swing.GroupLayout.PREFERRED_SIZE, 49,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(btnModificarVendedor3, javax.swing.GroupLayout.PREFERRED_SIZE, 49,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(14, Short.MAX_VALUE))
    );
```

```java
        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());

        getContentPane().setLayout(layout);

        layout.setHorizontalGroup(

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

            .addGroup(layout.createSequentialGroup()

                .addContainerGap()

                .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 btnModificarVendedorActionPerformed(java.awt.event.ActionEvent evt) {
     if(txtCodigo.getText().trim().isEmpty()){

        mostrarMensajeError("Llena el valor A");

        return;

      }


        if(txtNombre.getText().trim().isEmpty()){
```

```java
        mostrarMensajeError("Llena el valor B");

        return;

    }


    double a = Double.parseDouble(txtCodigo.getText());

    double b = Double.parseDouble(txtNombre.getText());



    mostrarMensajeExito(controlador.getUsuario()+ " realizo una resta. La respuesta es: " +
controlador.restar(a, b));

    limpiar();

}


private void btnModificarVendedor1ActionPerformed(java.awt.event.ActionEvent evt) {

    if(txtCodigo.getText().trim().isEmpty()){

        mostrarMensajeError("Llena el valor A");

        return;

    }


    if(txtNombre.getText().trim().isEmpty()){

        mostrarMensajeError("Llena el valor B");

        return;

    }


    double a = Double.parseDouble(txtCodigo.getText());

    double b = Double.parseDouble(txtNombre.getText());



    mostrarMensajeExito(controlador.getUsuario()+ " realizo una multiplicacion. La respuesta es: " +
controlador.multiplicar(a, b));
```

```java
        limpiar();
    }


    private void btnModificarVendedor2ActionPerformed(java.awt.event.ActionEvent evt) {
        if(txtCodigo.getText().trim().isEmpty()){
            mostrarMensajeError("Llena el valor A");
            return;
        }


        if(txtNombre.getText().trim().isEmpty()){
            mostrarMensajeError("Llena el valor B");
            return;
        }


        double a = Double.parseDouble(txtCodigo.getText());
        double b = Double.parseDouble(txtNombre.getText());



        mostrarMensajeExito(controlador.getUsuario()+ " realizo una suma. La respuesta es: " +
controlador.sumar(a, b));
        limpiar();

    }


    private void btnModificarVendedor3ActionPerformed(java.awt.event.ActionEvent evt) {
        if(txtCodigo.getText().trim().isEmpty()){
            mostrarMensajeError("Llena el valor A");
            return;
        }
```

```java
        if(txtNombre.getText().trim().isEmpty()){

            mostrarMensajeError("Llena el valor B");

            return;

        }


        double a = Double.parseDouble(txtCodigo.getText());

        double b = Double.parseDouble(txtNombre.getText());


        if(b == 0){

            mostrarMensajeError("B no puede ser 0");

            return;

        }


        mostrarMensajeExito(controlador.getUsuario()+ " realizo una division. La respuesta es: " +
controlador.dividir(a, b));

        limpiar();

    }


    /**
     * @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())) {
```

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

                break;

            }

        }

    } catch (ReflectiveOperationException | javax.swing.UnsupportedLookAndFeelException ex) {

        logger.log(java.util.logging.Level.SEVERE, null, ex);

    }

    //</editor-fold>


    /* Create and display the form */

    java.awt.EventQueue.invokeLater(() -> new VistaCalculadora().setVisible(true));

}


// Variables declaration - do not modify

private javax.swing.JButton btnModificarVendedor;

private javax.swing.JButton btnModificarVendedor1;

private javax.swing.JButton btnModificarVendedor2;

private javax.swing.JButton btnModificarVendedor3;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JPanel jPanel1;

private javax.swing.JTextField txtCodigo;

private javax.swing.JTextField txtNombre;

// End of variables declaration

}
```

Main

```java
package actividad7;

import model.*;

import view.*;

import controller.*;


public class Actividad7 {



    public static void main(String[] args) {

        Calculadora cal = new Calculadora();

        Usuario usu = new Usuario("Diego");


        ControladorCalculadora controlador = new ControladorCalculadora(usu, cal);


        VistaCalculadora vista = new VistaCalculadora();

        vista.setControlador(controlador);


        vista.setVisible(true);


    }


}
```