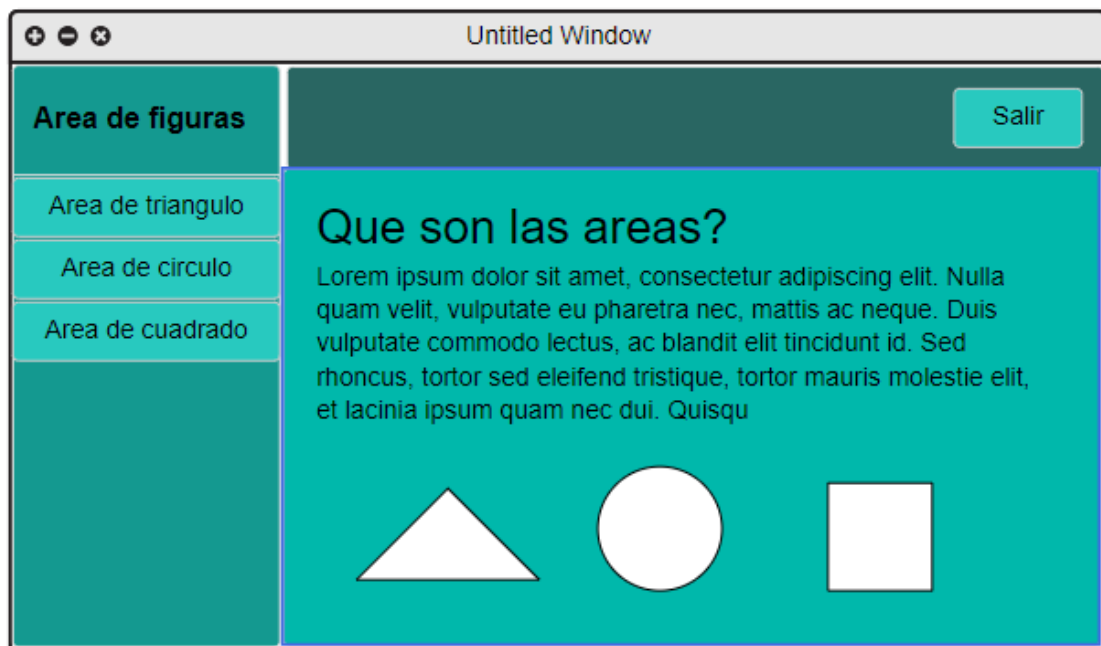# Informe
Aplicación para resolver el área de figuras 2 capas diseño de interface

Nombre: David Toro

Fecha:18/1/2024

Diseño:

Untitled Window

Area de figuras

- Area de triangulo
- Area de circulo
- Area de cuadrado

Salir

Area del triangulo

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec, mattis ac neque. Duis vulputate commodo lectus, ac blandit

Base:

Altura:

Area: 0.00

Calcular

Untitled Window

Area de figuras

- Area de triangulo
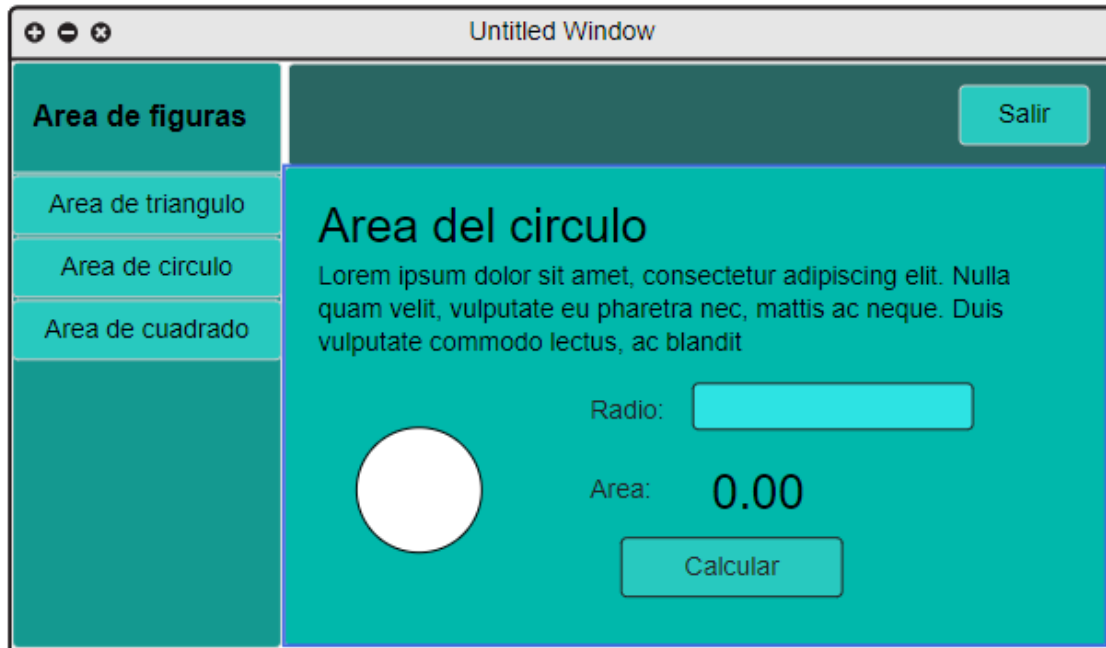- Area de circulo
- Area de cuadrado

Salir

Area del cuadrado

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla quam velit, vulputate eu pharetra nec, mattis ac neque. Duis vulputate commodo lectus, ac blandit

Lado:

Area: 0.00

Calcular

Codigo:

MenuJFrame:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */
package frontend;

/**
 *
 * @author david
 */
public class MenuJFrame extends javax.swing.JFrame {
```

```java
/**
 * Creates new form MenuJFrame
 */
public MenuJFrame() {
    initComponents();
    jLabelTitulo.putClientProperty( "FlatLaf.styleClass", "h2" );
    jButtonTriangulo.putClientProperty("FlatLaf.styleClass", "h3");
    jButtonCuadrado.putClientProperty("FlatLaf.styleClass", "h3");
    jButtonCirculo.putClientProperty("FlatLaf.styleClass", "h3");
    jButtonSalir.putClientProperty("FlatLaf.styleClass", "h3");


    MenuJPanel menu =new MenuJPanel();
    menu.setSize(jPanelContenido.getWidth(),jPanelContenido.getHeight());



    menu.setLocation(0, 0);
    jPanelContenido.removeAll();
    jPanelContenido.add(menu);
    jPanelContenido.revalidate();
    jPanelContenido.repaint();
}


/**
 * 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() {
```

```java
jPanelLateral = new javax.swing.JPanel();

jLabelTitulo = new javax.swing.JLabel();

jButtonTriangulo = new javax.swing.JButton();

jButtonCirculo = new javax.swing.JButton();

jButtonCuadrado = new javax.swing.JButton();

jPanelSuperior = new javax.swing.JPanel();

jButtonSalir = new javax.swing.JButton();

jPanelContenido = new javax.swing.JPanel();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

setPreferredSize(new java.awt.Dimension(600, 350));


jPanelLateral.setBackground(new java.awt.Color(20, 153, 144));


jLabelTitulo.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

jLabelTitulo.setText("Areas de figuras");

jLabelTitulo.setToolTipText("");


jButtonTriangulo.setText("Area del triangulo");

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

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

    jButtonTrianguloActionPerformed(evt);

  }

});


jButtonCirculo.setText("Area del circulo");

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

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

    jButtonCirculoActionPerformed(evt);

  }
```

```java
        });


        jButtonCuadrado.setText("Area del cuadrado");
        jButtonCuadrado.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButtonCuadradoActionPerformed(evt);
            }
        });


        javax.swing.GroupLayout jPanelLateralLayout = new
javax.swing.GroupLayout(jPanelLateral);
        jPanelLateral.setLayout(jPanelLateralLayout);
        jPanelLateralLayout.setHorizontalGroup(
            jPanelLateralLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jButtonTriangulo, javax.swing.GroupLayout.PREFERRED_SIZE, 160,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jButtonCirculo, javax.swing.GroupLayout.PREFERRED_SIZE, 160,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jButtonCuadrado, javax.swing.GroupLayout.PREFERRED_SIZE, 160,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGroup(jPanelLateralLayout.createSequentialGroup()
                .addGap(19, 19, 19)
                .addComponent(jLabelTitulo))
        );
        jPanelLateralLayout.setVerticalGroup(
            jPanelLateralLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanelLateralLayout.createSequentialGroup()
                .addGap(26, 26, 26)
                .addComponent(jLabelTitulo)
                .addGap(18, 18, 18)
                .addComponent(jButtonTriangulo, javax.swing.GroupLayout.PREFERRED_SIZE, 40,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(0, 0, 0)
```

```java
        .addComponent(jButtonCirculo, javax.swing.GroupLayout.PREFERRED_SIZE, 40,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(0, 0, 0)
        .addComponent(jButtonCuadrado, javax.swing.GroupLayout.PREFERRED_SIZE, 40,
javax.swing.GroupLayout.PREFERRED_SIZE))
    );


    jPanelSuperior.setBackground(new java.awt.Color(41, 102, 98));

    jPanelSuperior.setPreferredSize(new java.awt.Dimension(440, 60));


    jButtonSalir.setText("Salir");

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

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

            jButtonSalirActionPerformed(evt);

        }

    });


    javax.swing.GroupLayout jPanelSuperiorLayout = new
javax.swing.GroupLayout(jPanelSuperior);

    jPanelSuperior.setLayout(jPanelSuperiorLayout);

    jPanelSuperiorLayout.setHorizontalGroup(

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

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanelSuperiorLayout.createSequentialGroup()

            .addContainerGap(351, Short.MAX_VALUE)

            .addComponent(jButtonSalir)

            .addGap(17, 17, 17))

    );

    jPanelSuperiorLayout.setVerticalGroup(

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

        .addGroup(jPanelSuperiorLayout.createSequentialGroup()
```

```
                    .addGap(16, 16, 16)

                    .addComponent(jButtonSalir)

                    .addContainerGap(21, Short.MAX_VALUE))
        );


        javax.swing.GroupLayout jPanelContenidoLayout = new
javax.swing.GroupLayout(jPanelContenido);

        jPanelContenido.setLayout(jPanelContenidoLayout);

        jPanelContenidoLayout.setHorizontalGroup(


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

            .addGap(0, 0, Short.MAX_VALUE)
        );

        jPanelContenidoLayout.setVerticalGroup(


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

            .addGap(0, 0, 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(jPanelLateral, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

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

                    .addComponent(jPanelContenido, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                    .addComponent(jPanelSuperior, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))
        );

        layout.setVerticalGroup(
```

```java
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanelLateral, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addGroup(layout.createSequentialGroup()
          .addGap(60, 60, 60)
          .addComponent(jPanelContenido, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
        .addComponent(jPanelSuperior, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
    );


    pack();
  }// </editor-fold>


  private void jButtonCirculoActionPerformed(java.awt.event.ActionEvent evt) {
    CirculoJPanel cir =new CirculoJPanel();
    cir.setSize(jPanelContenido.getWidth(),jPanelContenido.getHeight());


    cir.setLocation(0, 0);
    jPanelContenido.removeAll();
    jPanelContenido.add(cir);
    jPanelContenido.revalidate();
    jPanelContenido.repaint();
  }


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


    TtrianguloJPanel tri =new TrianguloJPanel();
    tri.setSize(jPanelContenido.getWidth(),jPanelContenido.getHeight());


    tri.setLocation(0, 0);
```

```java
        jPanelContenido.removeAll();

        jPanelContenido.add(tri);

        jPanelContenido.revalidate();

        jPanelContenido.repaint();

    }


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

        dispose();

    }


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

        CuadradoJPanel cua =new CuadradoJPanel();

        cua.setSize(jPanelContenido.getWidth(),jPanelContenido.getHeight());



        cua.setLocation(0, 0);

        jPanelContenido.removeAll();

        jPanelContenido.add(cua);

        jPanelContenido.revalidate();

        jPanelContenido.repaint();

    }


    /**

     * @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
```

```java
         */
        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(MenuJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(MenuJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(MenuJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(MenuJFrame.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 MenuJFrame().setVisible(true);
            }
        });
```

```java
    }


    // Variables declaration - do not modify

    private javax.swing.JButton jButtonCirculo;

    private javax.swing.JButton jButtonCuadrado;

    private javax.swing.JButton jButtonSalir;

    private javax.swing.JButton jButtonTriangulo;

    private javax.swing.JLabel jLabelTitulo;

    private javax.swing.JPanel jPanelContenido;

    private javax.swing.JPanel jPanelLateral;

    private javax.swing.JPanel jPanelSuperior;

    // End of variables declaration
}
```

MenuJPanel:

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JPanel.java to edit this
template
 */
package frontend;


import javax.swing.ImageIcon;


/**
 *
 * @author david
 */
public class MenuJPanel extends javax.swing.JPanel {


    /**
```

```java
 * Creates new form MenuJPanel
 */
public MenuJPanel() {

    initComponents();

    jLabelTitulo.putClientProperty( "FlatLaf.styleClass", "h2" );
    jLabelParrafo.putClientProperty( "FlatLaf.styleClass", "h4" );

}

/**
 * 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() {

    jToggleButton1 = new javax.swing.JToggleButton();
    jLabelTitulo = new javax.swing.JLabel();
    jLabelParrafo = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();

    jToggleButton1.setText("jToggleButton1");

    setPreferredSize(new java.awt.Dimension(424, 251));
```

```java
        jLabelTitulo.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

        jLabelTitulo.setText("¿Que son las areas?");

        jLabelTitulo.setToolTipText("");


        jLabelParrafo.setText("<html>Se utiliza para medir la extensión de una superficie
bidimensional. El cálculo del área implica la multiplicación de dos dimensiones, como la
longitud y el ancho, en el caso de figuras como cuadrados y rectángulos. Para figuras
complejas, como triángulos o círculos, se aplican fórmulas.</html>");


        jLabel3.setIcon(new
javax.swing.ImageIcon("F:/poo/areasFigurasGrafico/src/main/java/resourses/circulo.png"));


        jLabel1.setIcon(new
javax.swing.ImageIcon("F:/poo/areasFigurasGrafico/src/main/java/resourses/cuadrado.png"));

        jLabel1.setPreferredSize(new java.awt.Dimension(75, 75));


        jLabel2.setIcon(new
javax.swing.ImageIcon("F:/poo/areasFigurasGrafico/src/main/java/resourses/triangulo.png"));

        jLabel2.setPreferredSize(new java.awt.Dimension(75, 75));


        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(this);

        this.setLayout(layout);

        layout.setHorizontalGroup(

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

          .addGroup(layout.createSequentialGroup()

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

              .addGroup(layout.createSequentialGroup()

                .addContainerGap()

                .addComponent(jLabelParrafo, javax.swing.GroupLayout.PREFERRED_SIZE, 395,
javax.swing.GroupLayout.PREFERRED_SIZE))

              .addGroup(layout.createSequentialGroup()

                .addGap(17, 17, 17)

                .addComponent(jLabelTitulo))

              .addGroup(layout.createSequentialGroup()
```

```
            .addGap(33, 33, 33)

            .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(43, 43, 43)

            .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(42, 42, 42)

            .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))

        .addContainerGap(23, Short.MAX_VALUE))
    );
    layout.setVerticalGroup(
      layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
      .addGroup(layout.createSequentialGroup()
        .addGap(25, 25, 25)

        .addComponent(jLabelTitulo)

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

        .addComponent(jLabelParrafo, javax.swing.GroupLayout.PREFERRED_SIZE, 88,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(18, 18, 18)

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

          .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

          .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

          .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addContainerGap(17, Short.MAX_VALUE))
    );
  }// </editor-fold>




  // Variables declaration - do not modify
```

```java
    private javax.swing.JLabel jLabel1;

    private javax.swing.JLabel jLabel2;

    private javax.swing.JLabel jLabel3;

    private javax.swing.JLabel jLabelParrafo;

    private javax.swing.JLabel jLabelTitulo;

    private javax.swing.JToggleButton jToggleButton1;

    // End of variables declaration

}
```

Main:

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 */


package com.mycompany.areasfigurasgrafico;



import com.formdev.flatlaf.FlatLaf;

import com.formdev.flatlaf.FlatLightLaf;

import com.formdev.flatlaf.intellijthemes.FlatCyanLightIJTheme;

import com.formdev.flatlaf.intellijthemes.FlatDarkFlatIJTheme;

import frontend.MenuJFrame;

import java.awt.Color;

import java.util.Collections;

import javax.swing.UIManager;



/**
 *
 * @author david
 */
```

```java
public class AreasFigurasGrafico {

    public static void main(String[] args) {
        FlatLaf.setGlobalExtraDefaults( Collections.singletonMap( "@accentColor", "#31524F" ) );


        FlatLaf.setGlobalExtraDefaults( Collections.singletonMap( "@foreground", "#000000" ) );
        FlatLightLaf.setup();
        UIManager.put("Button.background", Color.decode("#28C9BF"));
        UIManager.put("TextField.background", Color.decode("#2DE3E3"));
        UIManager.put("Panel.background",Color.decode("#00B8AB"));
        MenuJFrame menu = new MenuJFrame();
        menu.setVisible(true);
    }
}
```
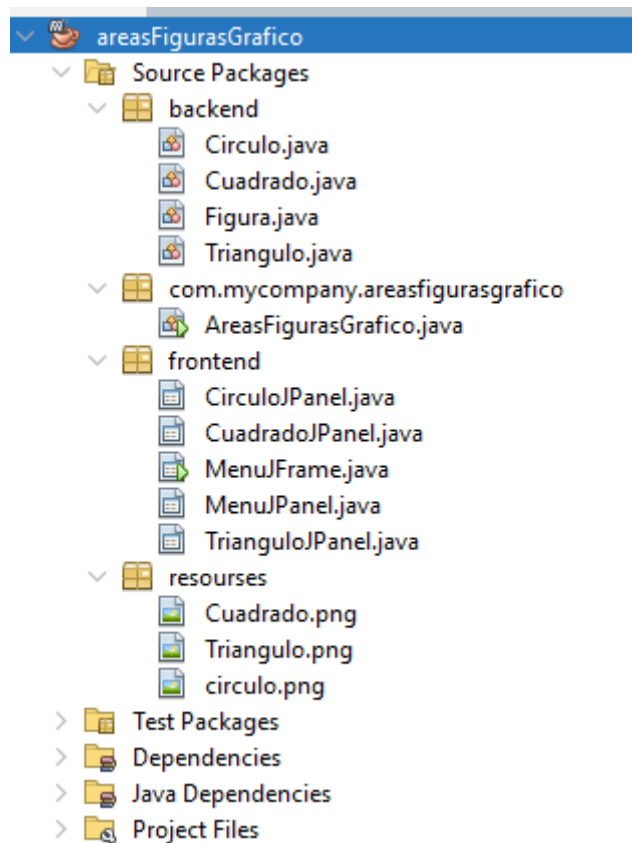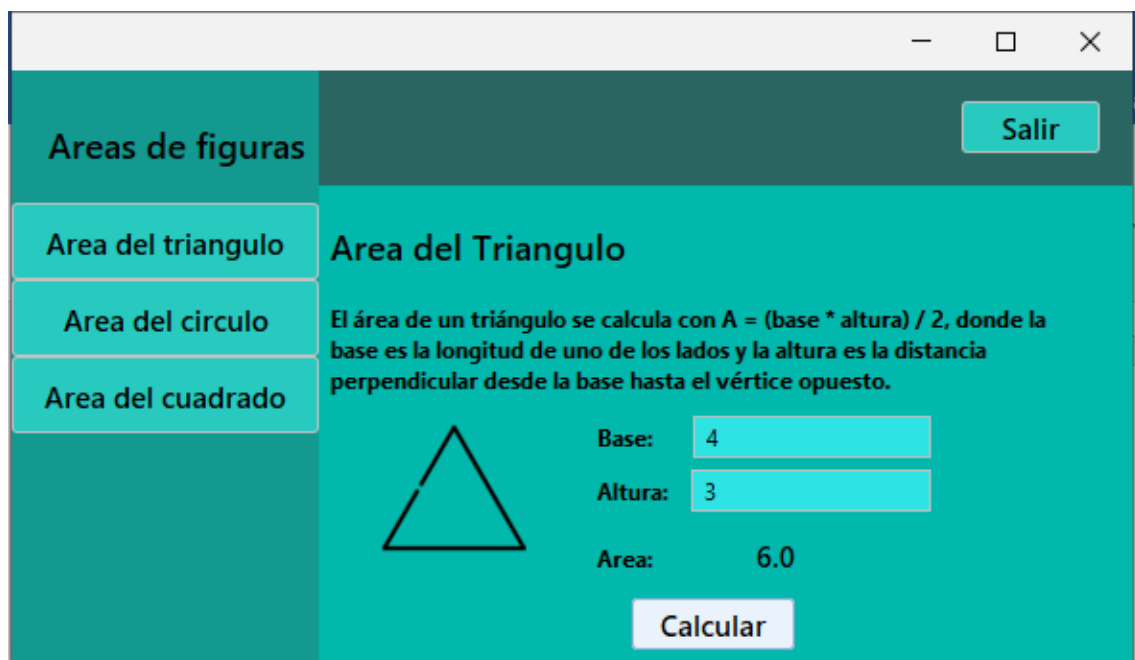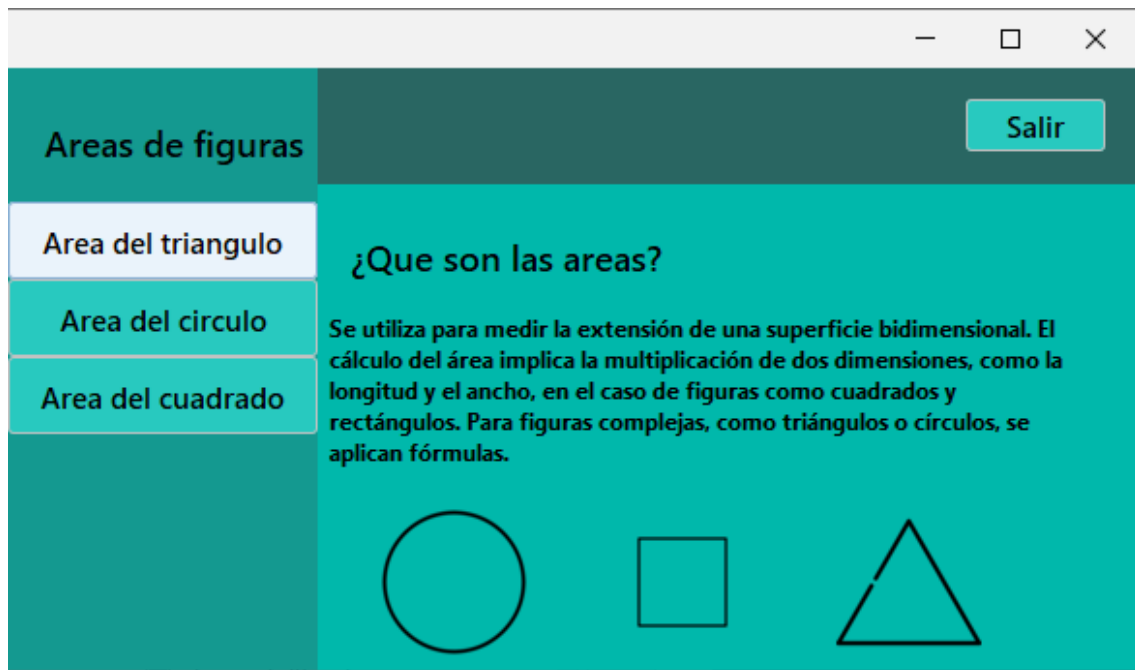
Proyecto:

Caso de prueba:

Areas de figuras

Salir

Area del triangulo

Area del circulo

Area del cuadrado

Area del Circulo

El área de un círculo se calcula mediante la fórmula A = π * r², donde π (pi) es una constante aproximadamente igual a 3.14159, y r es el radio del círculo, que es la distancia desde el centro del círculo hasta cualquier punto en su borde.

Radio: 5

Area: 78.5

Calcular

Areas de figuras

Salir

Area del triangulo

Area del circulo

Area del cuadrado

Area del Cuadrado

El área de un cuadrado se calcula multiplicando la longitud de un lado por sí misma. La fórmula general es A = lado², donde "lado" representa la longitud de uno de los lados del cuadrado.

Lado: 6

Area: 36.0

Calcular