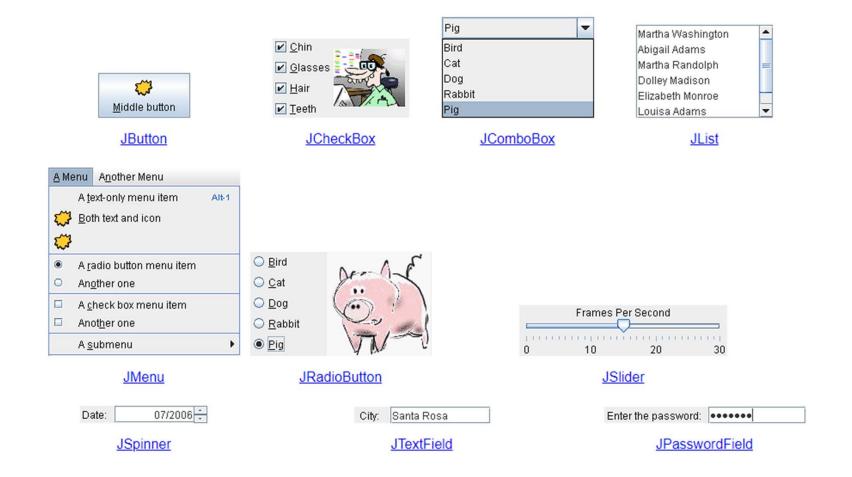
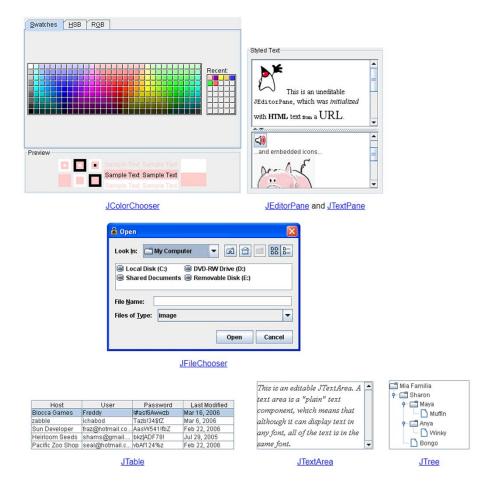


- La interfaz gráfica de usuario (GUI) juega un papel crucial en la experiencia del usuario. Java Swing es una de las bibliotecas más populares para crear GUIs en Java.
- Java Swing es una biblioteca de GUI que forma parte del JFC (Java Foundation Classes).
 Proporciona un conjunto de componentes ligeros y personalizables para construir interfaces gráficas de usuario.

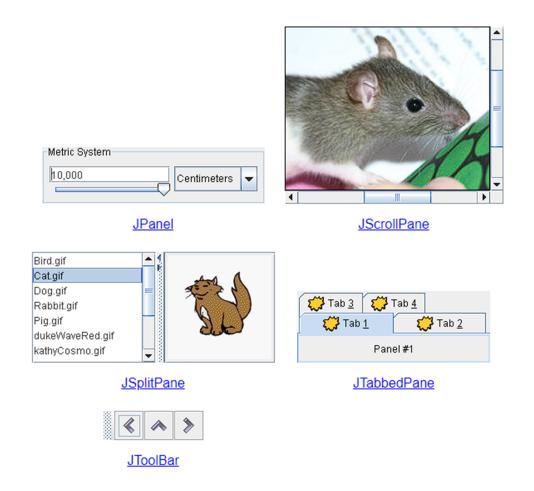
- El diseño de una GUI en Swing se basa en el uso de contenedores y componentes.
- Los contenedores, como JFrame y JPanel, son responsables de organizar y contener otros componentes como botones, etiquetas y campos de texto.
- Los diseños (layouts) determinan cómo se colocan estos componentes dentro de los contenedores.

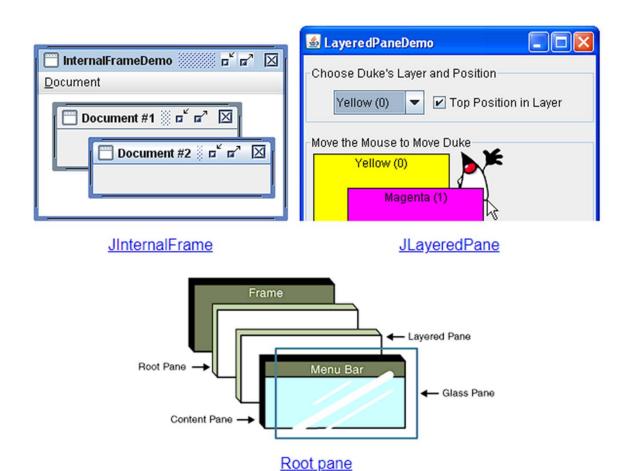






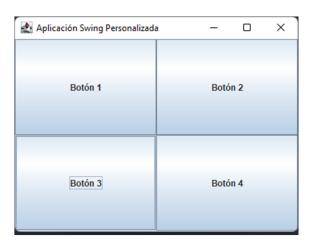


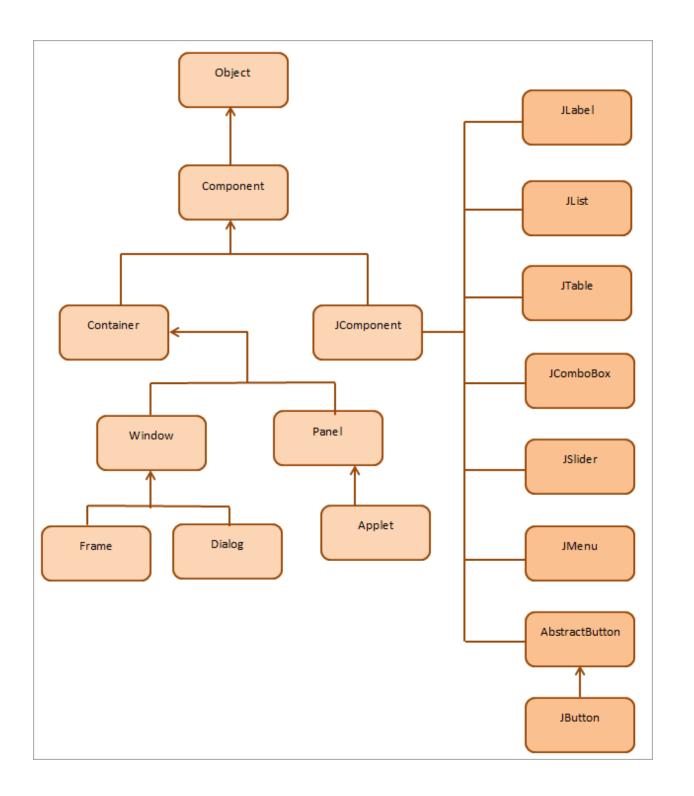




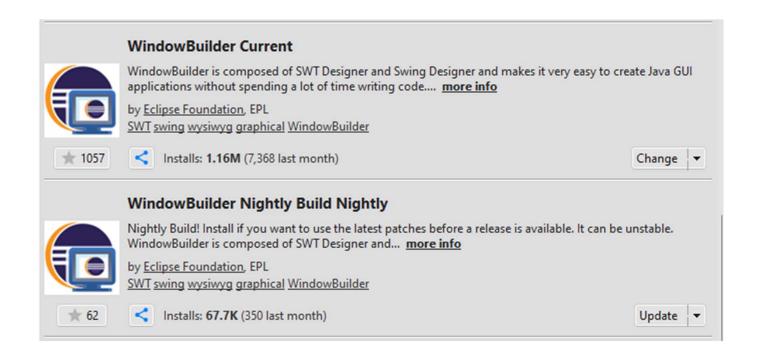
Ejemplo

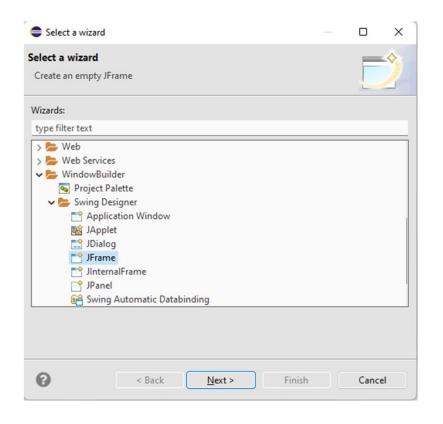
```
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JPanel;
import java.awt.GridLayout;
public class CustomSwingApp extends JFrame {
   public CustomSwingApp() {
       setTitle("Aplicación Swing Personalizada");
       setSize(400, 300);
       setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
       initUI();
    private void initUI() {
       JPanel panel = new JPanel(new GridLayout(2, 2));
       JButton button1 = new JButton("Botón 1");
       JButton button2 = new JButton("Botón 2");
        JButton button3 = new JButton("Botón 3");
       JButton button4 = new JButton("Botón 4");
       panel.add(button1);
       panel.add(button2);
       panel.add(button3);
       panel.add(button4);
       add(panel);
    public static void main(String[] args) {
       CustomSwingApp app = new CustomSwingApp();
       app.setVisible(true);
```

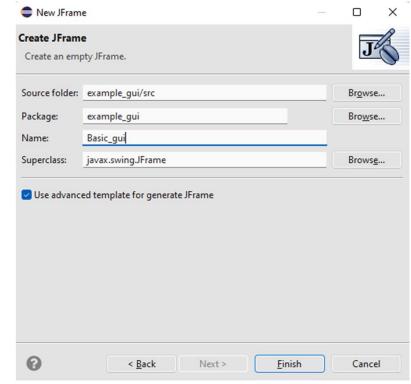




Para el eclipse







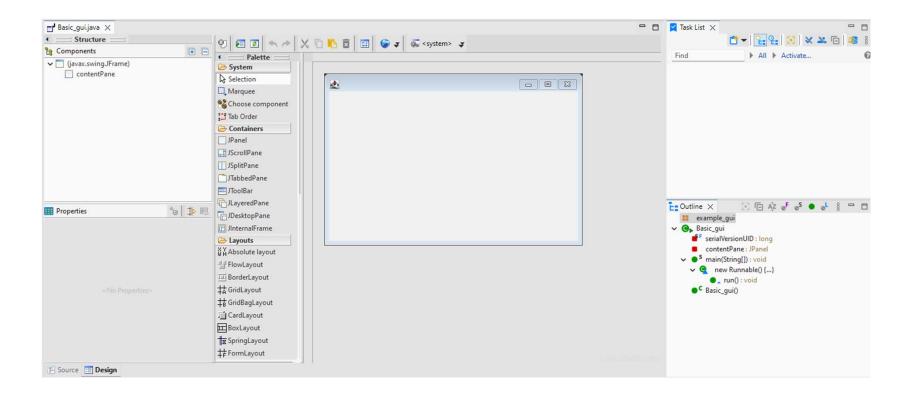
```
Package Explorer X
                                               Basic_gui.java X
package example gui;
  > # JRE System Library [jdk-22.0.2]
                                                30 import java.awt.EventQueue;

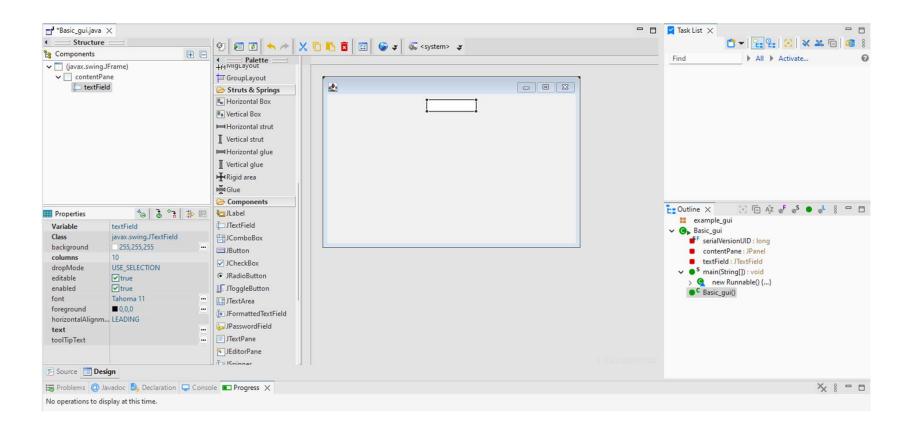
✓ 

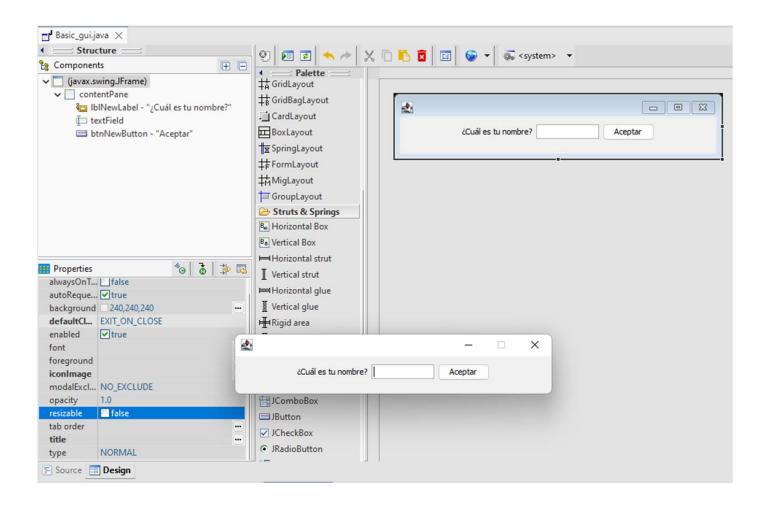
✓ 

Src

    ∨ !!! example_gui
                                                   public class Basic gui extends JFrame {
      > J Basic_gui.java
                                                10
                                                11
                                                       private static final long serialVersionUID = 1L;
                                                12
                                                       private JPanel contentPane;
                                                13
                                                140
                                                15
                                                        * Launch the application.
                                               16
                                                       public static void main(String[] args) {
                                               170
                                                180
                                                           EventQueue.invokeLater(new Runnable() {
                                                              public void run() {
                                               ▲19●
                                                20
                                                21
                                                                      Basic gui frame = new Basic gui();
                                                22
                                                                      frame.setVisible(true);
                                                23
                                                                  } catch (Exception e) {
                                                24
                                                                      e.printStackTrace();
                                                25
                                                26
                                                27
                                                          });
                                                28
                                                       }
                                                29
                                                300
                                                        * Create the frame.
                                                31
                                                32
                                                330
                                                       public Basic gui() {
                                               Source E Design
                                               No operations to display at this time.
```







Referencias

 https://web.mit.edu/6.005/www/sp14/psets/ps4/j ava-6-tutorial/components.html

https://docs.oracle.com/javase/tutorial/uiswing/components/toplevel.html