



INSTITUTO FEDERAL  
DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA  
Bahia

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# Linguagem de Programação II

Introdução às Interfaces Gráficas de  
Usuário (GUI) em Java: Pacote Swing  
(JFrame, JPanel, JLabel, JTextField,  
JPasswordField e JButton)



# Roteiro

- Introdução às Interfaces Gráficas de Usuário (GUI) em Java (Swing):
  - Introdução;
  - Componentes;
  - JFrame (Janela);
  - Netbeans e Swing
  - JButton (Botão)
  - JLabel (Rótulo ou Etiquetas);
  - JTextField (Campo de Texto);
  - JPasswordField (Campo de Senha);





# Java Swing - Introdução

- Na **Interface Gráfica** é necessário definir quais **componentes (objetos)** serão utilizados e a **disposição** que **eles** terão na **janela (objeto)**.

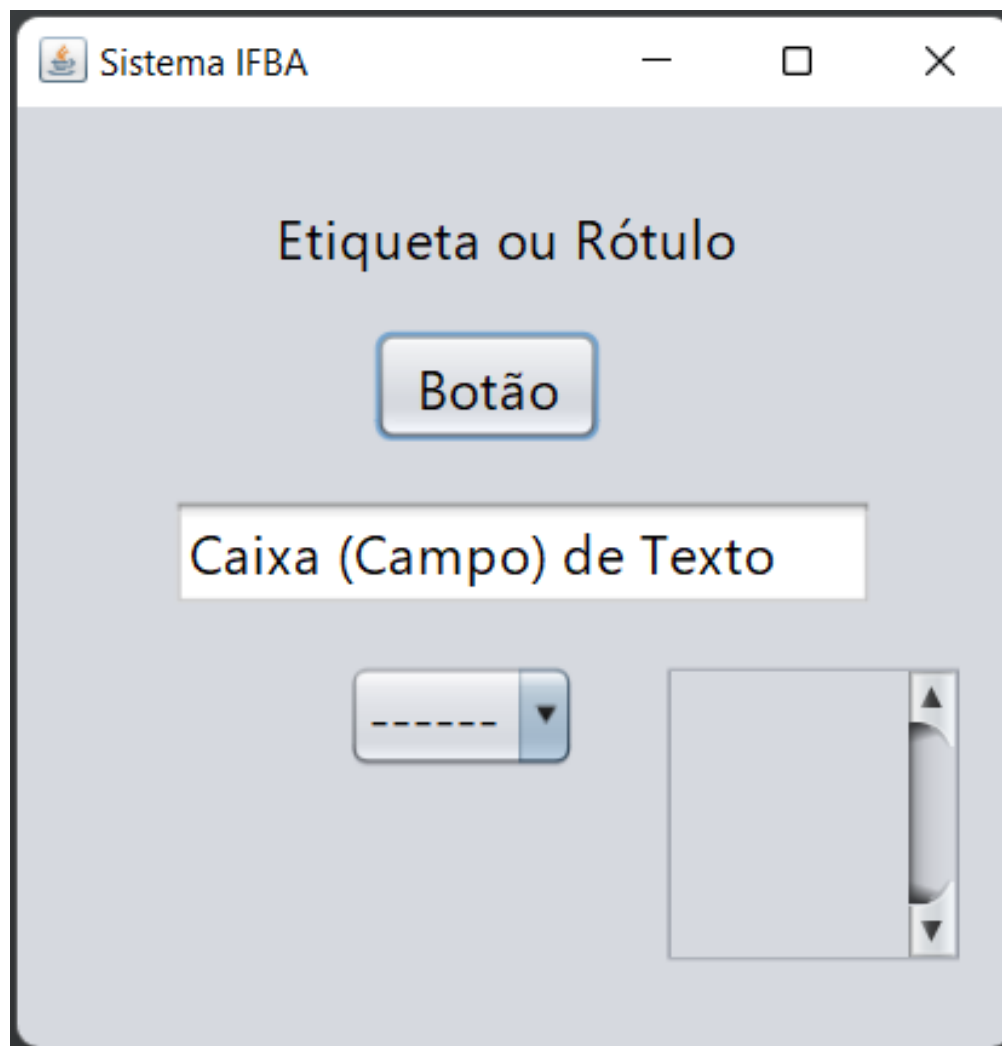


# Java Swing – Componentes

- Um **componente** da **Interface Gráfica** é um **objeto visual (Java)** que possibilita realizar a **interação com o programa** por meio do **mouse** e do **teclado**.
- Ex.: **etiquetas, botões, caixas de texto, painéis de rolagem, menus, objetos de múltipla escolha**, entre outros.



# Java Swing – Componentes



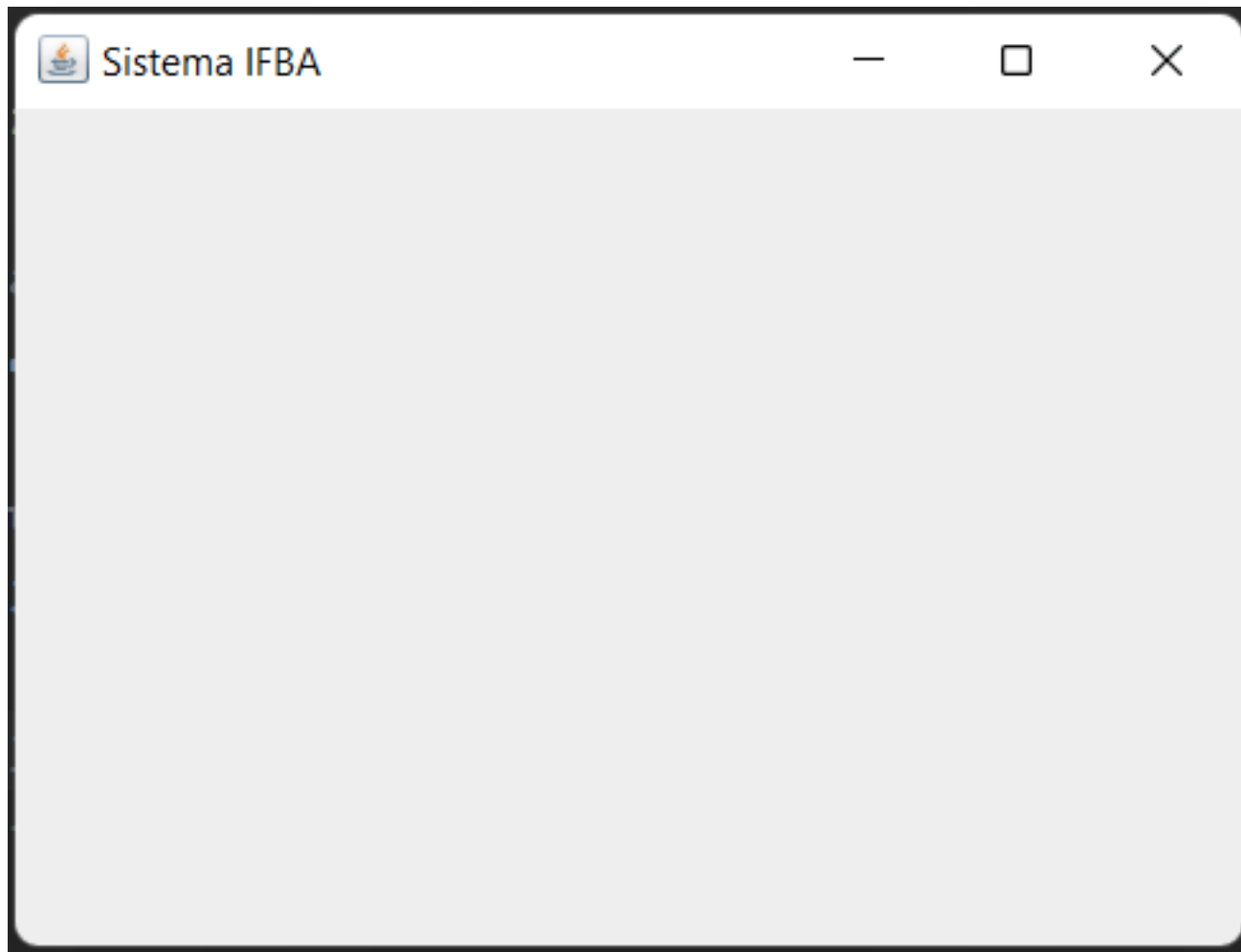
# Java Swing – JFrame

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- Para criar **Janelas** utilizaremos a classe **JFrame** disponível no pacote **swing**, a qual gera uma **janela** com **barra de título**, **bordas** e eventualmente outros **componentes visuais**.

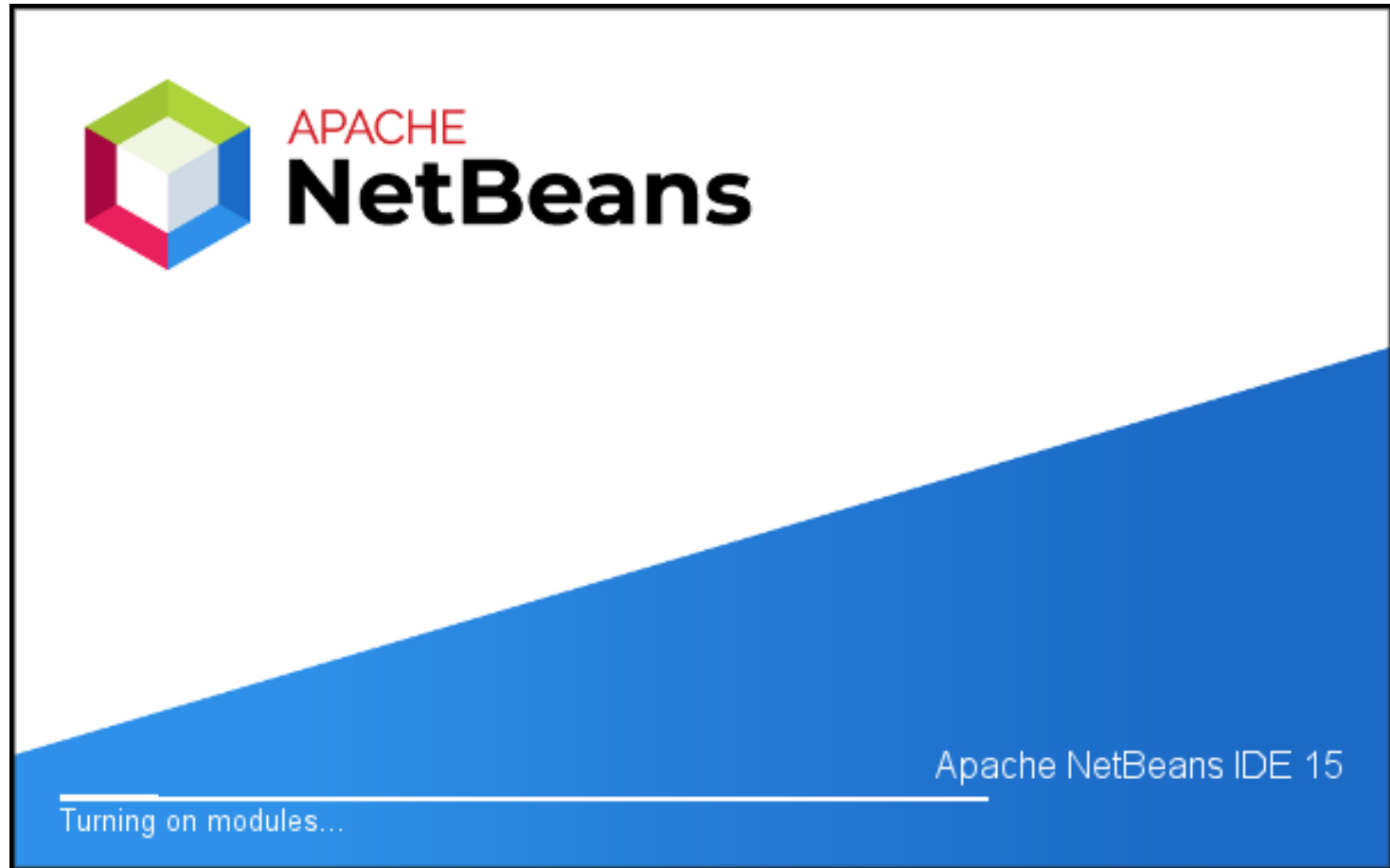


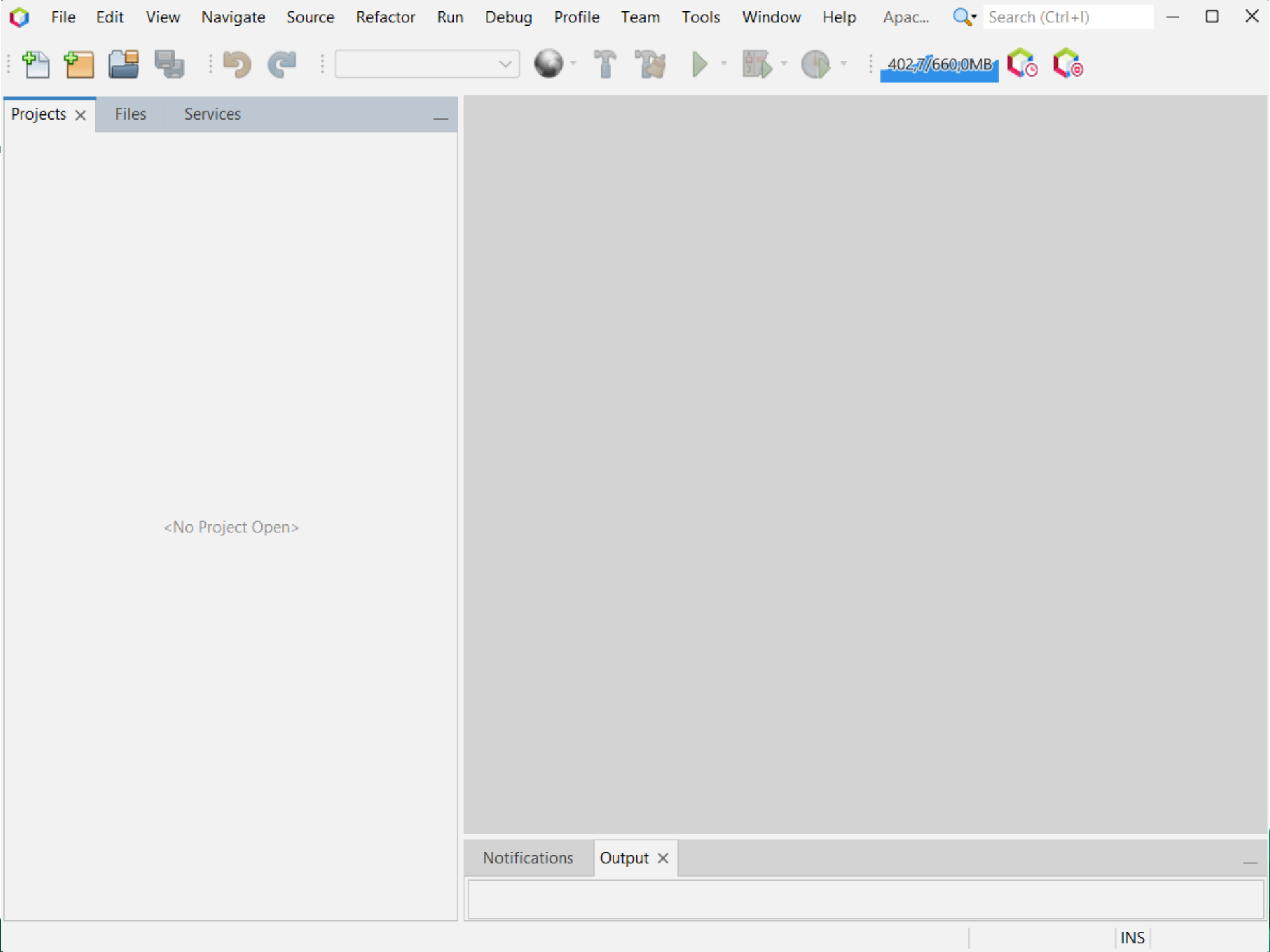
# Java Swing – JFrame



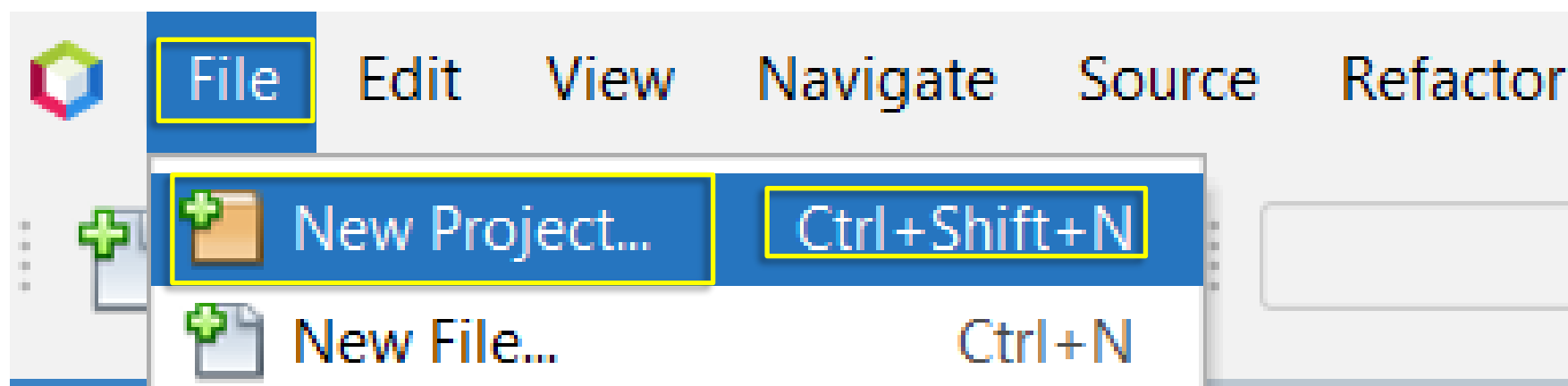


# Netbeans: IDE





# Netbeans: Novo Projeto



# Netbeans: Novo Projeto

## Choose Project



Filter:

### Categories:

- Java with Maven
- Java with Gradle
- Java with Ant
- JavaFX
- Java Web

### Projects:

- Java Application
- Java Class Library
- Java Project with Existing Sources
- Java Modular Project
- Java Free-Form Project



# Netbeans: Novo Projeto

**Name and Location**

Project Name:

Project Location:

Project Folder:

☐ Use Dedicated Folder for Storing Libraries

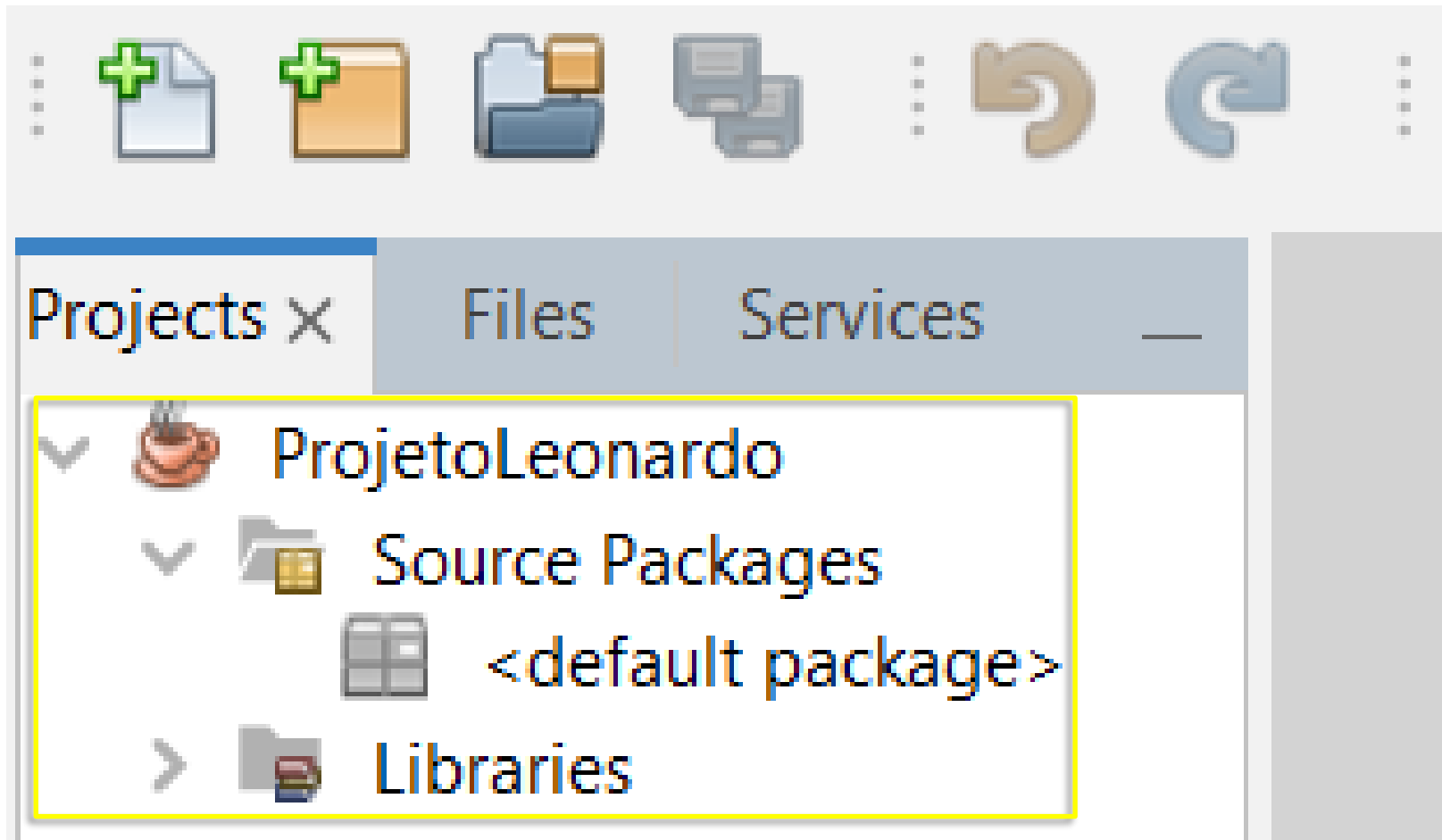
Libraries Folder:

Different users and projects can share the same compilation libraries (see Help for details).

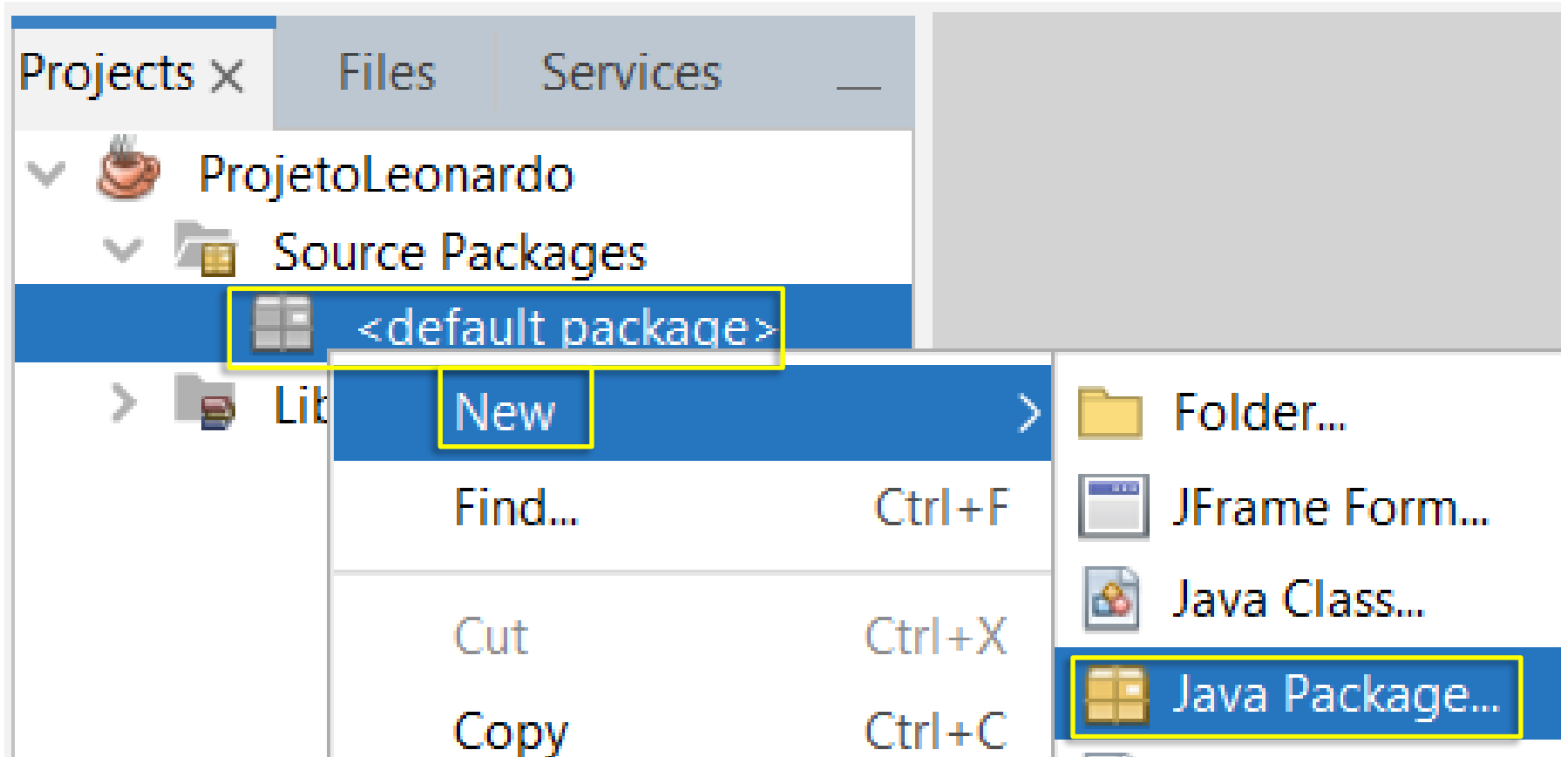
☐ Create Main Class



# Netbeans: Novo Projeto



# Netbeans: Novo Pacote



# Netbeans: Novo Pacote

## Name and Location

Package Name:

Principal

Project:

ProjetoLeonardo

Location:

Source Packages

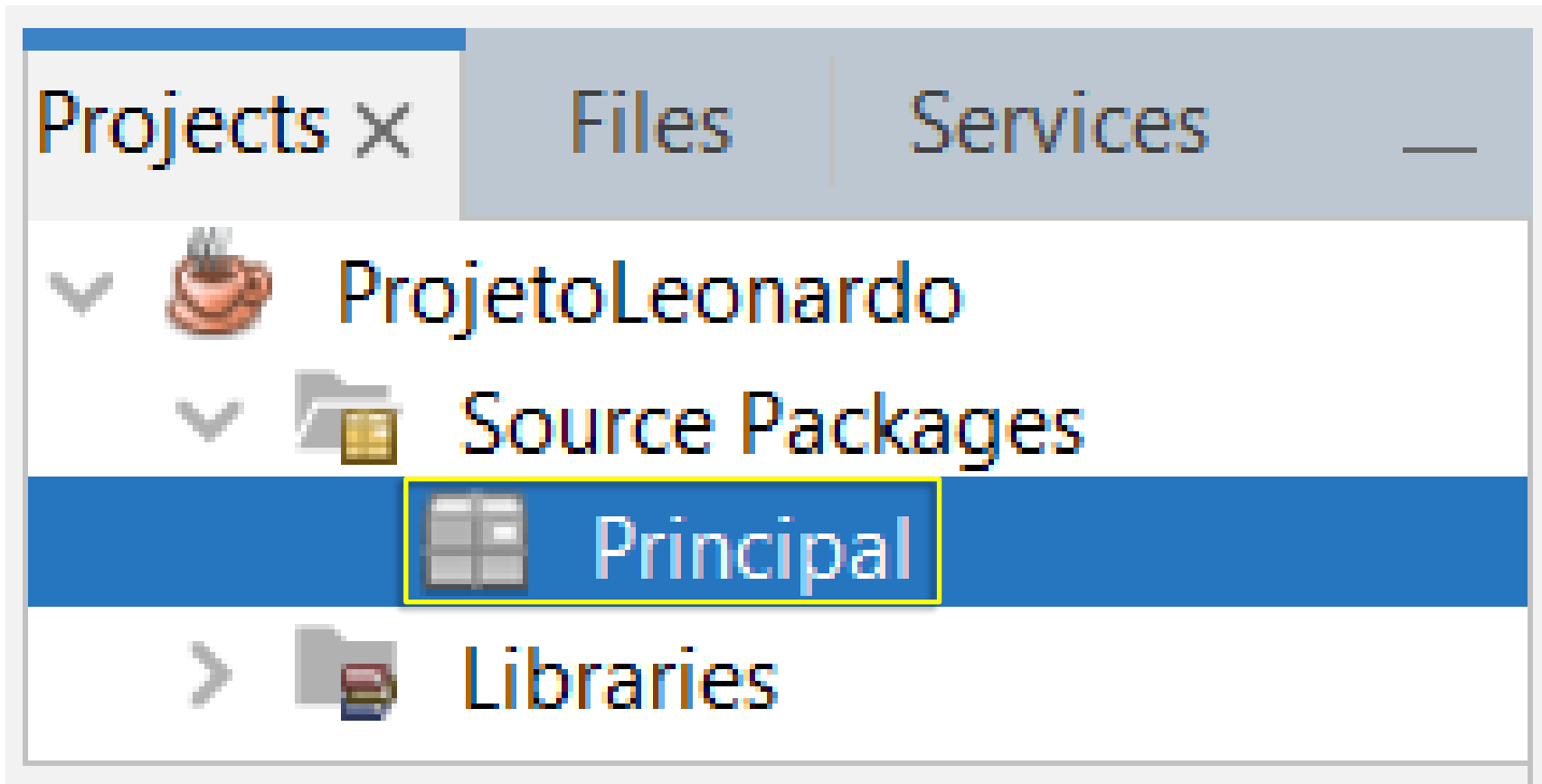
Created Folder:

.:\\Users\\leomi\\Documents\\NetBeansProjects\\ProjetoLeonardo\\src\\Principal

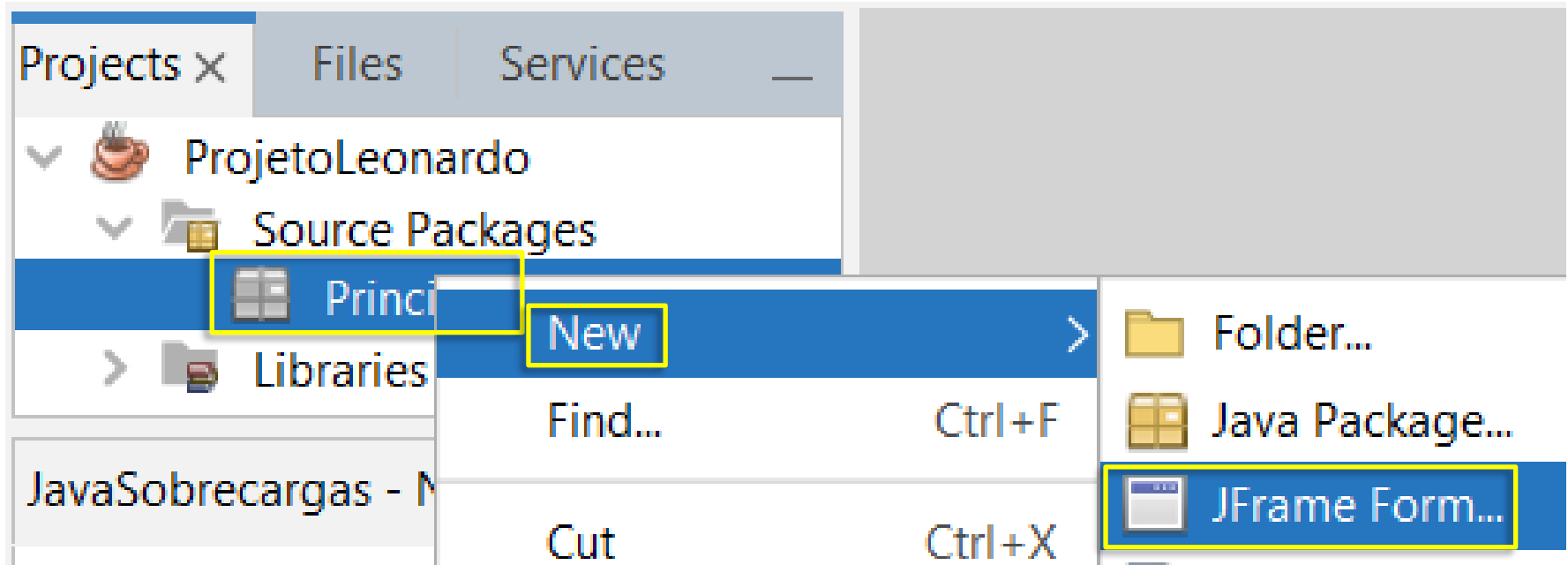




# Netbeans: Novo Pacote



# Netbeans: Nova Janela (JFrame)



# Netbeans: Nova Janela (Jframe)

## Name and Location

Class Name:

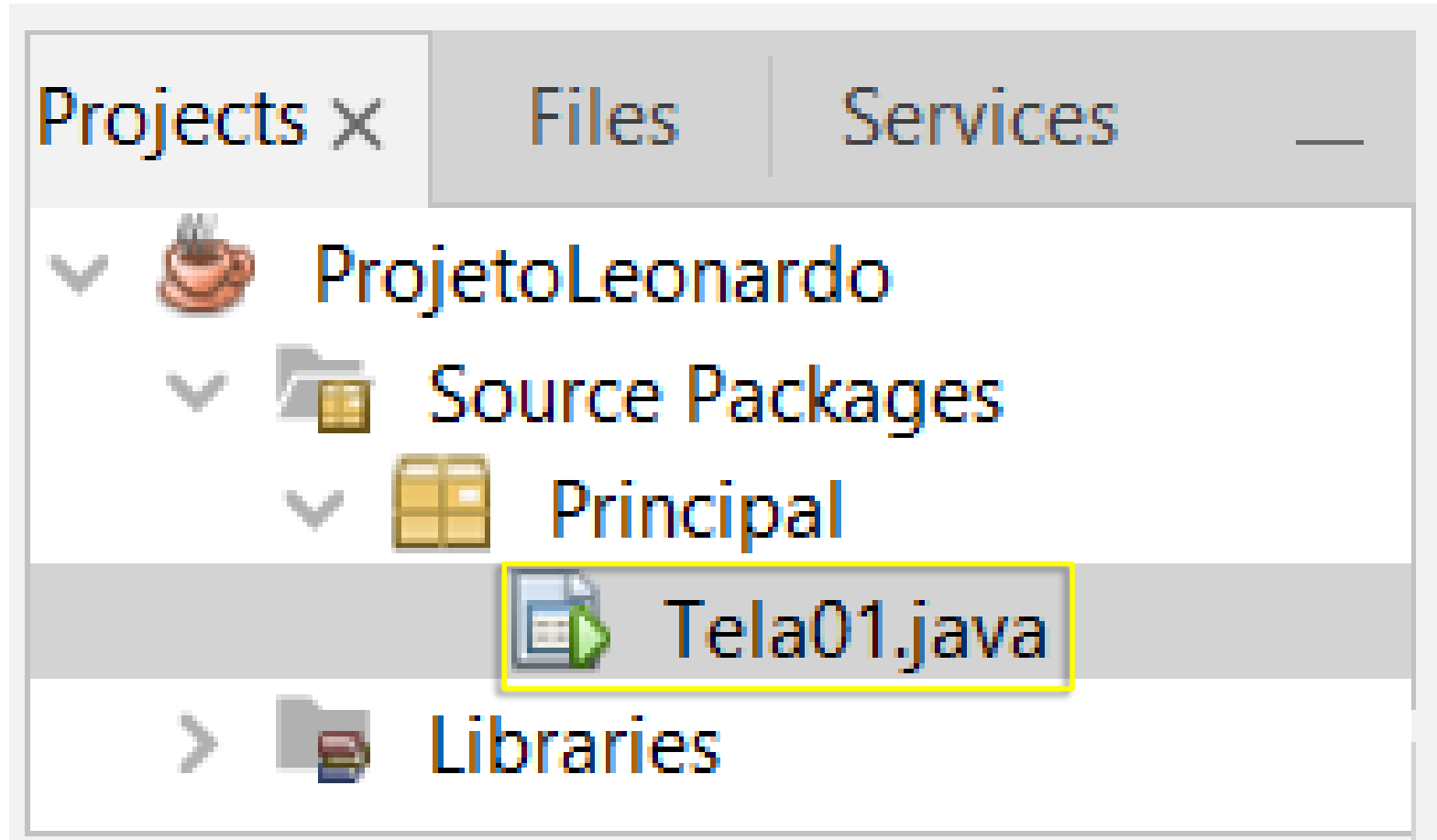
Project:

Location:

Package:



# Netbeans: Nova Janela (JFrame)



Projects x Files Services


- ProjetoLeonardo
  - Source Packages
    - Principal
      - Tela01.java
  - Libraries

[JFrame] - Navigator x

- Form Tela01
  - Other Components
    - [JFrame]

Tela01.java x

Source Design History



Palette x

Swing Containers

- Panel
- Tabbed Pane
- Split Pane
- Scroll Pane
- Tool Bar
- Desktop Pane
- Internal Frame

[JFrame] - Properties x

Properties Events

Code

Properties

defaultCloseOperation	EXIT_ON...	...
title		...

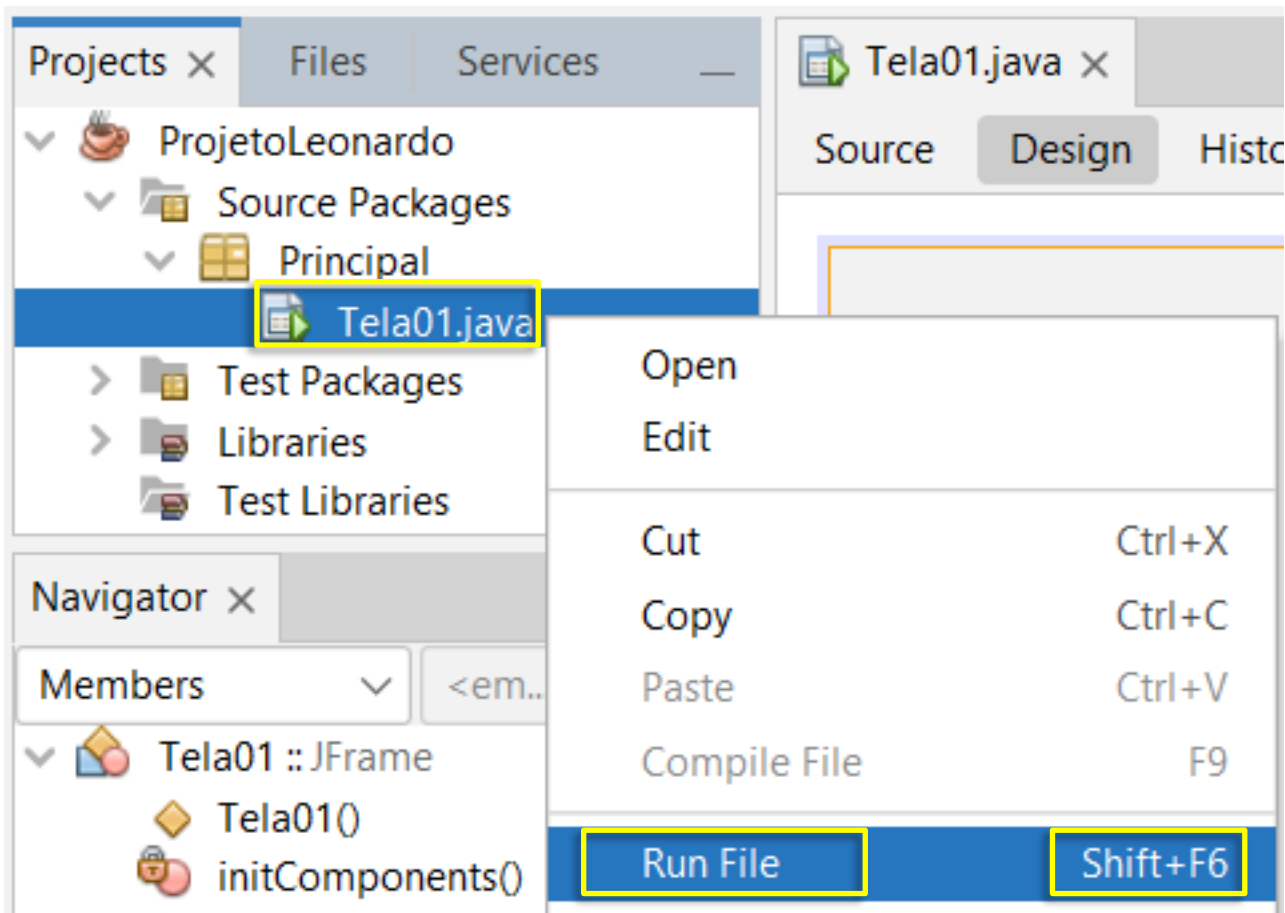
Other Properties

alwaysOnTop	<input type="checkbox"/>	...
alwaysOnTopSupport	<input checked="" type="checkbox"/>	...

[JFrame] ?

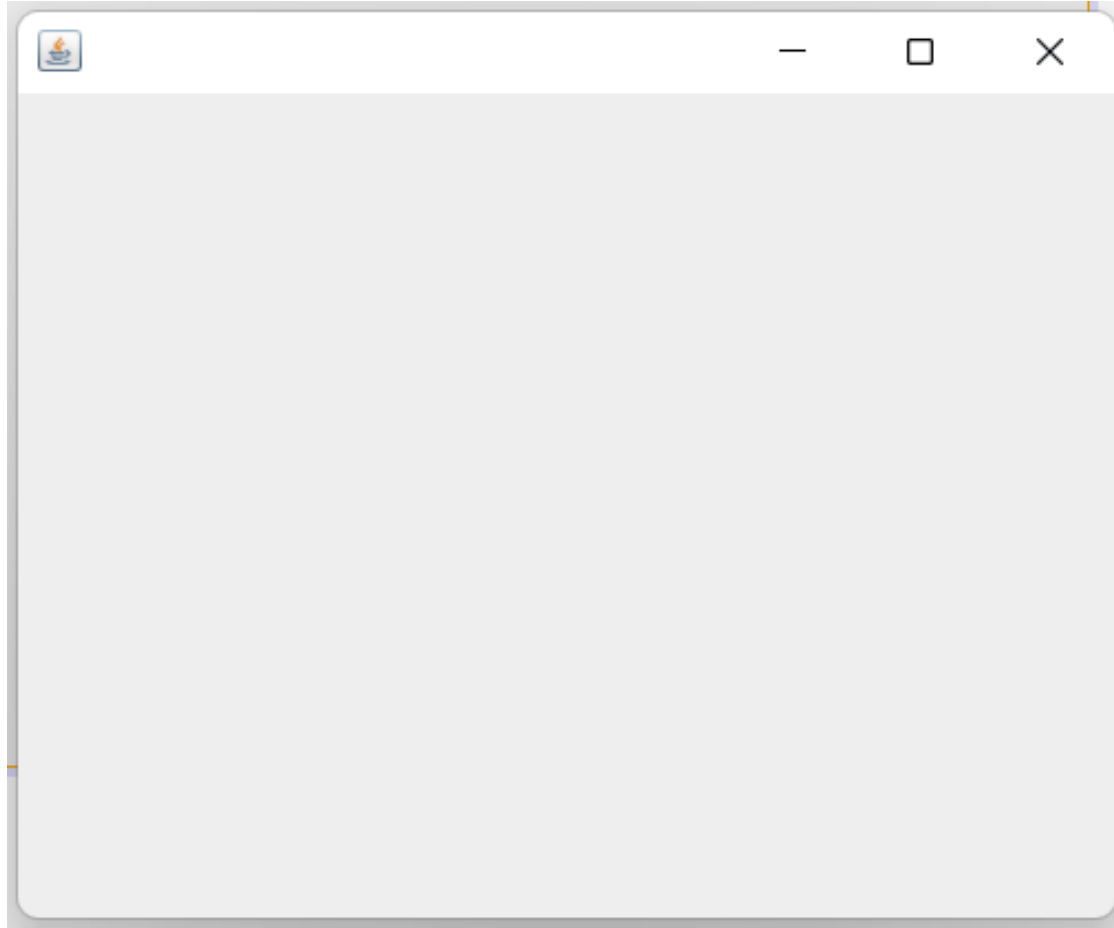
Notifications Output x

# Netbeans: Executando Janela (JFrame)



# Netbeans: Executando Janela (JFrame)

---





```
1 package Principal;
```

```
2  
3 public class Tela01 extends javax.swing.JFrame {
```

```
4  
5     public Tela01() {  
6         initComponents();  
7     }  
8
```

```
9 + Generated Code
```

```
27  
28     public static void main(String args[]) {  
29         new Tela01().setVisible(true);  
30     }  
31
```

```
32 // Variables declaration - do not modify  
33 // End of variables declaration  
34
```

```
}
```





```
1 package Principal;
```

Pacote

```
2  
3 public class Tela01 extends javax.swing.JFrame {
```

Construtor

Classe

Herança

```
4 public Tela01() {  
5     initComponents();  
6 }  
7
```

Chamada de método que  
inicializa componentes

Generated Code

Inicialização e configuração de  
componentes

Método estático "main"

```
27  
28 public static void main(String args[]) {  
29     new Tela01().setVisible(true);  
30 }  
31
```

Declaração  
de variáveis

Cria objeto (componente) Tela01 e o torna visível

```
32 // Variables declaration - do not modify  
33 // End of variables declaration  
34 }
```

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

```
private void initComponents() {
```

```
    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
```

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

```
    getContentPane().setLayout(layout);
```

```
    layout.setHorizontalGroup(
```

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

```
            .addGap(0, 400, Short.MAX_VALUE)
```

```
    );
```

```
    layout.setVerticalGroup(
```

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

```
            .addGap(0, 300, Short.MAX_VALUE)
```

```
    );
```

```
    pack();
```

```
}// </editor-fold>
```

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

```
private void initComponents() {
```

Método

Comportamento do ícone (botão) de fechar o JFrame

```
setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
```

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

```
getContentPane().setLayout(layout);
```

```
layout.setHorizontalGroup(
```

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

```
        .addGap(0, 400, Short.MAX_VALUE)
```

```
);
```

```
layout.setVerticalGroup(
```

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

```
        .addGap(0, 300, Short.MAX_VALUE)
```

```
);
```

```
pack();
```

Layout Manager do JFrame ajusta o tamanho da tela (Frame) com base em seus componentes internos

Configurações de Layout do JFrame

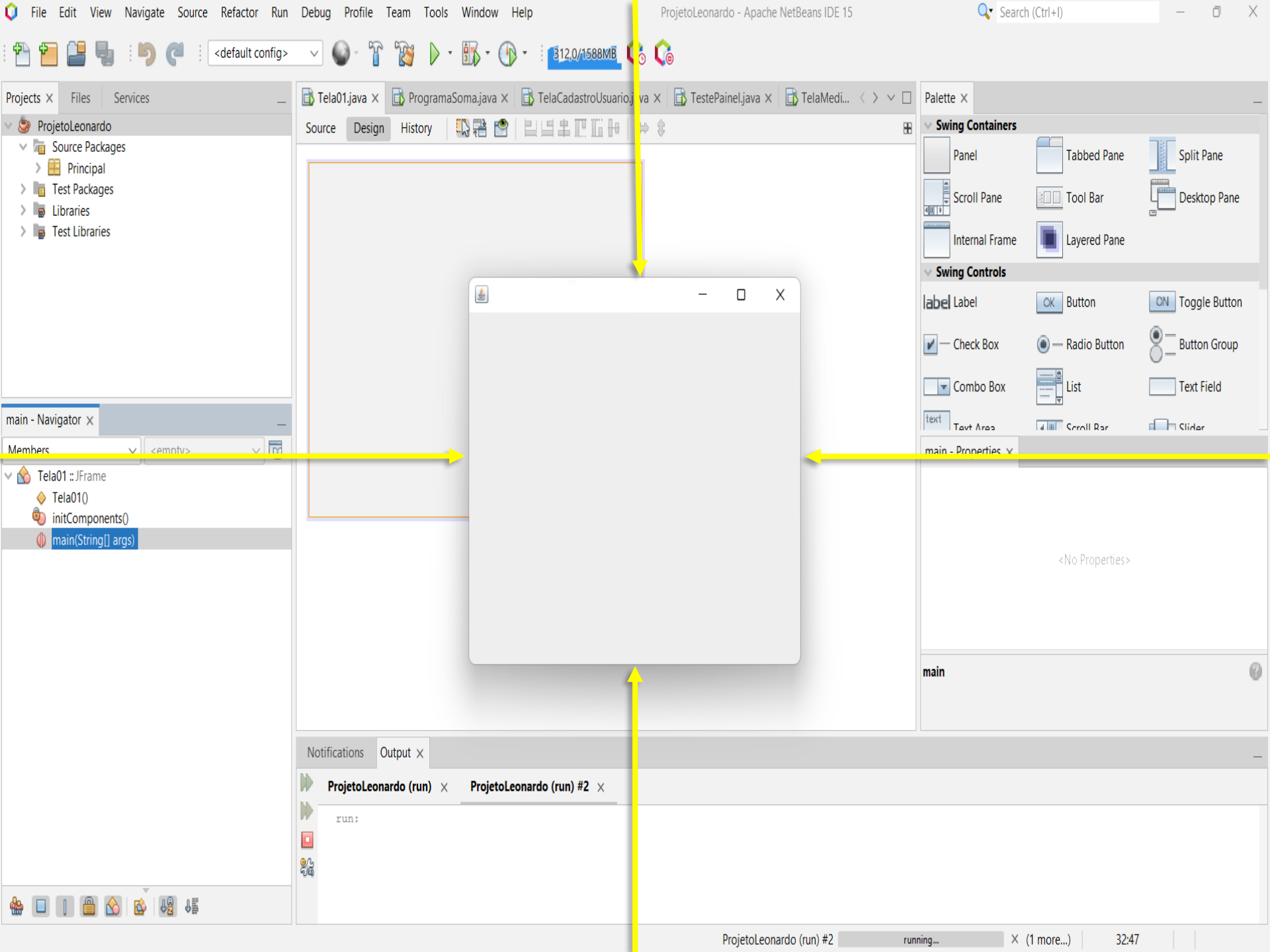
```
} // </editor-fold>
```

# Netbeans: Centralizar JFrame

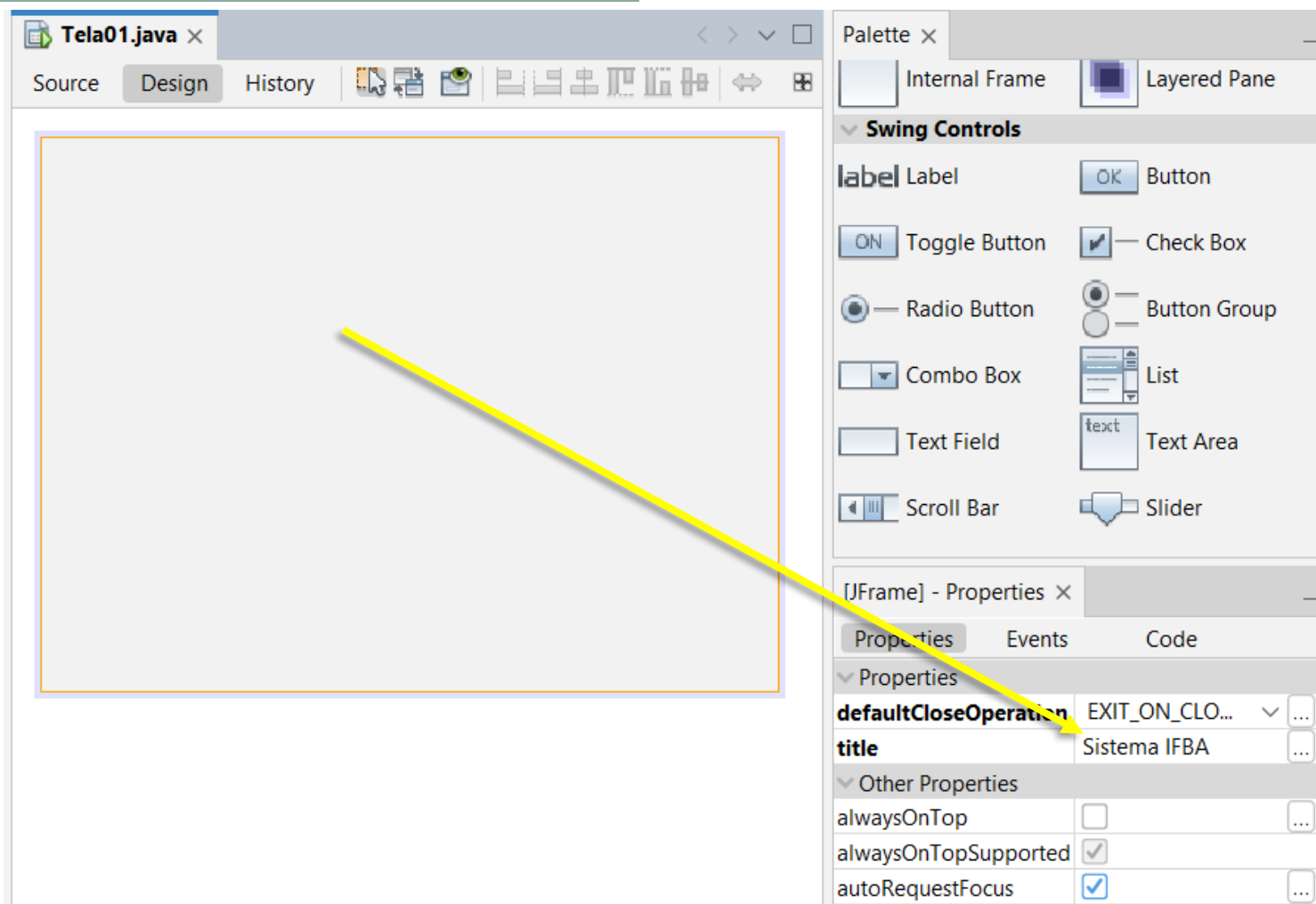
---

```
public Tela01 () {  
    initComponents () ;  
    this.setLocationRelativeTo (null) ;  
}
```

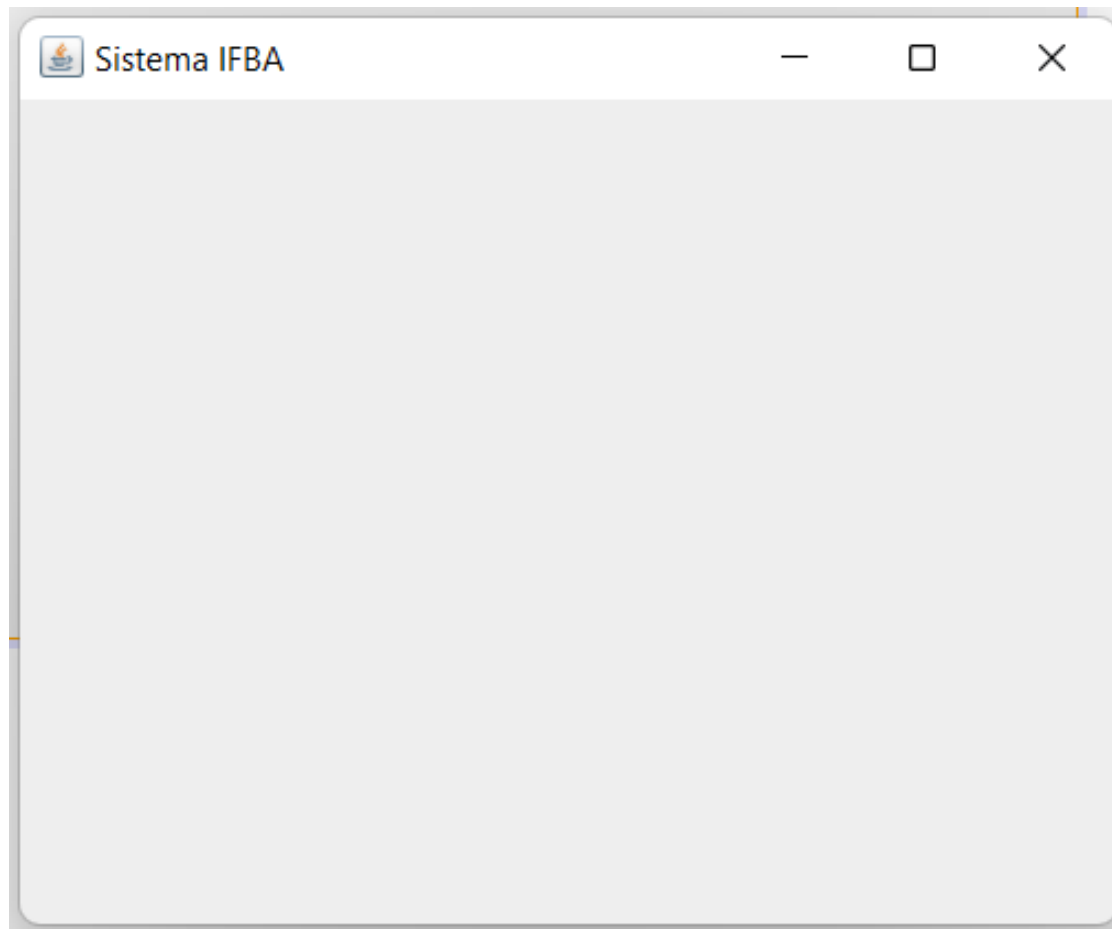




# Netbeans: Título da Janela (JFrame)



# Netbeans: Título da Janela (JFrame)



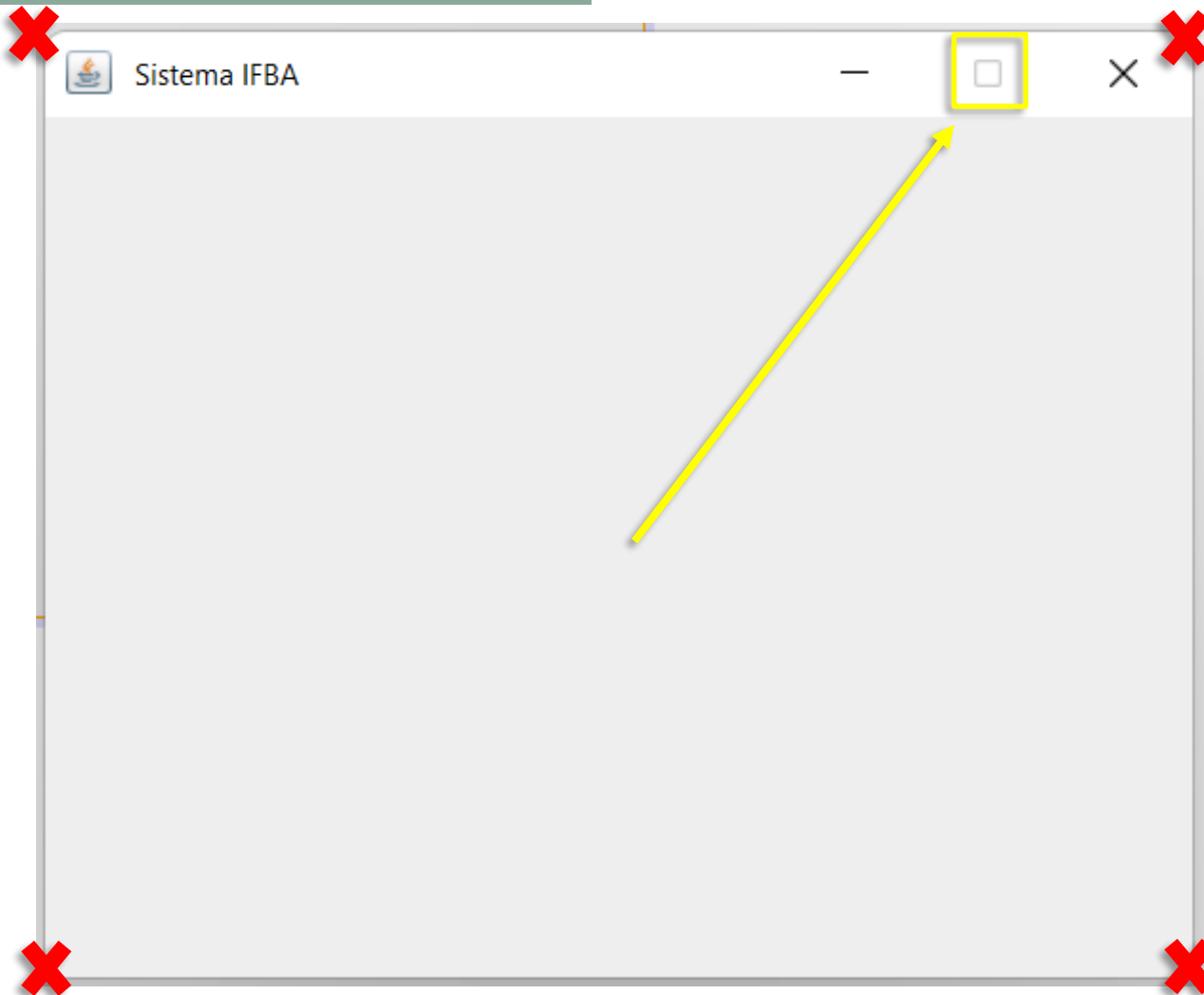
# Netbeans: Desabilitar Redimensionar

[JFrame] - Properties X

Properties	Events	Code
preferredSize	[395, 300]	...
<b>resizable</b>	<input type="checkbox"/>	...
shape	<none>	...
size	<Not Set>	False
state	0	...
type	NORMAL	...



# Netbeans: Desabilitar Redimensionar

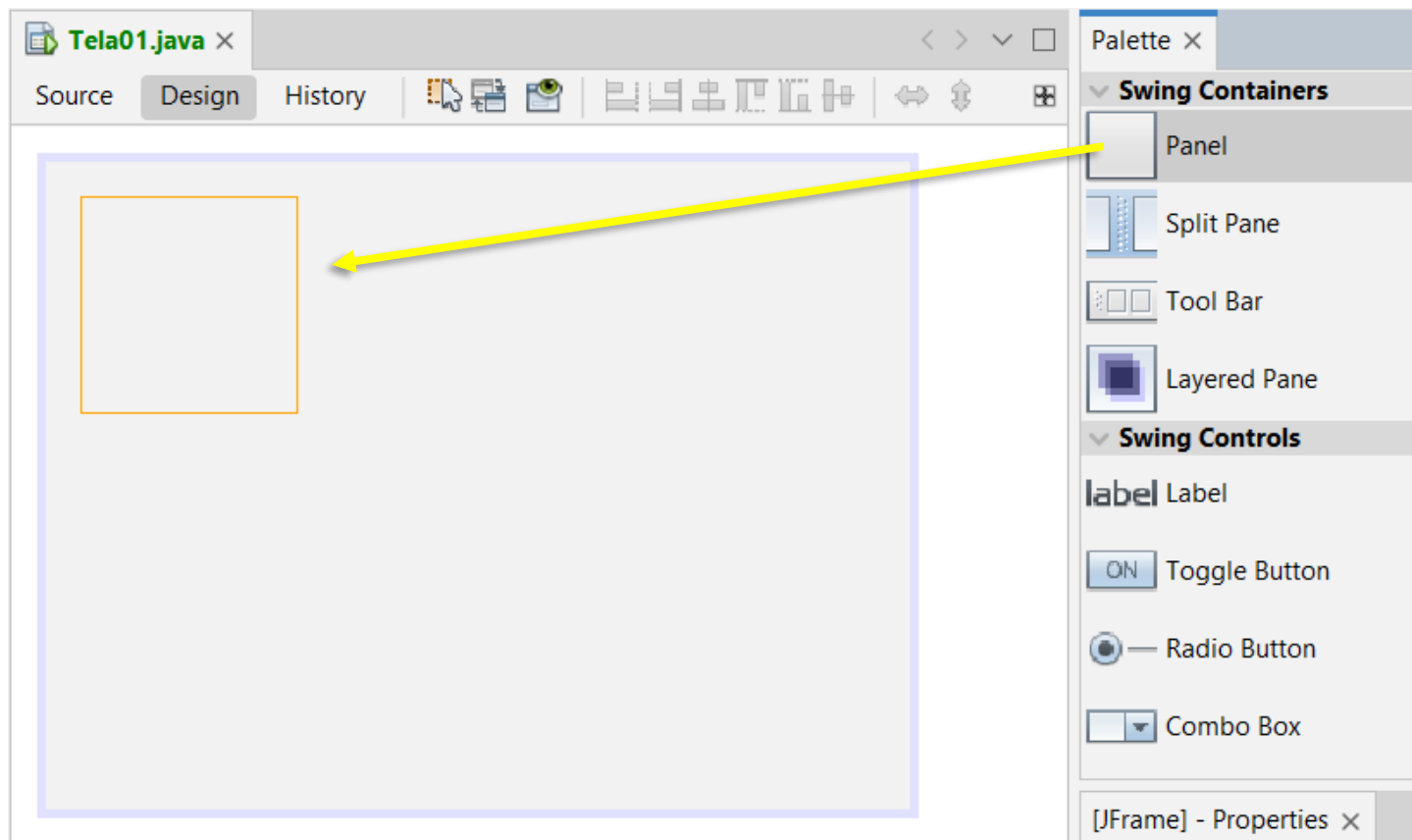


# Java Swing – JPanel

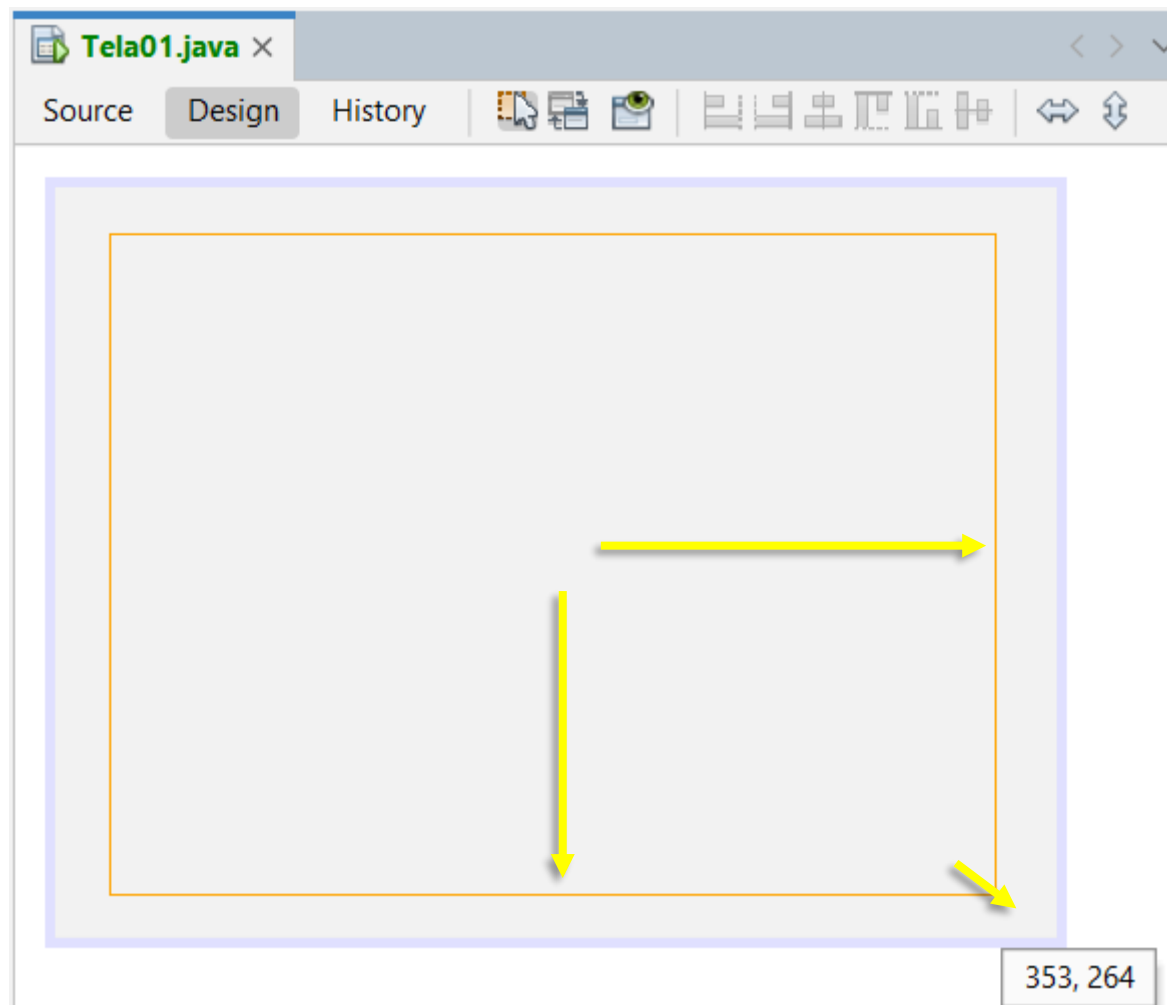
- O **JPanel** é um **contêiner flexível** no Java Swing, utilizado para **agrupar e organizar componentes** em interfaces gráficas.
- Ele **oferece opções de personalização**, como **layout e cor de fundo**, permitindo criar **interfaces atraentes e adaptáveis**.



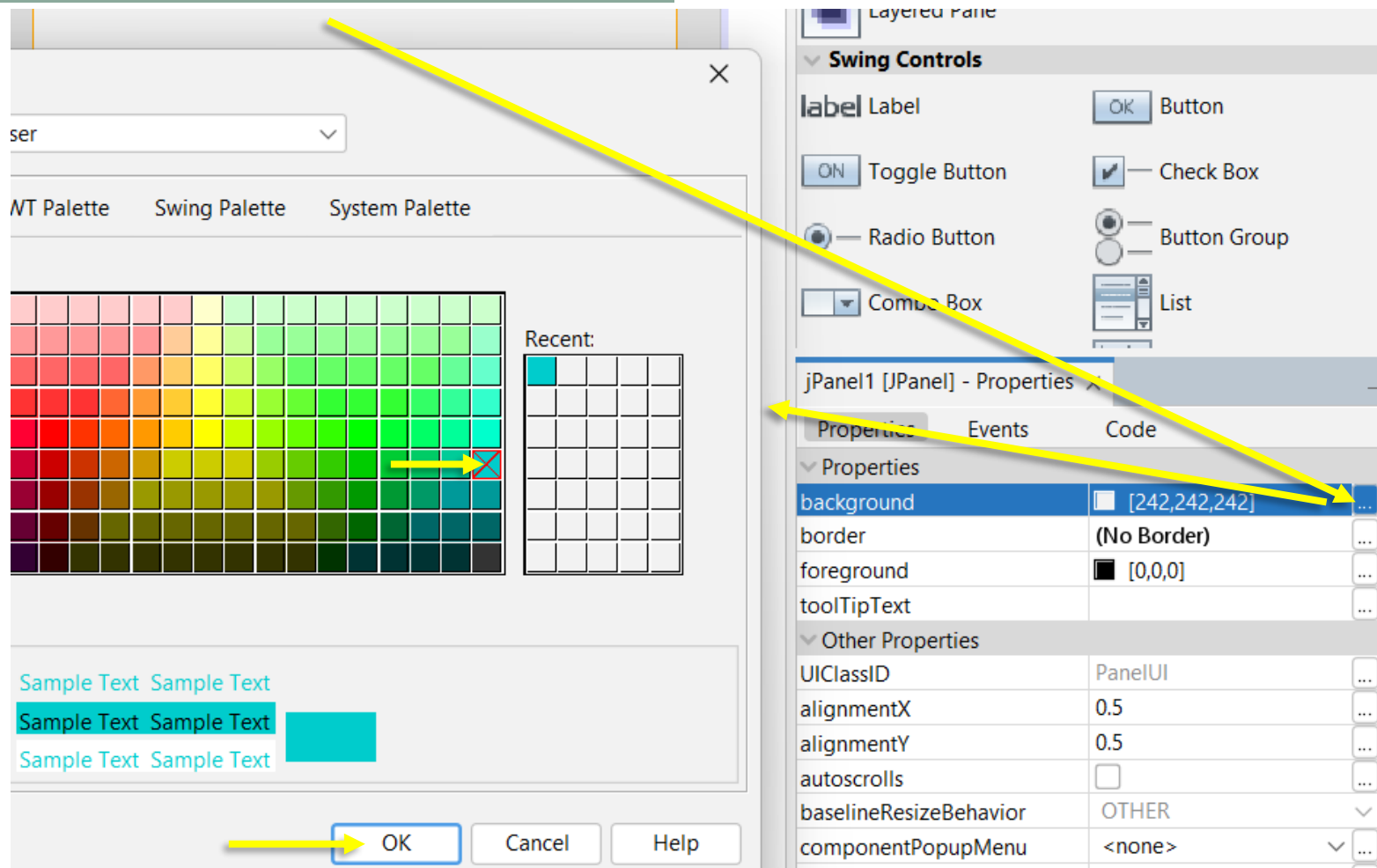
# Java Swing – JPanel - Adicionar



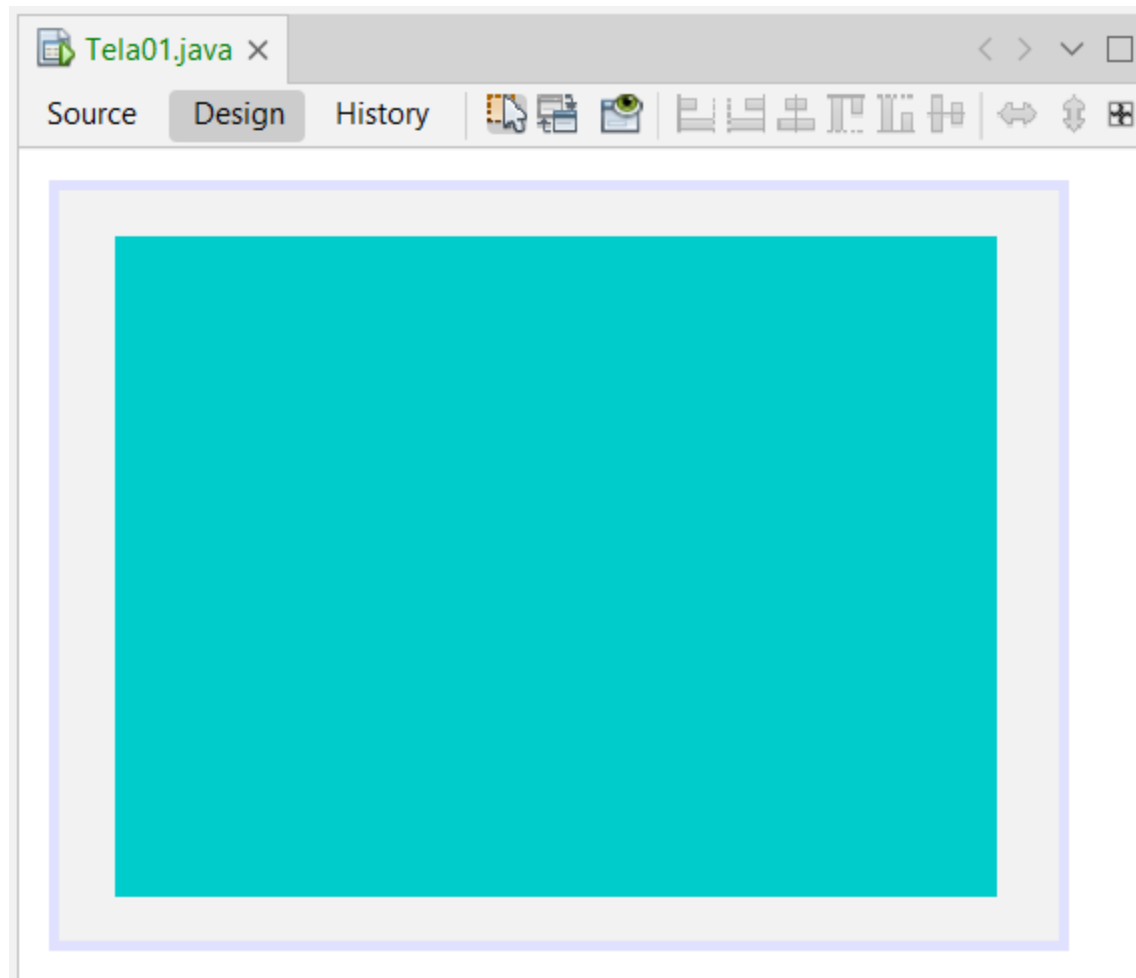
# Java Swing – JPanel - Redimensionar



# Java Swing – JPanel – Mudar Cor Fundo



# Java Swing – JPanel – Mudar Cor Fundo

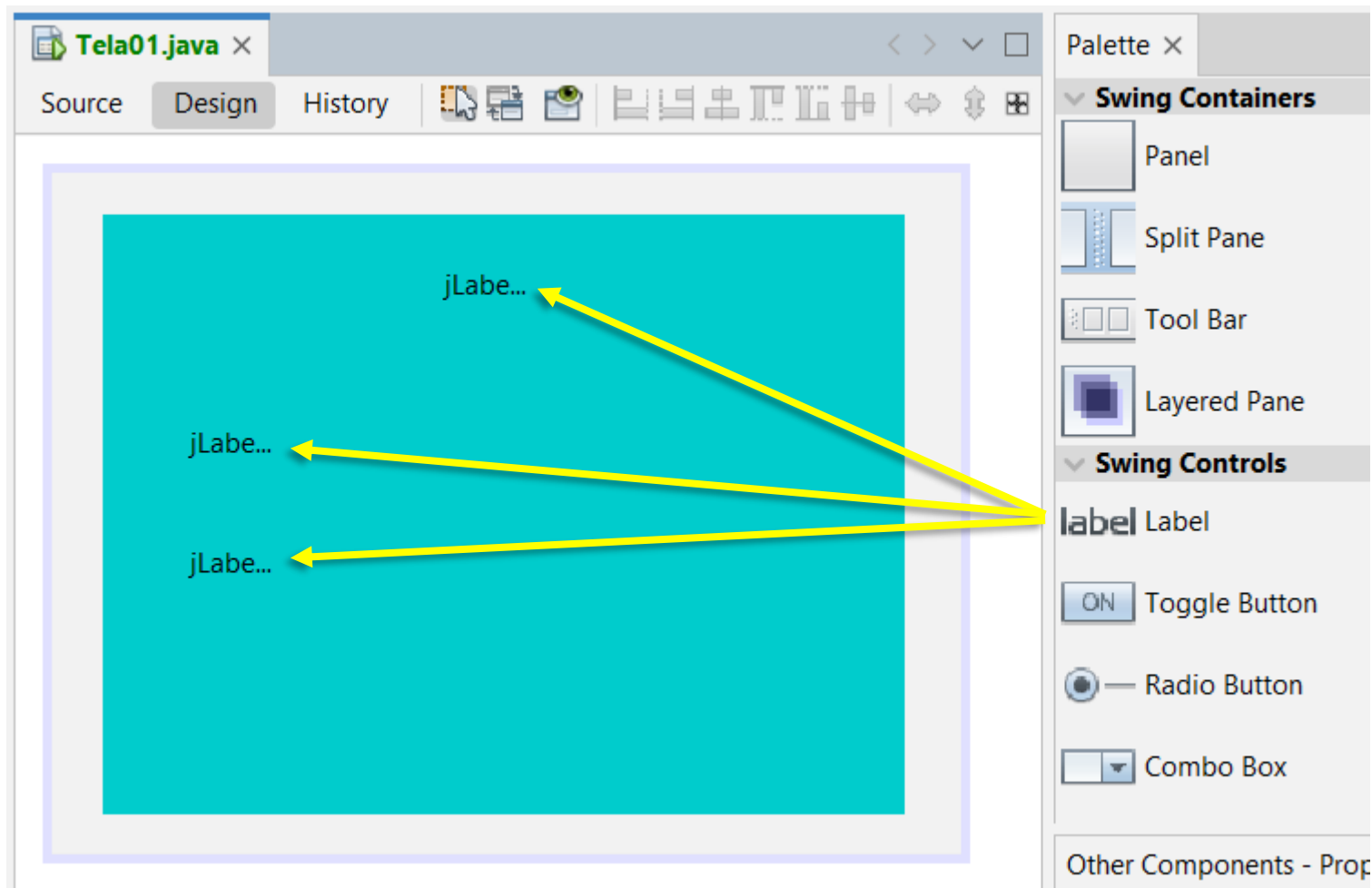


# Java Swing – JLabel

- A classe **JLabel** permite **definir um texto** que **pode ser adicionado** a um **outro componente** (frame, painel etc.).
- Podem ser definidas várias **propriedades** para esse texto, tais como **alinhamento**, **tipo de letra**, **tamanho**, **cor** etc.



# Java Swing – JLabel – Adicionar





# Java Swing – JLabel – Editor Texto

The screenshot shows the Java Swing IDE with the following components:

- Design View:** A light blue rectangular area representing a window. Inside, there is a grey rectangular component labeled "Tela 01". Below it, there are two labels "jLabe..." (partially visible).
- Palette:** A panel on the right side of the IDE showing various Swing components. It is divided into two sections:
  - Swing Containers:** Panel, Split Pane, Tool Bar, Layered Pane, Tabbed Pane, Scroll Pane, Internal Frame.
  - Swing Controls:** label Label, Button (with an "OK" button icon).
- Properties Window:** A window titled "jLabel1 [JLabel] - Properties" is open. It has three tabs: Properties, Events, and Code. The Properties tab is selected, showing the following properties:

Properties	Events	Code
icon		<none>
labelFor		<none>
<b>text</b>		Tela 01
toolTipText		

A yellow arrow points from the "Tela 01" text in the Properties window to the "Tela 01" component in the Design view.



# Java Swing – JLabel – Editor Texto

The screenshot shows the Java Swing IDE with the file `Tela01.java` open. The Design view is active, showing a cyan background with a gray rectangular area containing a JLabel component. The JLabel is labeled "Mens" and has a yellow border. A yellow arrow points from the "text" property in the Properties window to the text "Mensagem 1:" in the design view.

**Palette**

- Swing Containers**
  - Panel
  - Split Pane
  - Tool Bar
  - Layered Pane
  - Tabbed Pane
  - Scroll Pane
  - Internal Frame
- Swing Controls**
  - label Label
  - OK Button

**jLabel2 [JLabel] - Properties**

Properties	Events	Code
icon		<none>
labelFor		<none>
<b>text</b>		Mensagem 1:
<b>toolTipText</b>		



# Java Swing – JLabel – Editor Texto

The screenshot shows an IDE window titled 'Tela01.java' with tabs for Source, Design, and History. The Design tab is active, showing a visual representation of a Java Swing window. The window has a cyan background and a grey panel labeled 'Tela 0..'. Inside this panel is a vertical grey bar with two labels 'Mens...' and a wavy line. A yellow arrow points from the 'Mens...' label to the 'jLabel3 [JLabel] - Properties' window. The 'Palette' window on the right shows 'Swing Containers' and 'Swing Controls'. The 'Properties' window shows the 'text' property set to 'Mensagem 2:'.

**Swing Containers**

- Panel
- Split Pane
- Tool Bar
- Layered Pane
- Tabbed Pane
- Scroll Pane
- Internal Frame

**Swing Controls**

- label Label
- OK Button

**jLabel3 [JLabel] - Properties**

Properties	Events	Code
icon		<none>
labelFor		<none>
<b>text</b>		Mensagem 2:
toolTipText		



# Java Swing – JLabel – Aumentar Fonte

The image shows a Java Swing IDE interface with a yellow arrow pointing from a JLabel component in the design view to the 'jLabel1 [JLabel] - font' dialog box. The dialog box has a title bar with a close button. Below the title bar, it says 'Set JLabel1's font property using: Default editor'. There is a checkbox 'Derive the font from the default font' which is unchecked. Below this are three columns: 'Font:', 'Font Style:', and 'Size:'. The 'Font:' column has a list box with 'Segoe UI' selected. The 'Font Style:' column has a list box with 'Plain' selected. The 'Size:' column has a list box with '24' selected. Below these columns is a 'Preview' section with the text 'The quick brown fox jumps over the lazy dog'. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons. A yellow arrow points from the 'OK' button to the 'jLabel1 [JLabel] - Properties' window. The 'jLabel1 [JLabel] - Properties' window has tabs for 'Properties', 'Events', and 'Code'. The 'Properties' tab is active, showing a table of properties. The 'font' property is highlighted in blue, and its value is 'Segoe UI 12 Plain'. A yellow arrow points from the 'font' property value to the 'jLabel1 [JLabel] - font' dialog box.

**jLabel1 [JLabel] - font**

Set **jLabel1's font** property using: Default editor

☐ Derive the font from the default font

Font:	Font Style:	Size:
Segoe UI	Plain	24
Segoe Print	Plain	14
Segoe Script	Bold	18
Segoe UI	Italic	24
Segoe UI Black	Bold Italic	36

Preview  
The quick brown fox jumps over the lazy dog

OK Cancel Help

**jLabel1 [JLabel] - Properties**

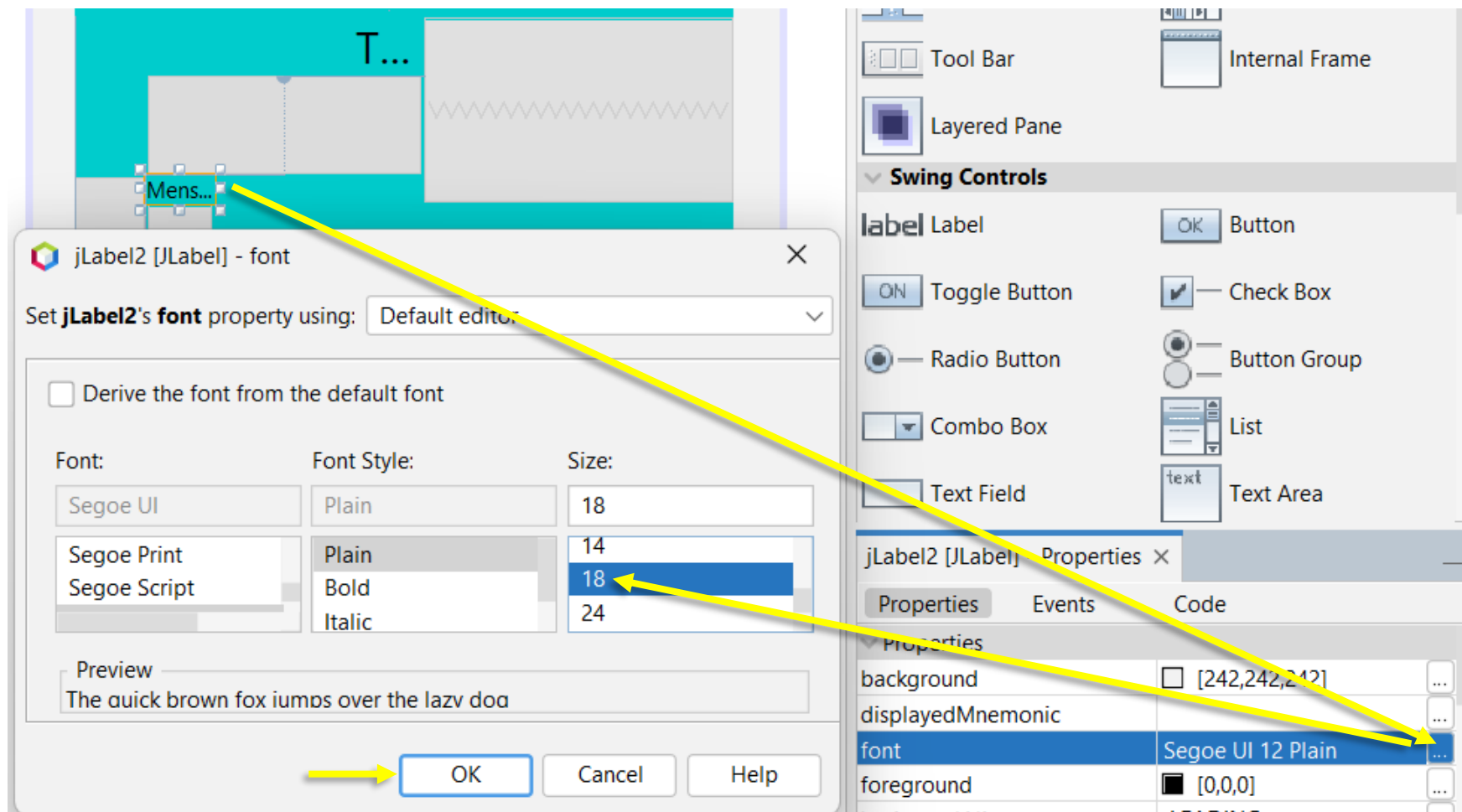
Properties Events Code

Properties

background	[242,242,242]
displayedMnemonic	
font	Segoe UI 12 Plain
foreground	[0,0,0]



# Java Swing – JLabel – Aumentar Fonte



# Java Swing – JLabel – Aumentar Fonte

The image shows a Java Swing IDE interface with two main windows. The top window is a preview of a JLabel component with the text "Mens...". Below it is a dialog box titled "jLabel3 [JLabel] - font". The dialog box has a dropdown menu set to "Default editor". It contains a checkbox "Derive the font from the default font" which is unchecked. Below this are three columns: "Font:", "Font Style:", and "Size:". The "Font:" column has a list with "Segoe UI" and "Segoe Print". The "Font Style:" column has a list with "Plain" and "Bold". The "Size:" column has a list with "18" and "24". The "18" option is selected. Below these columns is a "Preview" section with the text "The quick brown fox jumps over the lazy dog". At the bottom of the dialog box are three buttons: "OK", "Cancel", and "Help". A yellow arrow points from the "OK" button to the "font" property in the "jLabel3 [JLabel] - Properties" window. The "jLabel3 [JLabel] - Properties" window has three tabs: "Properties", "Events", and "Code". The "Properties" tab is active. It shows a list of properties: "background", "DisplayedMnemonic", "font", "foreground", "horizontalAlignment", and "icon". The "font" property is selected and its value is "Segoe UI 12 Plain". A yellow arrow points from the "font" property value to the "font" property in the "jLabel3 [JLabel] - font" dialog box.

Font: Segoe UI, Segoe Print

Font Style: Plain, Bold

Size: 18, 24

Preview: The quick brown fox jumps over the lazy dog

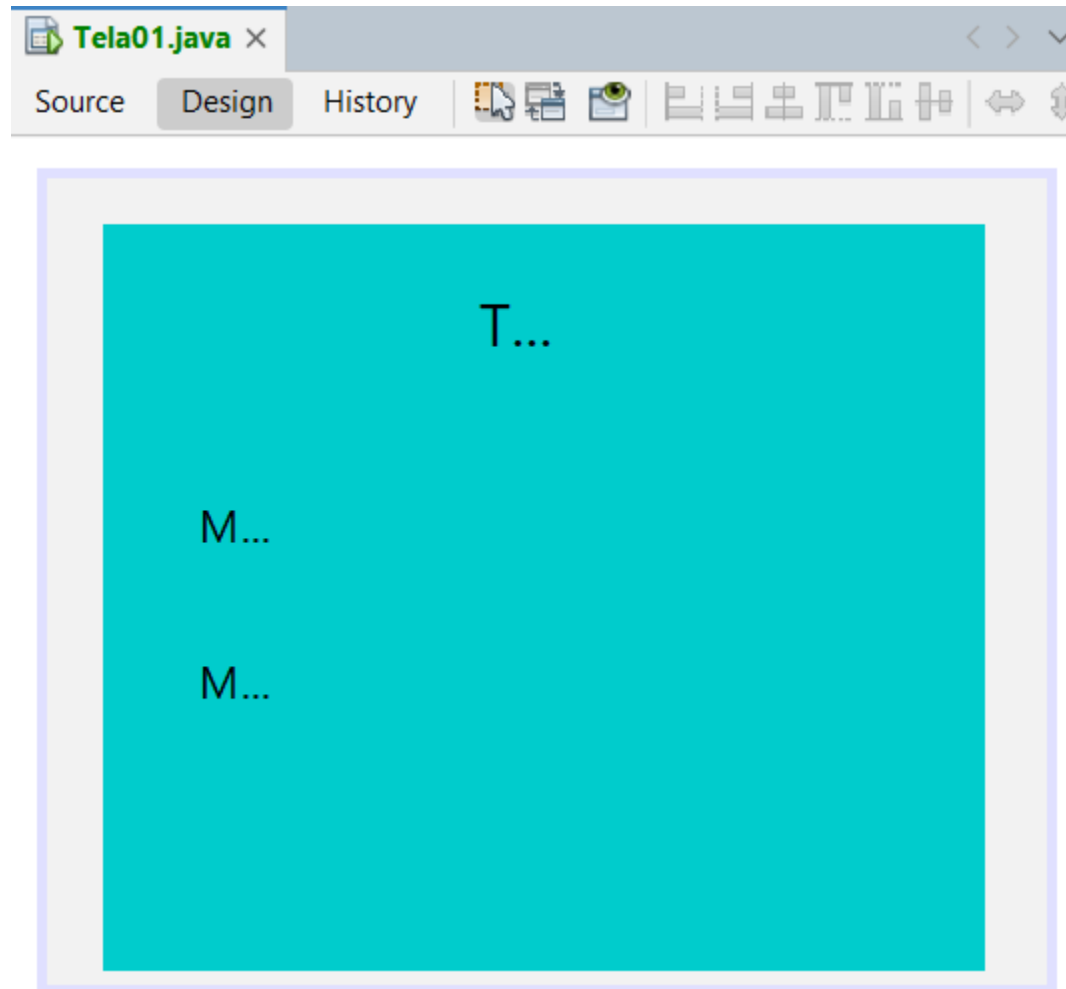
OK, Cancel, Help

Properties, Events, Code

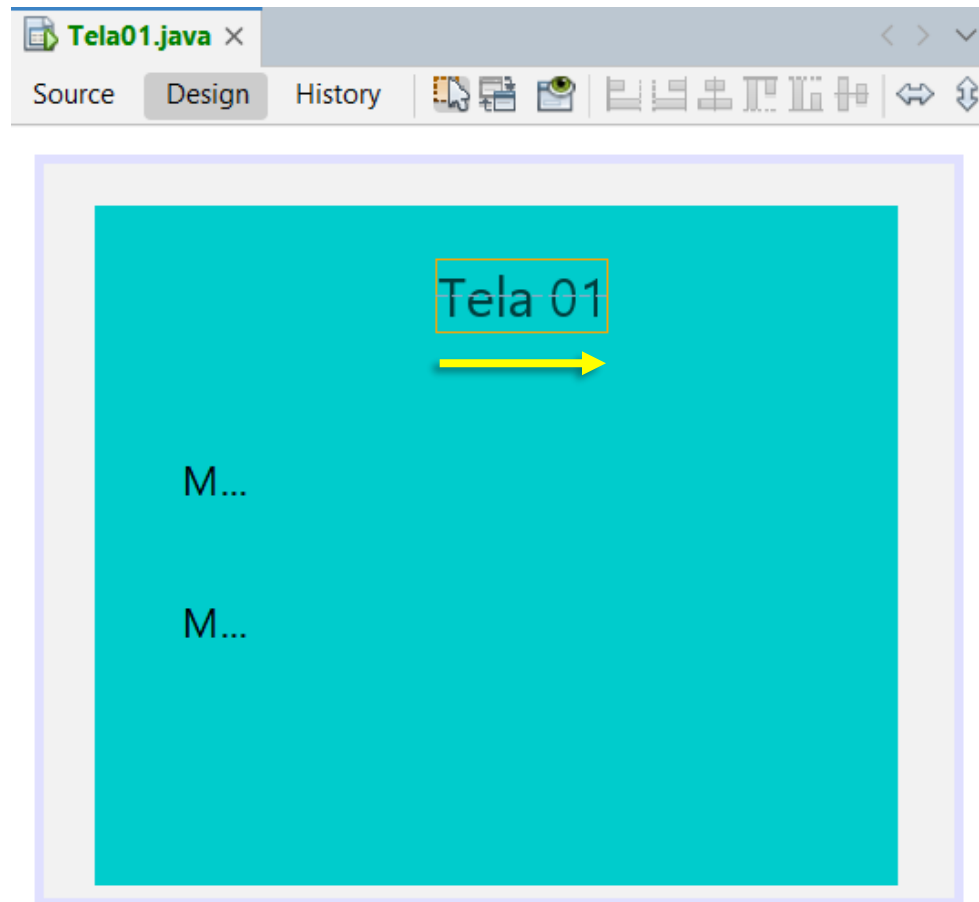
font: Segoe UI 12 Plain



# Java Swing – JLabel – Aumentar Fonte

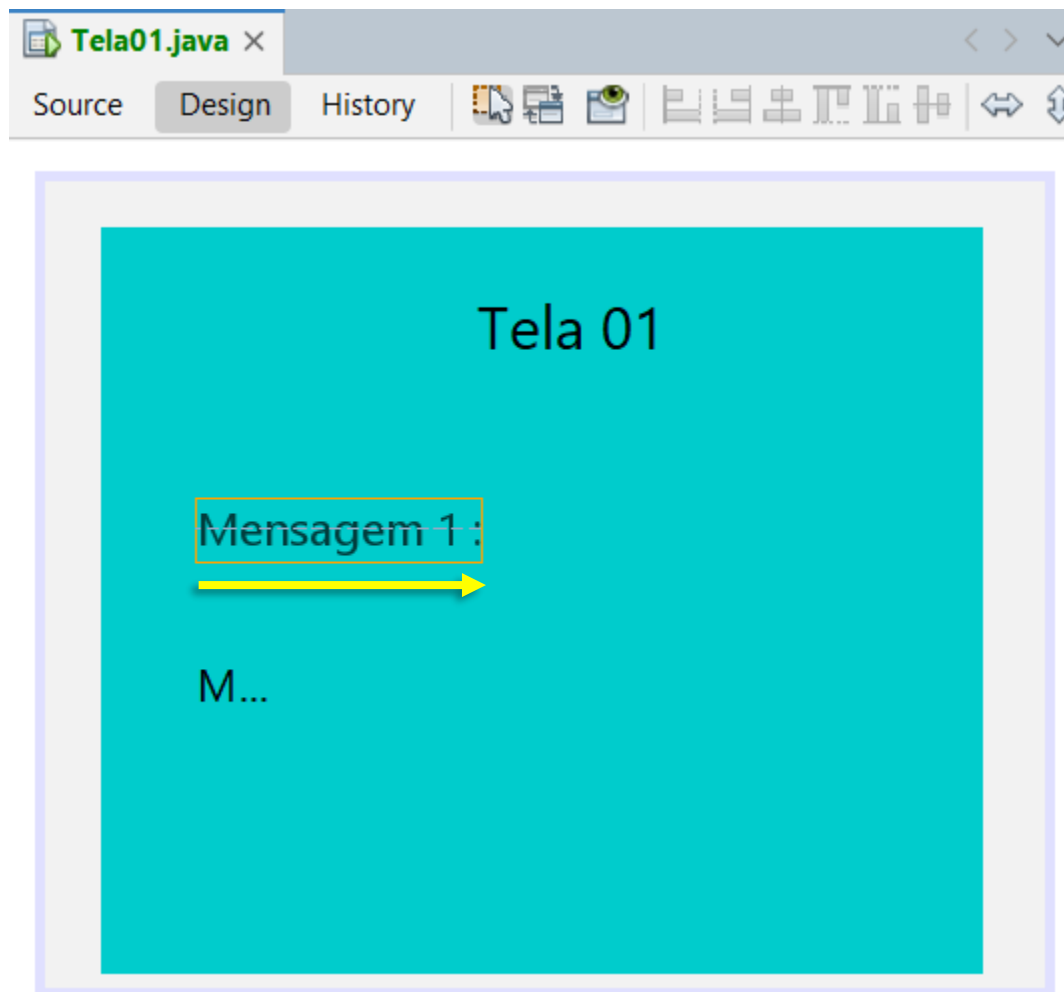


# Java Swing – JLabel – Redimensionar

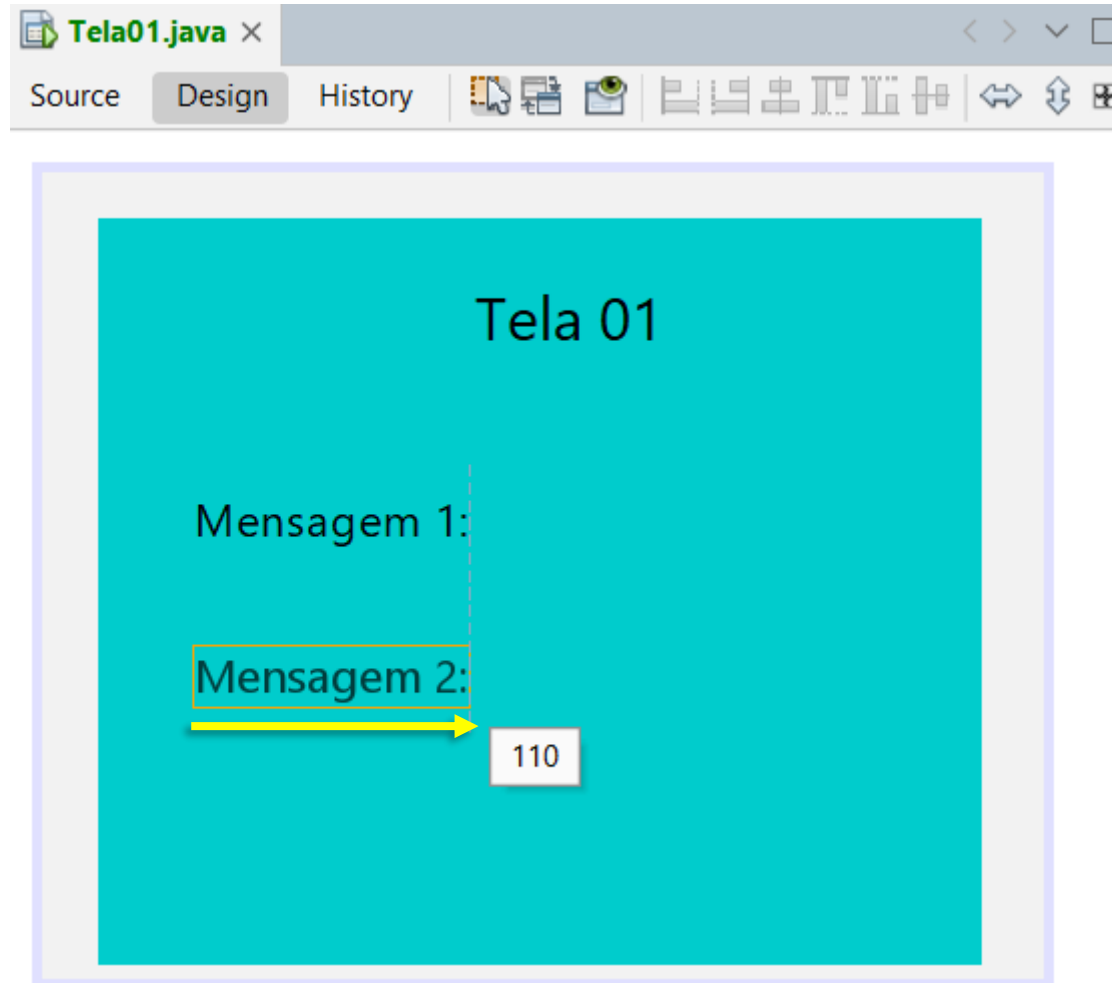




# Java Swing – JLabel – Redimensionar



# Java Swing – JLabel – Redimensionar



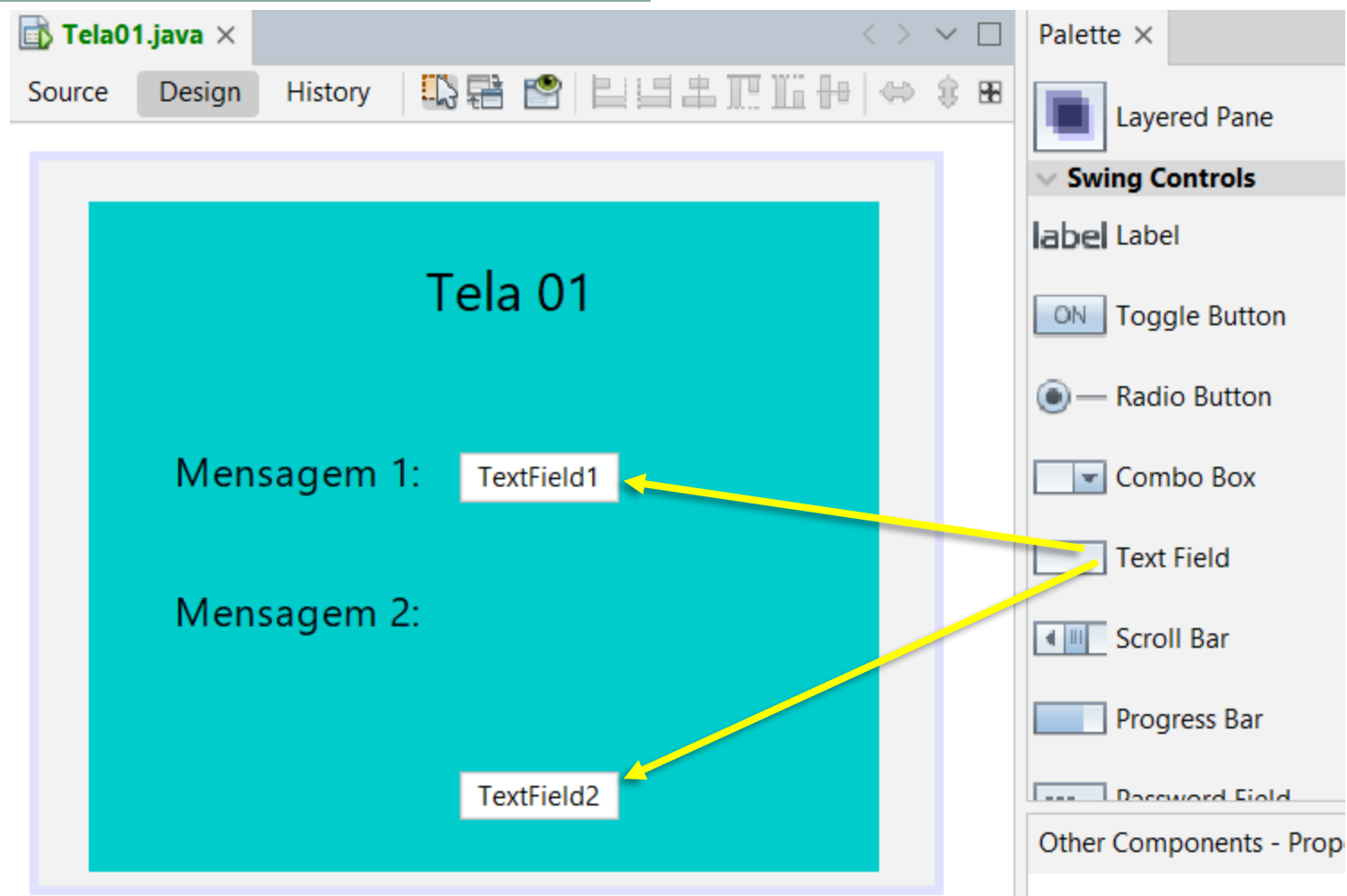
# Java Swing – JTextField

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- A classe **JTextField** permite criar uma **caixa de texto gráfica** na qual o usuário pode **digitar dados**.
- Existem **diversas propriedades** cujos **conteúdos podem ser modificados**.



# Java Swing – JTextField – Adicionar



# Java Swing – JTextField – Editor Texto

The image shows a screenshot of an IDE window titled 'Tela01.java' in Design mode. The main window contains a cyan background with the text 'Tela 01' at the top. Below it, there are two labels: 'Mensagem 1:' and 'Mensagem 2:'. A text field, labeled 'TextField2' at its bottom, is positioned to the right of 'Mensagem 1:'. A yellow arrow points from the text field to the 'text' property in the 'jTextField1 [JTextField] - Properties' panel on the right.

**Palette**

- Layered Pane
- Swing Controls**
  - Label
  - Toggle Button
  - Radio Button
  - Combo Box
  - Button (OK)
  - Check Box
  - Button Group
  - List

**jTextField1 [JTextField] - Properties**

Properties	Events	Code
foreground		[0,0,0]
horizontalAlignment		LEADING
text		
toolTipText		
<b>Other Properties</b>		
UI		<default>



# Java Swing – JTextField – Editor Texto

The screenshot shows an IDE window titled 'Tela01.java' with tabs for Source, Design, and History. The Design view displays a window titled 'Tela 01' with a cyan background. It contains two labels, 'Mensagem 1:' and 'Mensagem 2:', and a text field. A yellow arrow points from the text field to the 'text' property in the Properties window.

**Palette**

- Layered Pane
- Swing Controls**
  - Label
  - Toggle Button
  - Radio Button
  - Combo Box
  - Button
  - Check Box
  - Button Group
  - List

**jTextField2 [JTextField] - Properties**

Properties	Events	Code
foreground		[0,0,0]
horizontalAlignment		LEADING
text		
toolTipText		
<b>Other Properties</b>		
UI		<default>



# Java Swing – JTextField – Renomear Var.

Properties Events Code

Code Generation	
Bean Class	class javax.swing.JTextField
Variable Name	txtMensagem1
Variable Modifiers	private
Type Parameters	
Use Local Variable	<input type="checkbox"/>



# Java Swing – JTextField – Renomear Var.

The image shows a screenshot of an IDE interface. On the left, a window titled "Tela01.java" is in Design mode. It contains a cyan rectangular area labeled "Tela 01". Inside this area, there are two labels: "Mensagem 1:" and "Mensagem 2:". Below "Mensagem 1:" is a text field. A yellow arrow points from this text field to the "Code" tab of the "jTextField2 [JTextField] - Properties" panel on the right. The "Code" tab shows the following properties:

Code Generation	
Bean Class	class javax.swing.JTextField
Variable Name	txtMensagemFinal
Variable Modifiers	private
Type Parameters	
Use Local Variable	<input type="checkbox"/>

The "Swing Controls" palette on the right lists various UI components: Layered Pane, Label, Button, Toggle Button, Check Box, Radio Button, Button Group, Combo Box, and List.





# Java Swing – JTextField – Aument. Fonte

The image shows a Java Swing IDE interface with a yellow text field labeled "Mensagem 1:". A dialog box titled "txtMensagem1 [JTextField] - font" is open, showing the font configuration for the text field. The dialog box has a "Set txtMensagem1's font property using:" dropdown set to "Default editor". Below this, there is a checkbox "Derive the font from the default font" which is unchecked. The "Font:" section shows "Segoe UI" selected. The "Font Style:" section shows "Plain" selected. The "Size:" section shows "18" selected. A preview of the text "The quick brown fox jumps over the lazy dog" is shown. The "OK" button is highlighted with a yellow arrow. In the background, the "txtMensagem1 [JTextField] - Properties" window is visible, showing the "font" property set to "Segoe UI 12 Plain". A yellow arrow points from the "font" property in the Properties window to the "font" property in the dialog box. Another yellow arrow points from the "font" property in the Properties window to the "font" property in the dialog box. A third yellow arrow points from the "font" property in the Properties window to the "font" property in the dialog box.

txtMensagem1 [JTextField] - font

Set **txtMensagem1**'s **font** property using: Default editor

☐ Derive the font from the default font

Font: Segoe UI Font Style: Plain Size: 18

Preview  
The quick brown fox jumps over the lazy dog

OK Cancel Help

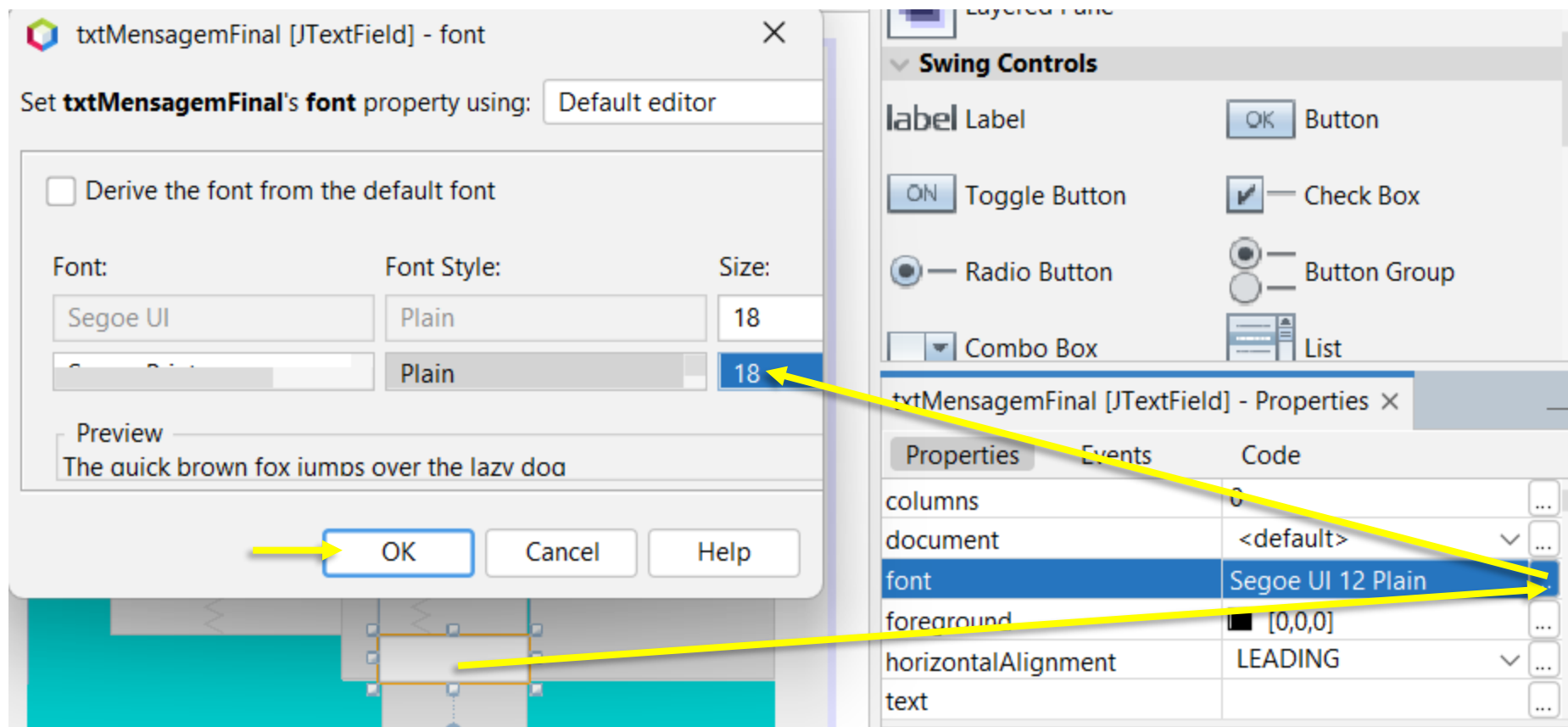
txtMensagem1 [JTextField] - Properties

Properties	Events	Code
columns		0
document		<default>
font		Segoe UI 12 Plain
foreground		■ [0.0.0]
horizontalAlignment		LEADING
text		

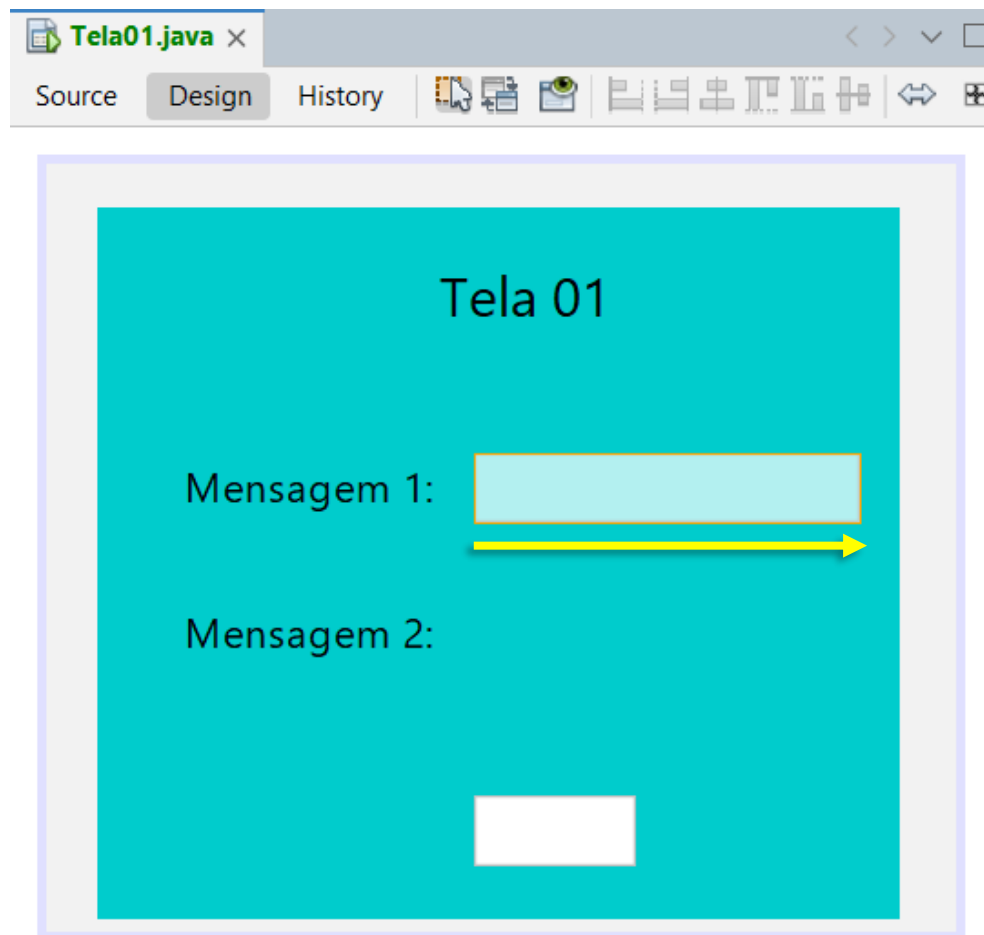
**font**  
(java.awt.Font) The font for the component.



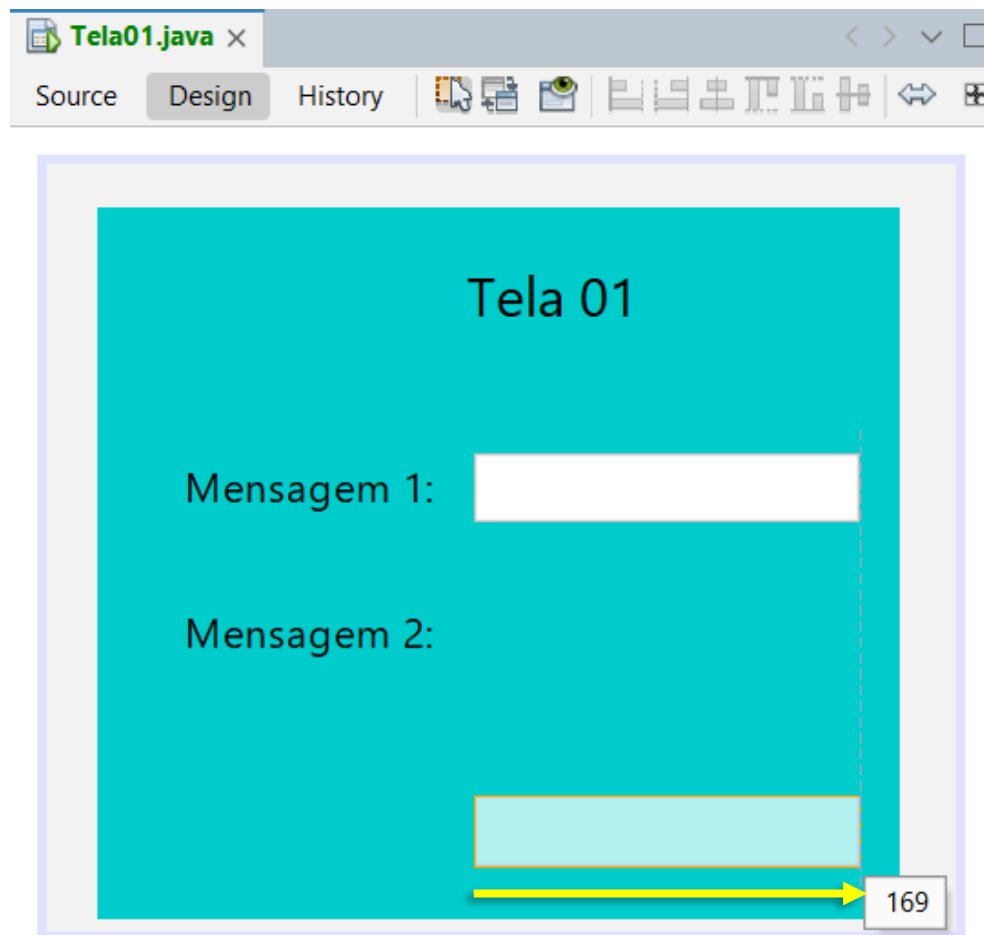
# Java Swing – JTextField – Aument. Fonte



# Java Swing – JTextField – Redimens.



# Java Swing – JTextField – Redimens.



# Java Swing – JTextField – Não Editável

The image shows a Java Swing application window titled "Tela 01" with a cyan background. It contains two labels, "Mensagem 1:" and "Mensagem 2:", each followed by a text field. The text field for "Mensagem 2:" is highlighted with a yellow box, and a yellow arrow points from it to the "editable" property in the Properties panel, which is set to false.

**Palette:**

- Radio Button
- Button Group
- Combo Box
- List
- Text Field
- Text Area
- Scroll Bar
- Slider
- Progress Bar
- Formatted Field
- Password Field
- Spinner
- Separator
- Text Pane

**txtMensagemFinal [JTextField] - Properties**

Properties	Events	Code
editable		<input type="checkbox"/>
background		<input type="checkbox"/> [242,242,242]
columns		0

**editable**



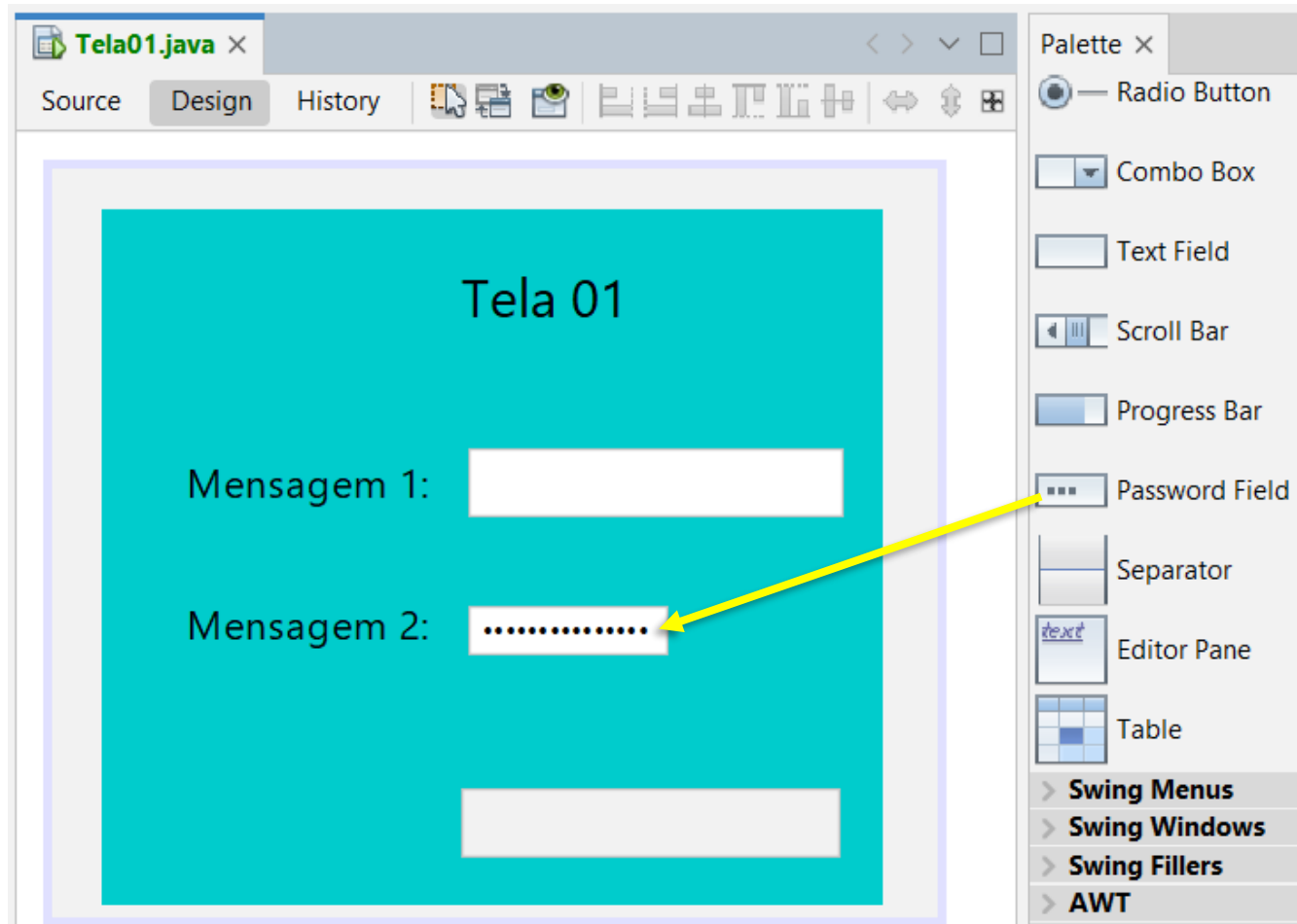
# Java Swing – JPasswordField

---

- A classe **JPasswordField** permite criar uma **caixa de texto gráfica** na qual o usuário pode **digitar dados**, porém eles são substituídos (visualmente) por outro caractere (\*).



# Java Swing – JPasswordField – Adic.



# Java Swing – JPasswordField – Editor T.

The screenshot displays the NetBeans IDE interface for a Java Swing application. The main window, titled "Tela 01", is in the Design view. It features a cyan background with two labels, "Mensagem 1:" and "Mensagem 2:", each followed by a text field. The second text field is a JPasswordField, highlighted by a yellow arrow pointing to its "toolTipText" property in the Properties window. The Properties window shows the "JPasswordField1 [JPasswordField]" component with properties like foreground, horizontalAlignment, text, and toolTipText. The Palette window on the right shows various Swing components like Radio Button, Combo Box, Text Field, Password Field, etc.





# Java Swing – JPasswordField – Ren. Var.

The screenshot shows an IDE window titled 'Tela01.java' with tabs for Source, Design, and History. The Design view displays a window titled 'Tela 01' with a cyan background. It contains two password fields, 'Mensagem 1:' and 'Mensagem 2:'. A yellow arrow points from the 'Mensagem 2:' password field to the 'txpMensagem2 [JPasswordField] - Properties' window. The Properties window shows the 'Code' tab with the following properties:

Property	Value
Bean Class	class javax.swing.JPassword...
Variable Name	txpMensagem2
Variable Modifiers	private

The Properties window also shows the 'Code Generation' tab with the following code:

```
txpMensagem2 [JPasswordField]
```



# Java Swing – JPasswordField – Aum. F.

The image shows a Java Swing IDE with a window titled 'Tela01.java'. A dialog box titled 'txpMensagem2 [JPasswordField] - font' is open, allowing the user to set the font for the 'txpMensagem2' component. The dialog has a 'Default editor' button and a checkbox 'Derive the font from the default font' which is unchecked. The 'Font' field is set to 'Segoe UI', 'Font Style' is 'Plain', and 'Size' is '18'. Below these fields are 'OK', 'Cancel', and 'Help' buttons. A yellow arrow points from the 'OK' button to the 'txpMensagem2 [JPasswordField] - Properties' window. The 'Properties' window shows the 'font' property set to 'Segoe UI 12 Plain'. Another yellow arrow points from the 'font' property to the 'txpMensagem2 [JPasswordField] - font' dialog. The 'txpMensagem2 [JPasswordField]' component is visible in the background, showing a text field with the text 'Mensagem 2:'.

Set **txpMensagem2**'s font property using: Default editor

☐ Derive the font from the default font

Font: Segoe UI Font Style: Plain Size: 18

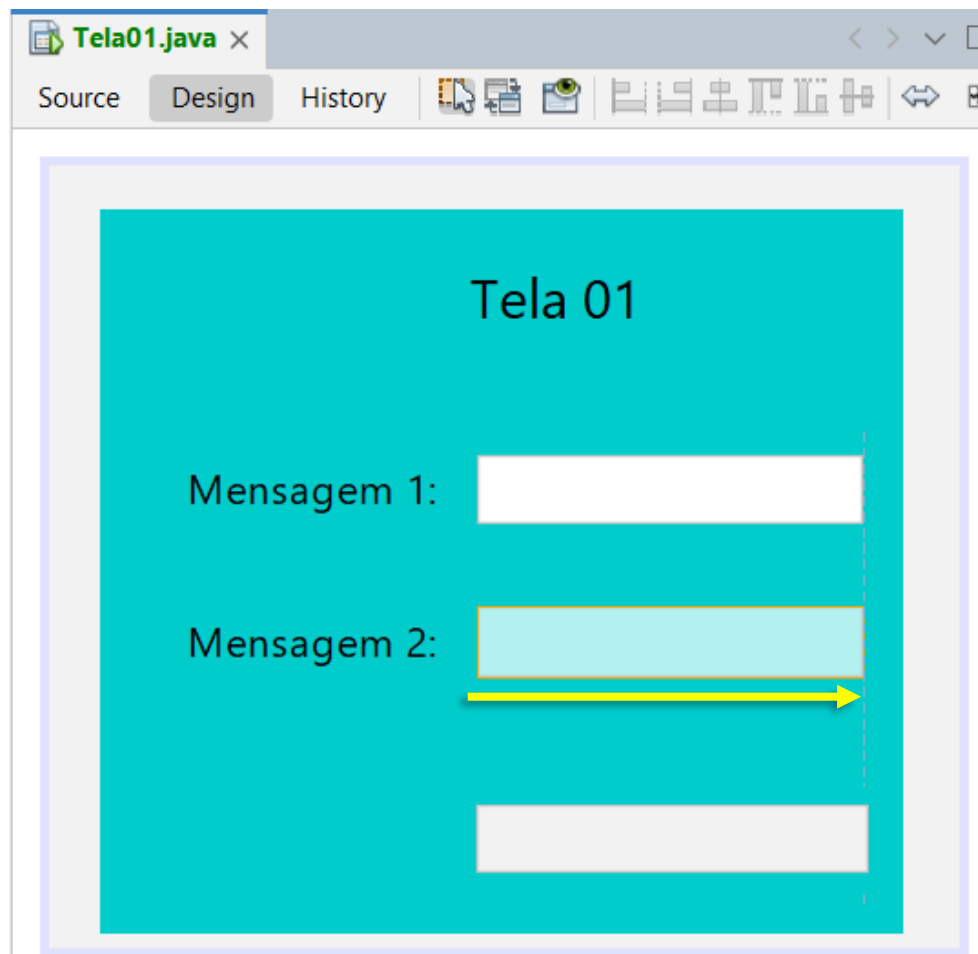
OK Cancel Help

txpMensagem2 [JPasswordField] - Properties

Properties	Events	Code
columns		0
document		<default>
font		Segoe UI 12 Plain
foreground		[0,0,0]



# Java Swing – JPasswordField – Redimen.



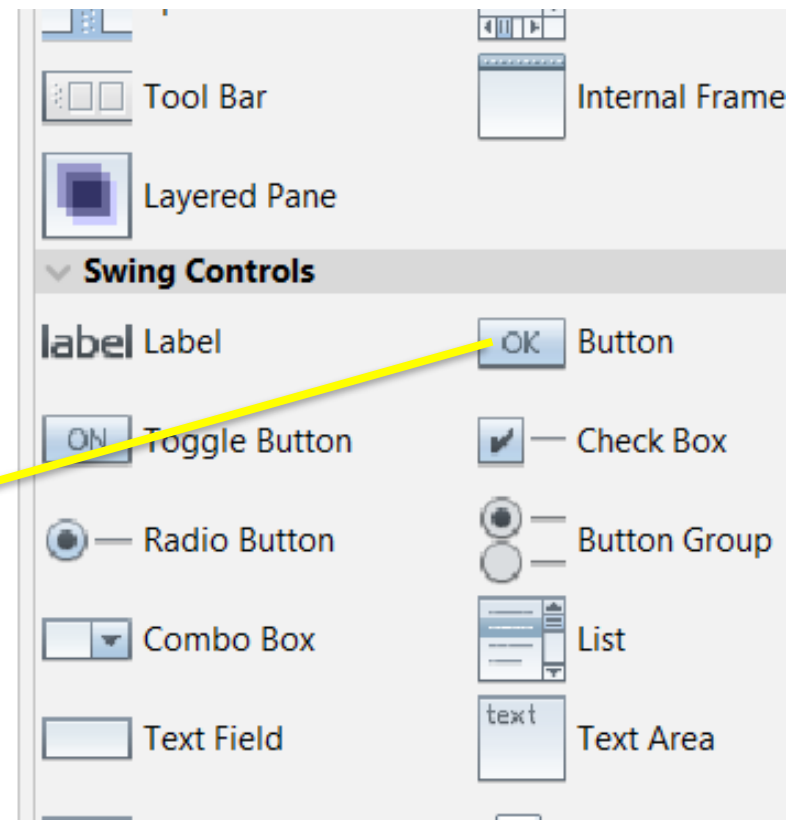
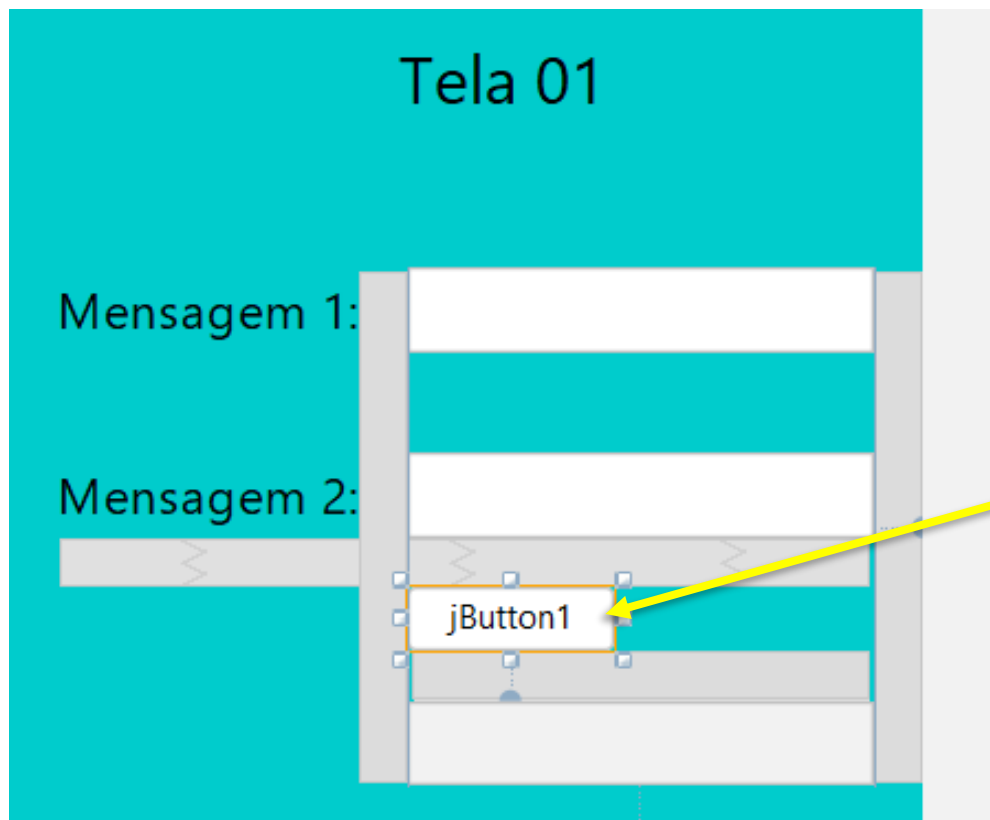
# Java Swing – JButton

---

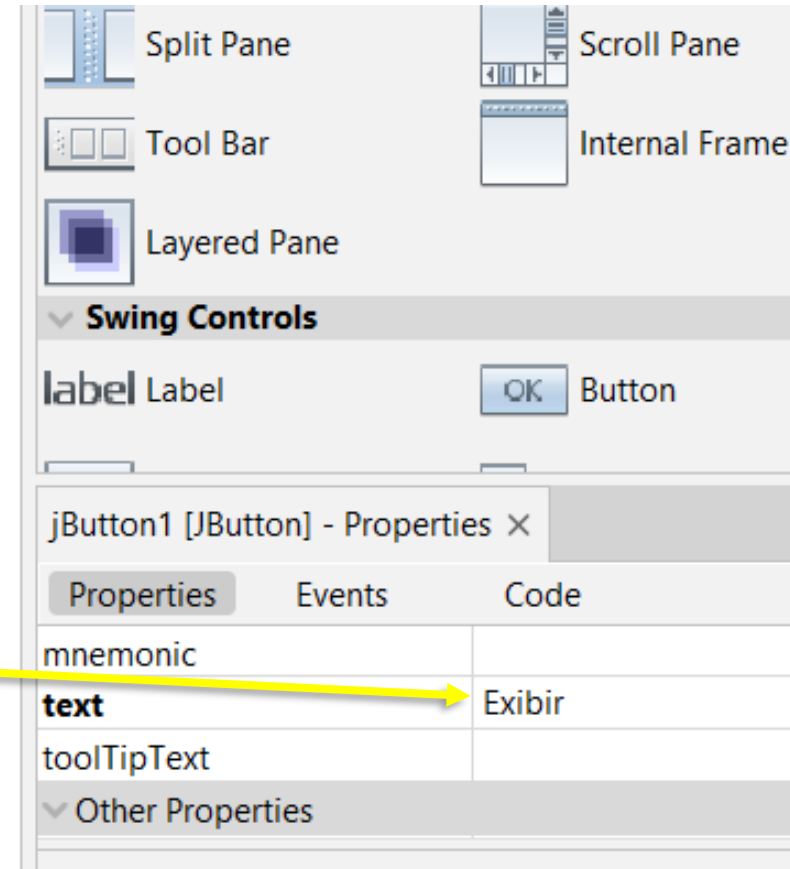
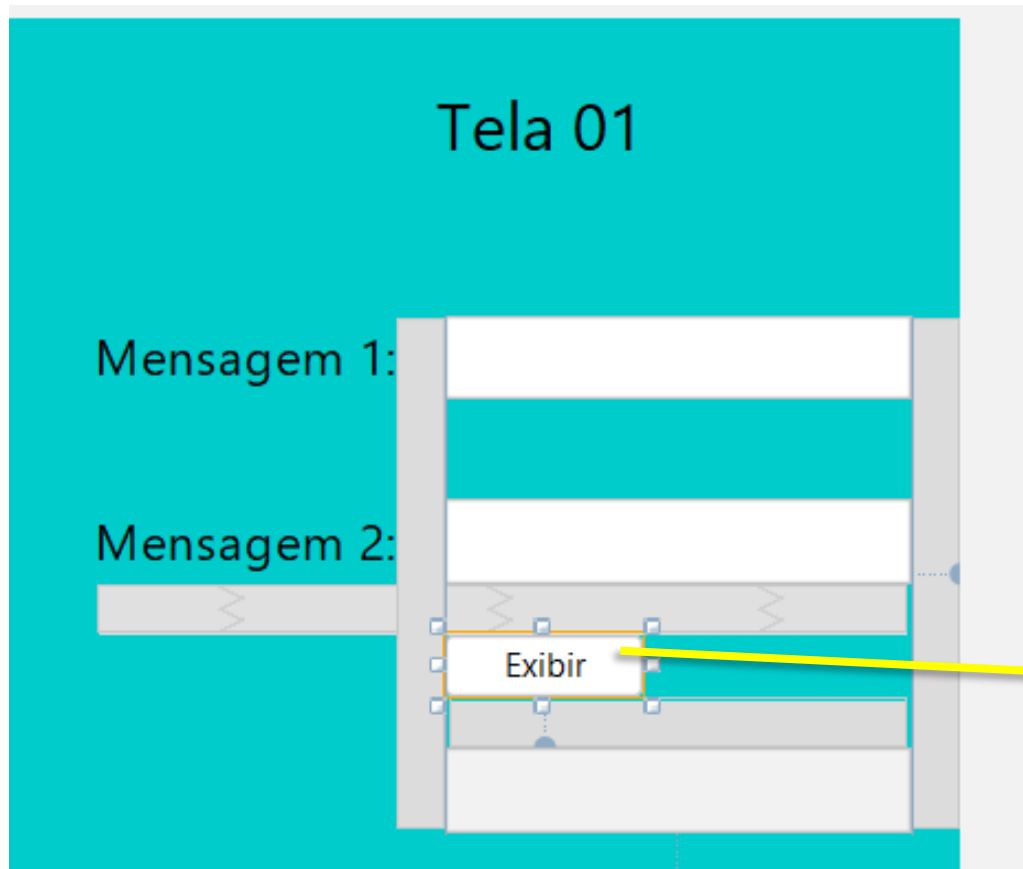
- A classe **JButton** permite **definir botões gráficos** que **pode ser adicionados** a um **outro componente** (frame, painel etc.).
- Um **botão** pode **ser criado** com apenas um **texto e/ou com ícones** para tornar o ambiente mais intuitivo.



# Java Swing – JButton – Adicionar



# Java Swing – JButton – Editor Texto



# Java Swing – JButton – Aumentar Fonte

The image shows a Java Swing IDE interface with two main windows. The left window is titled "jButton1 [JButton] - font" and contains a "Default editor" tab. It has a checkbox "Derive the font from the default font" which is unchecked. Below this are three fields: "Font:" with "Segoe UI", "Font Style:" with "Plain", and "Size:" with "18". A "Preview" section shows the text "The quick brown fox jumps over the lazy dog" in the selected font. At the bottom are "OK", "Cancel", and "Help" buttons. A yellow arrow points from the "OK" button to the "font" property in the right window. The right window is titled "jButton1 [JButton] - Properties" and has three tabs: "Properties", "Events", and "Code". The "Properties" tab is active, showing a list of properties. The "font" property is highlighted, and its value is "Segoe UI 12 Plain". A yellow arrow points from the "Size:" field in the left window to the "font" property in the right window. Another yellow arrow points from the "font" property in the right window to the "font" property in the left window. The background shows a partial view of a Swing container with a button labeled "Exibir".

Set **jButton1**'s **font** property using: Default editor

☐ Derive the font from the default font

Font: Segoe UI Font Style: Plain Size: 18

Preview  
The quick brown fox jumps over the lazy dog

OK Cancel Help

Swing Containers

- Panel
- Split Pane
- Tool Bar
- Layered Pane
- Tabbed Pane
- Scroll Pane
- Internal Frame

Swing Controls

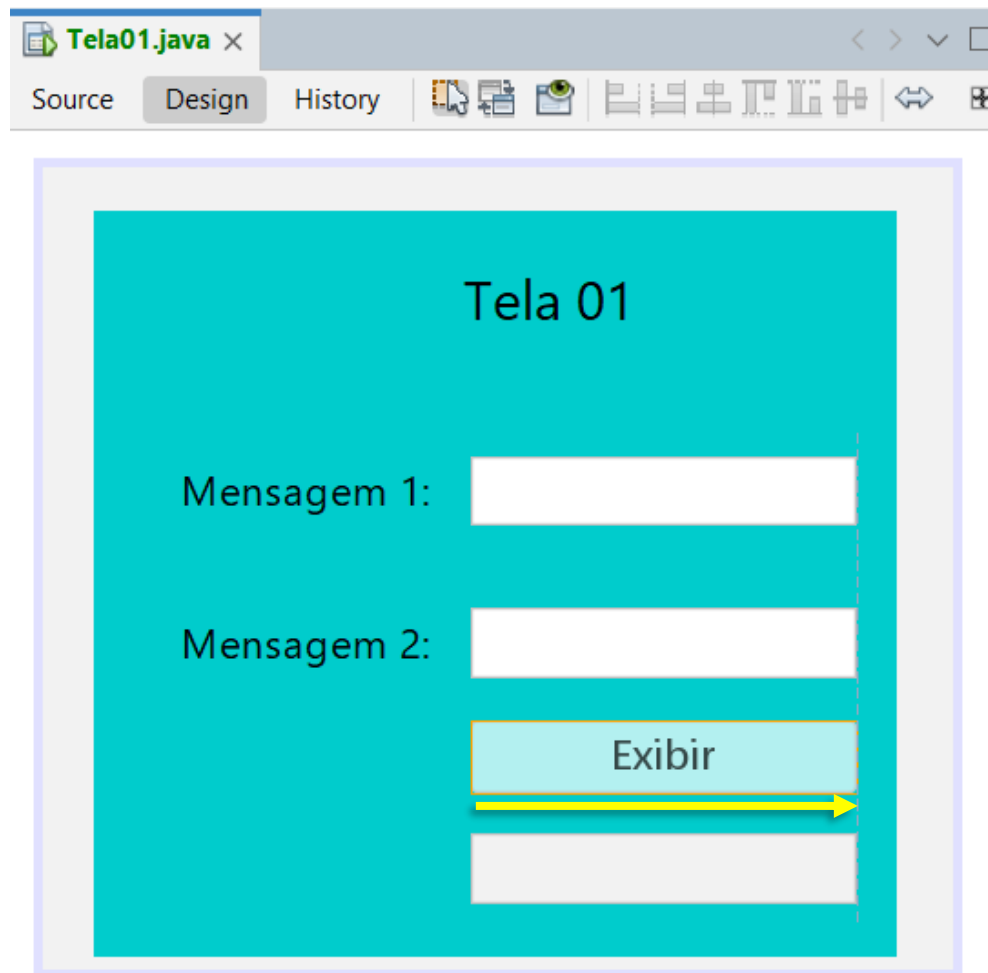
- Label
- Button

jButton1 [JButton] - Properties

Properties	Events	Code
font		Segoe UI 12 Plain
foreground		[0,0,0]
icon		<none>



# Java Swing – JButton – Redimensionar





# Java Swing – JButton – Renomear Var.

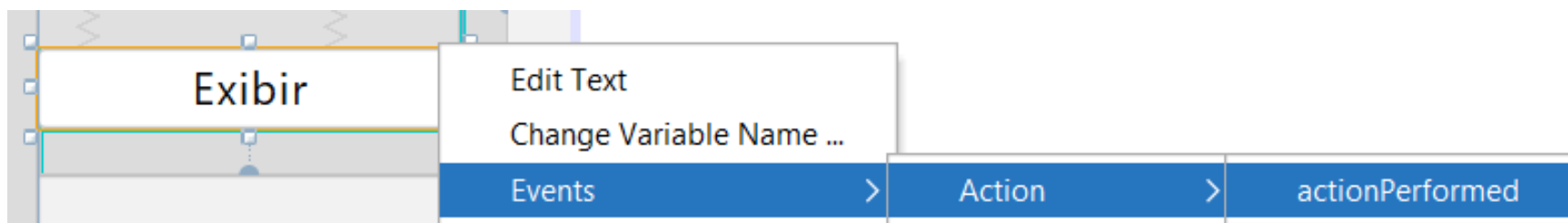
The image shows a Java Swing IDE interface. The main window, titled 'Tela 01', is in Design mode. It contains a cyan background with the text 'Tela 01'. Below this, there are two labels: 'Mensagem 1:' and 'Mensagem 2:'. To the right of these labels is a vertical stack of components. The bottom component is a JButton labeled 'Exibir'. A yellow arrow points from the 'Exibir' button to the 'Properties' window.

The 'Properties' window for 'btnExibir [JButton]' is open. It shows the 'Code' tab. The 'Code Generation' section displays the following information:

Property	Value
Bean Class	class javax.swing.JButton
Variable Name	btnExibir
Variable Modifiers	private



# Java Swing – JButton – Adicionar Ação



# Java Swing – JButton – Adicionar Ação

```
private void btnExibirActionPerformed(java.awt.event.ActionEvent evt) {
```

}



# Java Swing – JButton – Adicionar Ação

---

```
import javax.swing.JOptionPane;
```



# Java Swing – JButton – Adicionar Ação

```
private void btnExibirActionPerformed(java.awt.event.ActionEvent evt) {  
  
    String mensagem1 = txtMensagem1.getText();  
    String mensagem2 = String.valueOf(txpMensagem2.getPassword());  
  
    String mensagemFinal = mensagem1 + " " + mensagem2;  
  
    txtMensagemFinal.setText(mensagemFinal);  
  
    JOptionPane.showMessageDialog(this, mensagemFinal);  
  
}
```



# Java Swing – JButton – Execução



Sistema IFBA

Tela 01

Mensagem 1:

Mensagem 2:



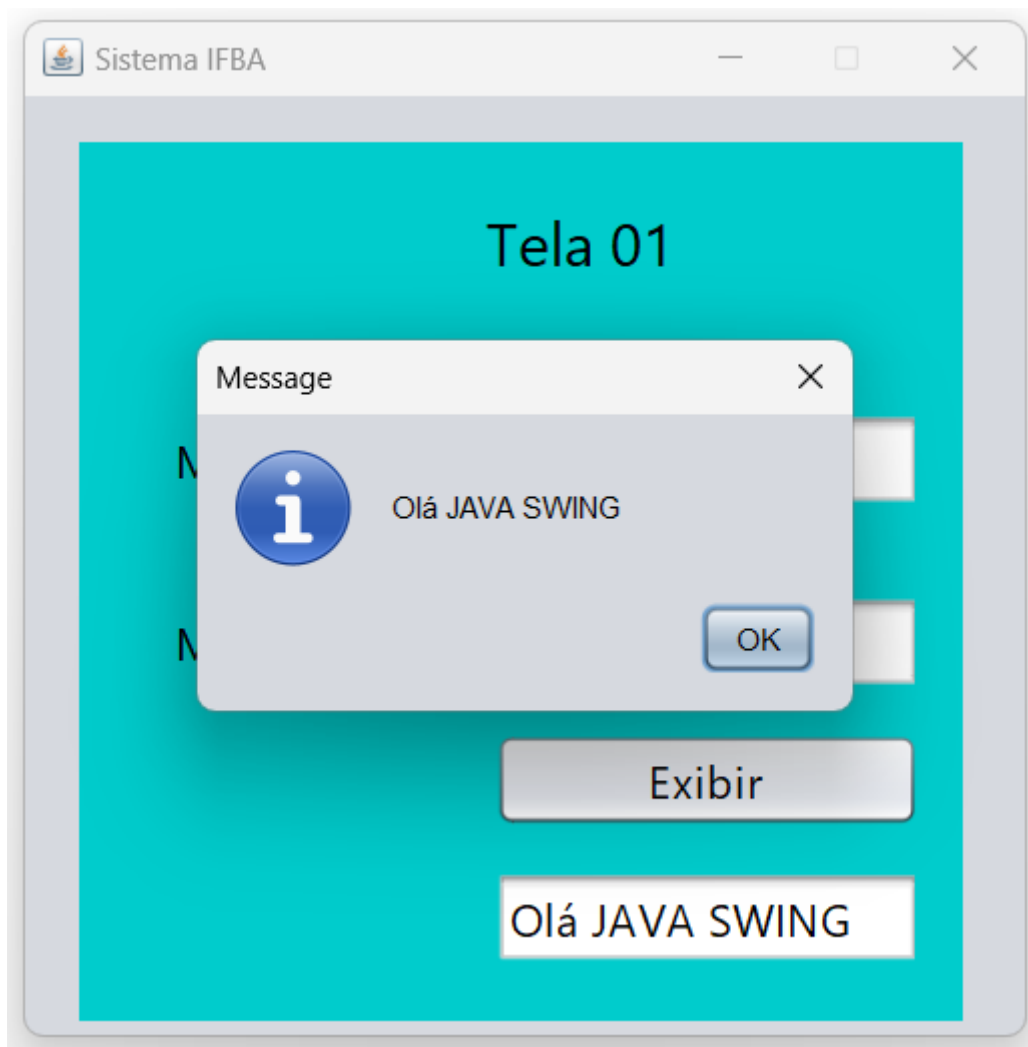
# Java Swing – JButton – Execução



The screenshot shows a Java Swing window titled "Sistema IFBA". The window has a light gray title bar with standard minimize, maximize, and close buttons. The main content area has a cyan background. At the top center, the text "Tela 01" is displayed. Below this, there are two text input fields. The first field is labeled "Mensagem 1:" and contains the text "Olá". The second field is labeled "Mensagem 2:" and contains a series of asterisks "\*\*\*\*\*". Below the second field is a button labeled "Exibir". At the bottom of the cyan area, there is an empty text input field.



# Java Swing – JButton – Execução





# Java Swing – JButton – Execução



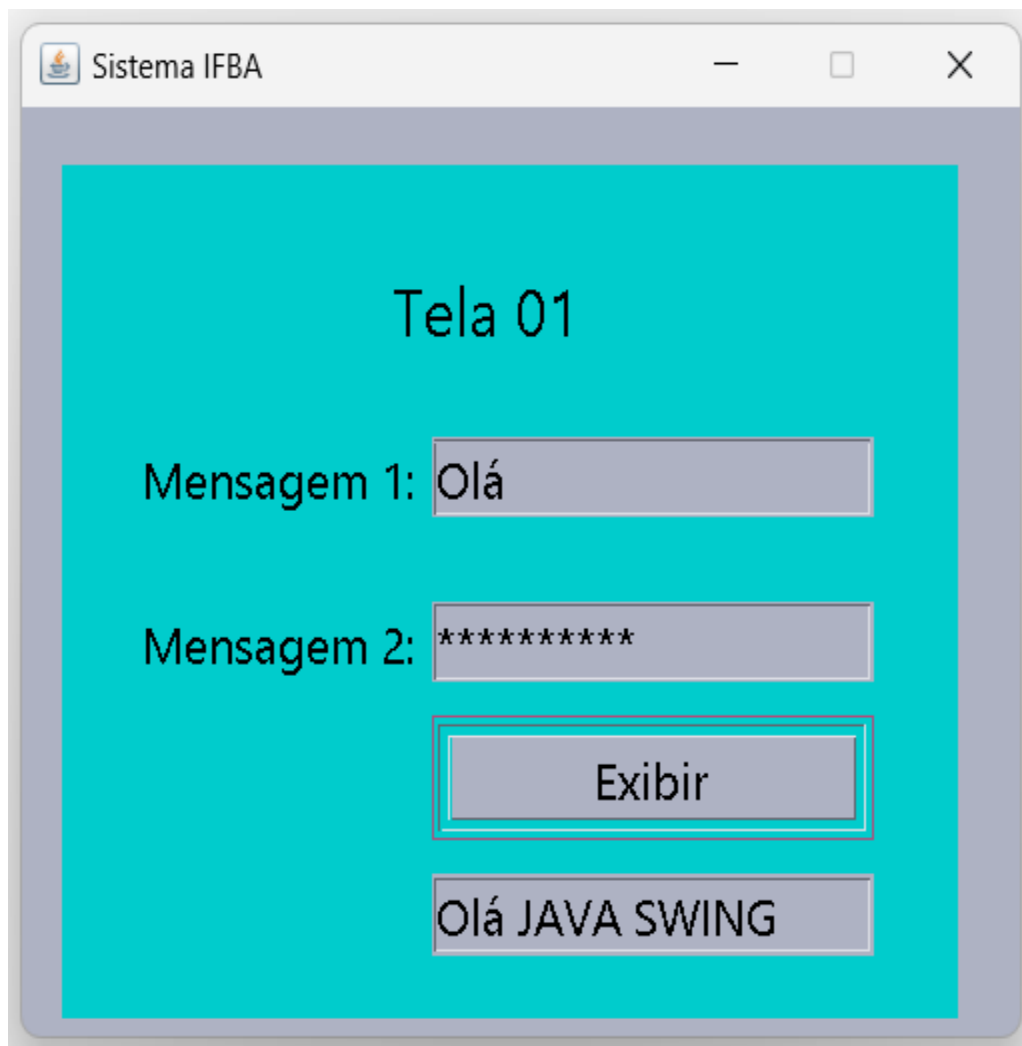
# Java Swing – Troca de Tema (Aparência)

```
if ("Nimbus".equals(info.getName())) {  
    javax.swing.UIManager.setLookAndFeel(info.getClassName());  
    break;  
}
```

```
if ("CDE/Motif".equals(info.getName())) {  
    javax.swing.UIManager.setLookAndFeel(info.getClassName());  
    break;  
}
```



# Java Swing – Troca de Tema (Aparência)

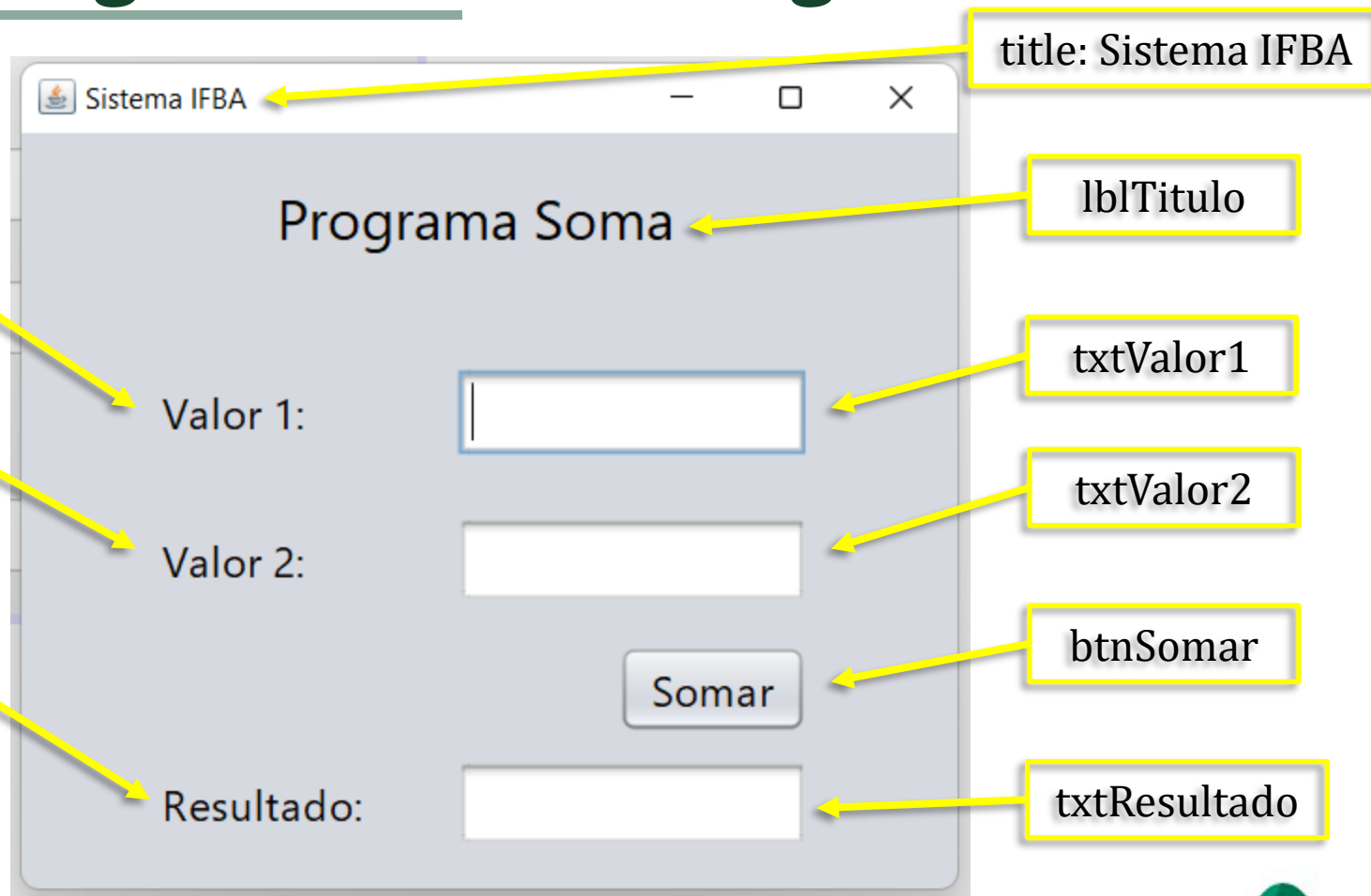


# Java Swing – Lista de Tema (Aparência)

1. Nimbus
2. Metal
3. CDE/Motif (também conhecido como Motif)
4. Windows
5. Windows Classic
6. GTK (disponível apenas em sistemas Linux)
7. Aqua (disponível apenas em sistemas macOS)
8. Synth
9. Mac
10. Mac OS X
11. Ocean
12. Plastic
13. System



# Java Swing – Exercício – Prog. Soma



TelaSoma.java



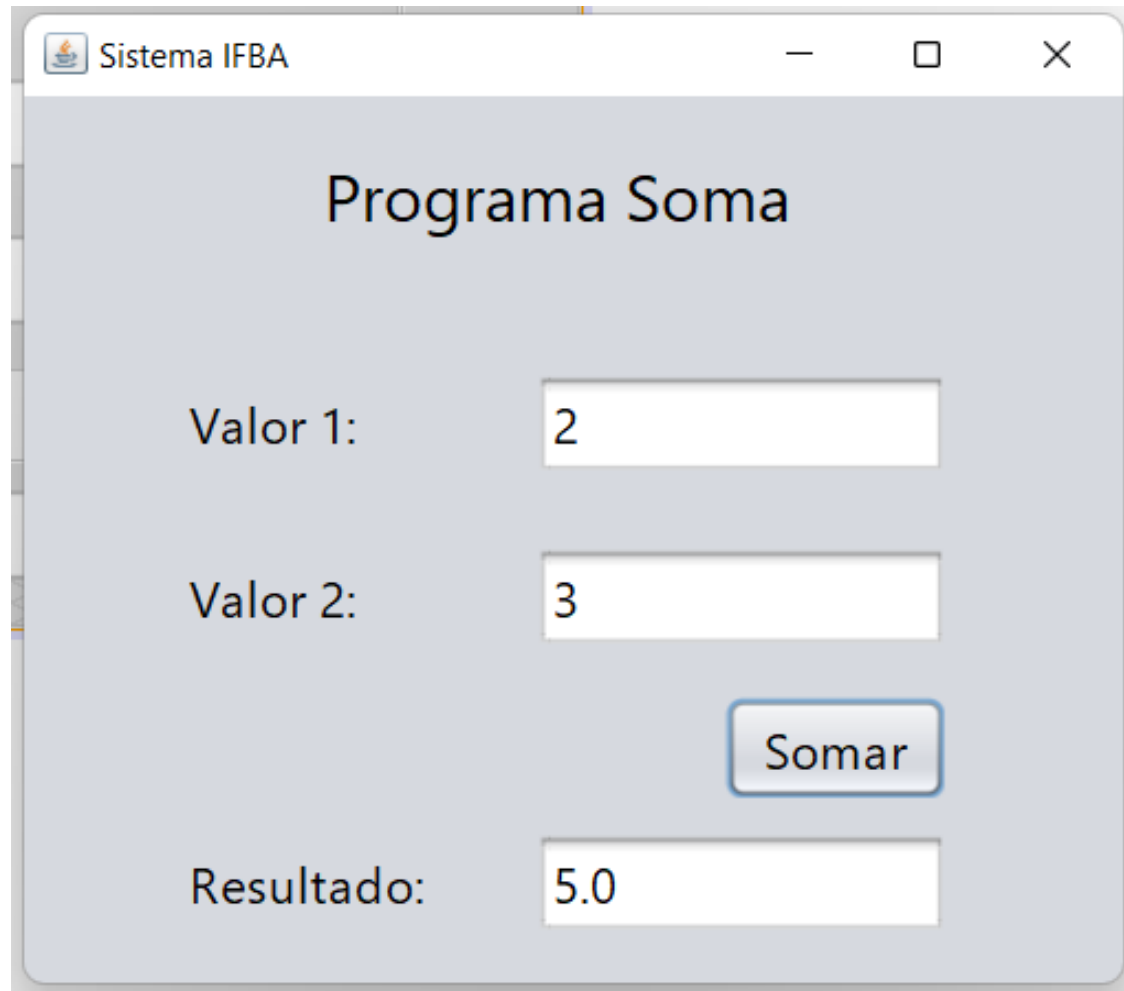
# Java Swing – Exercício – Prog. Soma

```
private void btnSomarActionPerformed(java.awt.event.ActionEvent evt) {  
  
    double valor1 = Double.parseDouble(txtValor1.getText());  
  
    double valor2 = Double.parseDouble(txtValor2.getText());  
  
    double resultado = valor1 + valor2;  
  
    String strResultado = String.valueOf(resultado);  
  
    txtResultado.setText(strResultado);  
  
}
```



# Java Swing – Exercício – Prog. Soma

Execução



Sistema IFBA

## Programa Soma

Valor 1: 2

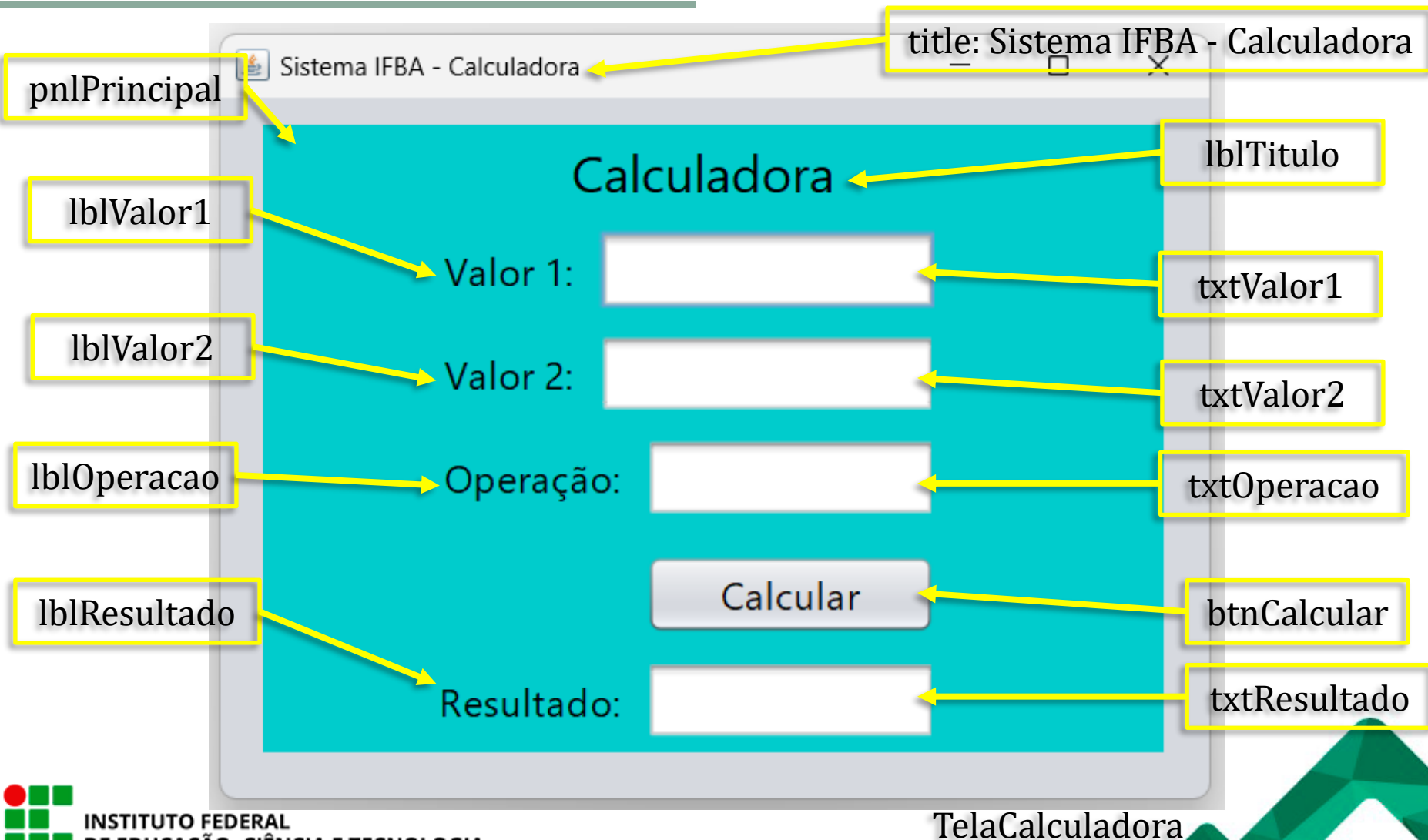
Valor 2: 3

Somar

Resultado: 5.0



# Java Swing – Exercício – Prog. Calc.





# Java Swing – Exercício – Prog. Calc.

---

Qual é o código executado ao acionar o botão “Calcular”?



# Java Swing – Exercício – Prog. Calc.

Leia valor1 como um número decimal do campo de texto txtValor1.

Leia valor2 como um número decimal do campo de texto txtValor2.

Leia operacao como uma string do campo de texto txtOperacao.

Declare resultado como um número decimal e inicialize com 0.0.

Se operacao for igual a "+":

atribua a resultado a soma de valor1 e valor2.

Senão, se operacao for igual a "-":

atribua a resultado a diferença entre valor1 e valor2.

Senão, se operacao for igual a "\*":

atribua a resultado o produto de valor1 e valor2.

Senão, se operacao for igual a "/":

atribua a resultado a divisão de valor1 por valor2.

Converta resultado para uma string e atribua ao campo de texto txtResultado.



# Java Swing – Exercício – Prog. Calc.

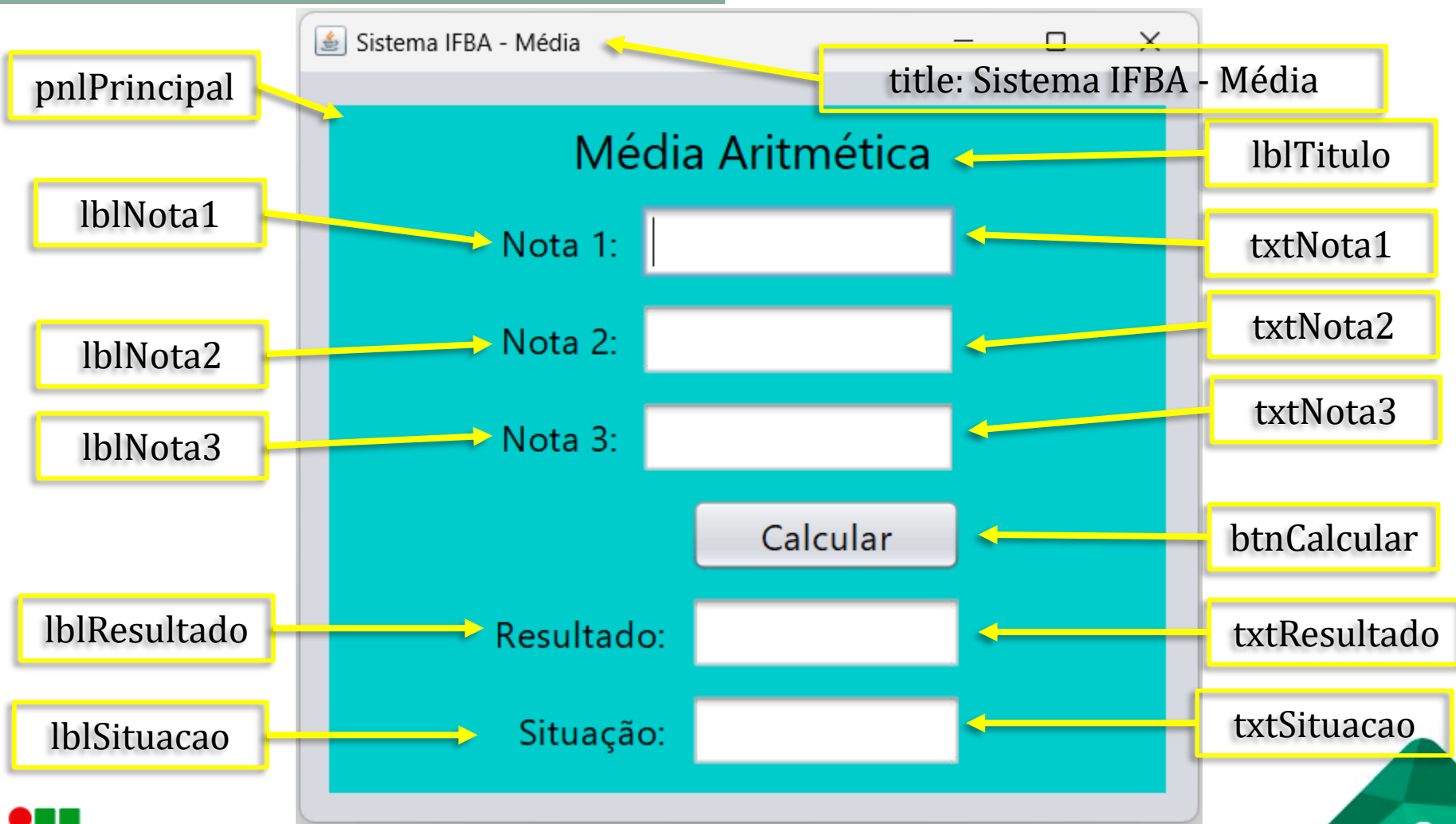
Execução

The screenshot shows a Java Swing window titled "Sistema IFBA - Calculadora". The window has a light blue background and contains the following elements:

- Valor 1:** A text input field containing the number "10".
- Valor 2:** A text input field containing the number "5".
- Operação:** A dropdown menu showing the multiplication symbol (\*). A yellow box highlights the dropdown menu, and a yellow arrow points to the selected option.
- Buttons:** A single button labeled "Calcular" is centered below the operation dropdown.
- Resultado:** A text input field containing the result "50.0".



# Java Swing – Exercício – Prog. Média



TelaMedia



# Java Swing – Exercício – Prog. Média

---

Qual é o código executado ao acionar o botão “Calcular”?



# Java Swing – Exercício – Prog. Média

Leia nota1 como um número decimal do campo de texto txtNota1.

Leia nota2 como um número decimal do campo de texto txtNota2.

Leia nota3 como um número decimal do campo de texto txtNota3.

Calcule a média como a soma de nota1, nota2 e nota3 dividido por 3.

Declare situacao como uma string.

Se a média for maior ou igual a 6.0:

atribua "Aprovação" a situacao.

Senão:

atribua "Recuperação" a situacao.

Arredonde a média para duas casas decimais.

Converta a média para uma string e atribua ao campo de texto txtResultado.

Atribua a situacao ao campo de texto txtSituacao.



# Java Swing – Exercício – Prog. Média

---

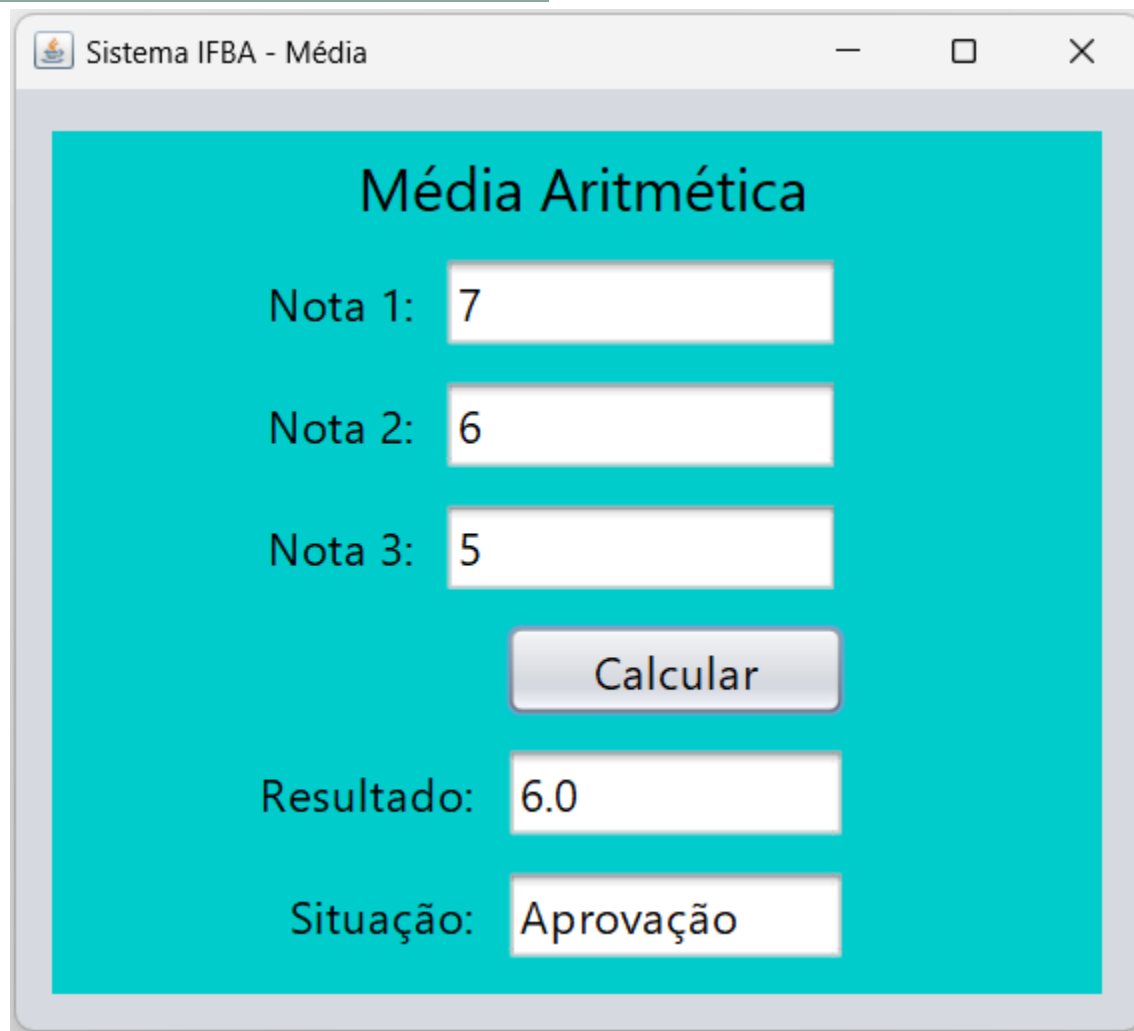
Arredondar o valor da variável “media” do tipo double para duas casas decimais:

```
media = Math.floor(media * 100) / 100;
```



# Java Swing – Exercício – Prog. Média

Execução



The screenshot shows a Java Swing window titled "Sistema IFBA - Média". The window has a light blue background and a white border. Inside, the title "Média Aritmética" is centered at the top. Below it, there are three input fields for "Nota 1:", "Nota 2:", and "Nota 3:". The values entered are 7, 6, and 5 respectively. A "Calcular" button is positioned below the input fields. Below the button, there are two more input fields: "Resultado:" with the value 6.0, and "Situação:" with the value "Aprovação".

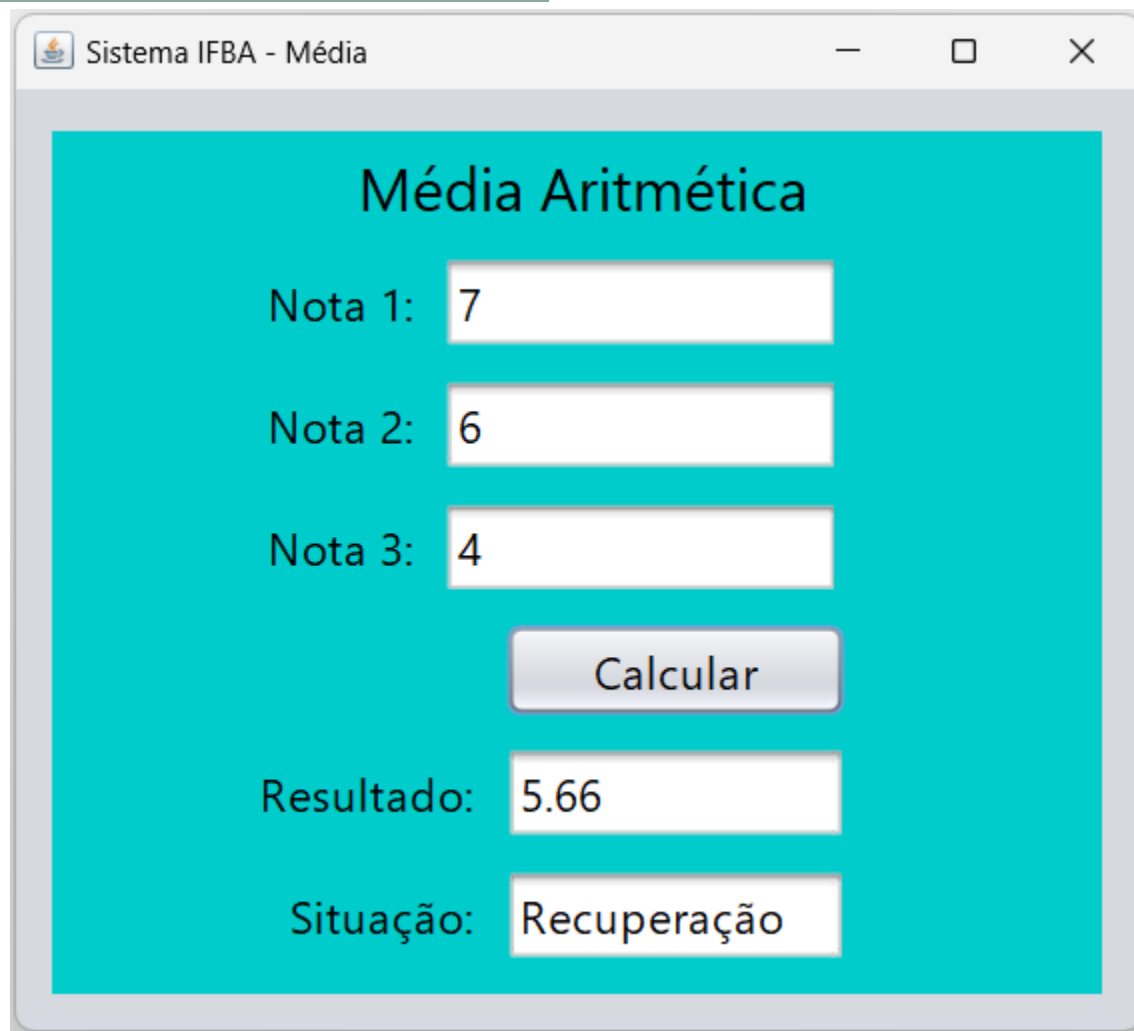
Label	Value
Nota 1:	7
Nota 2:	6
Nota 3:	5
Calcular	
Resultado:	6.0
Situação:	Aprovação





# Java Swing – Exercício – Prog. Média

Execução

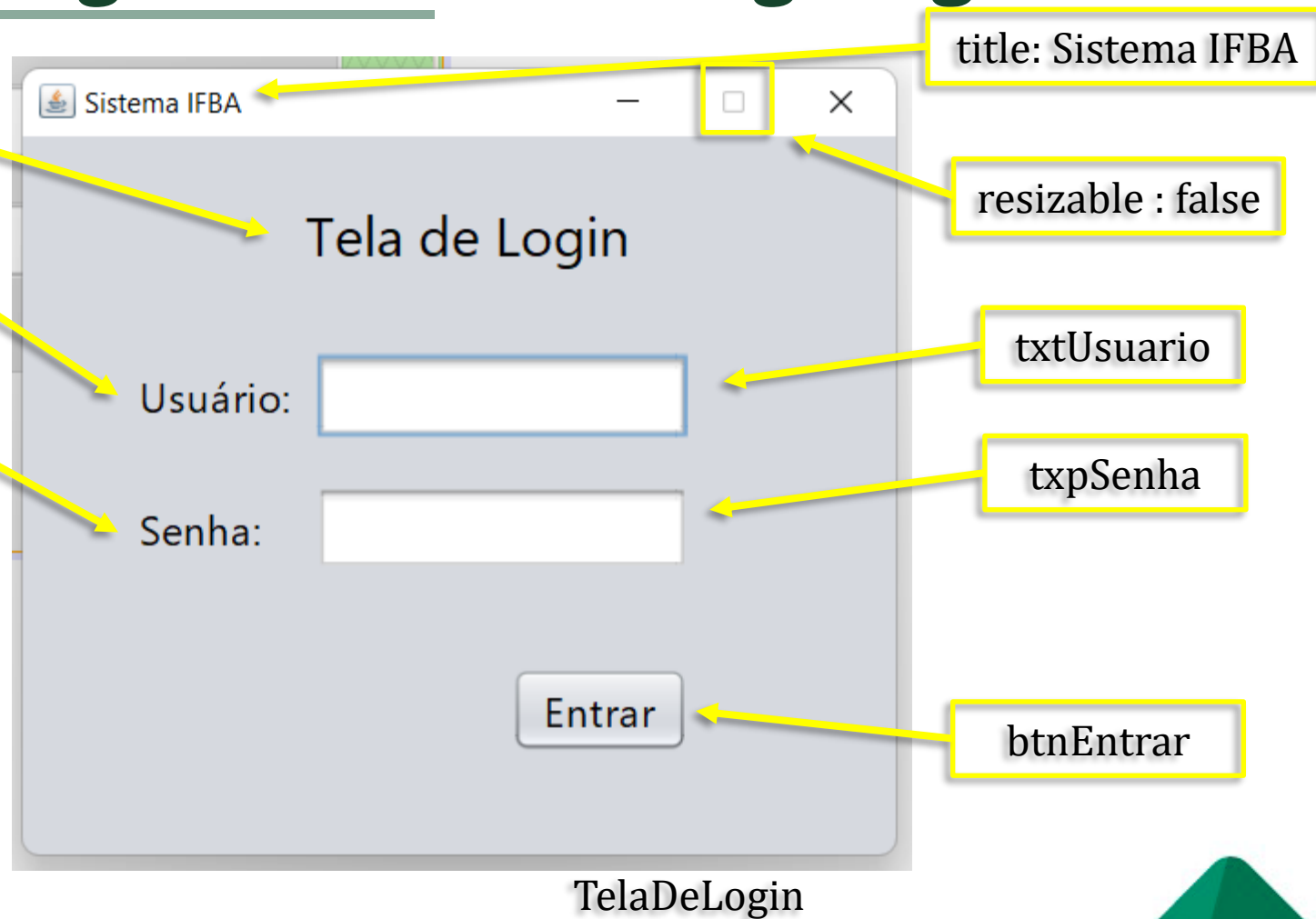


The screenshot shows a Java Swing window titled "Sistema IFBA - Média". The window has a light blue background and contains the following elements:

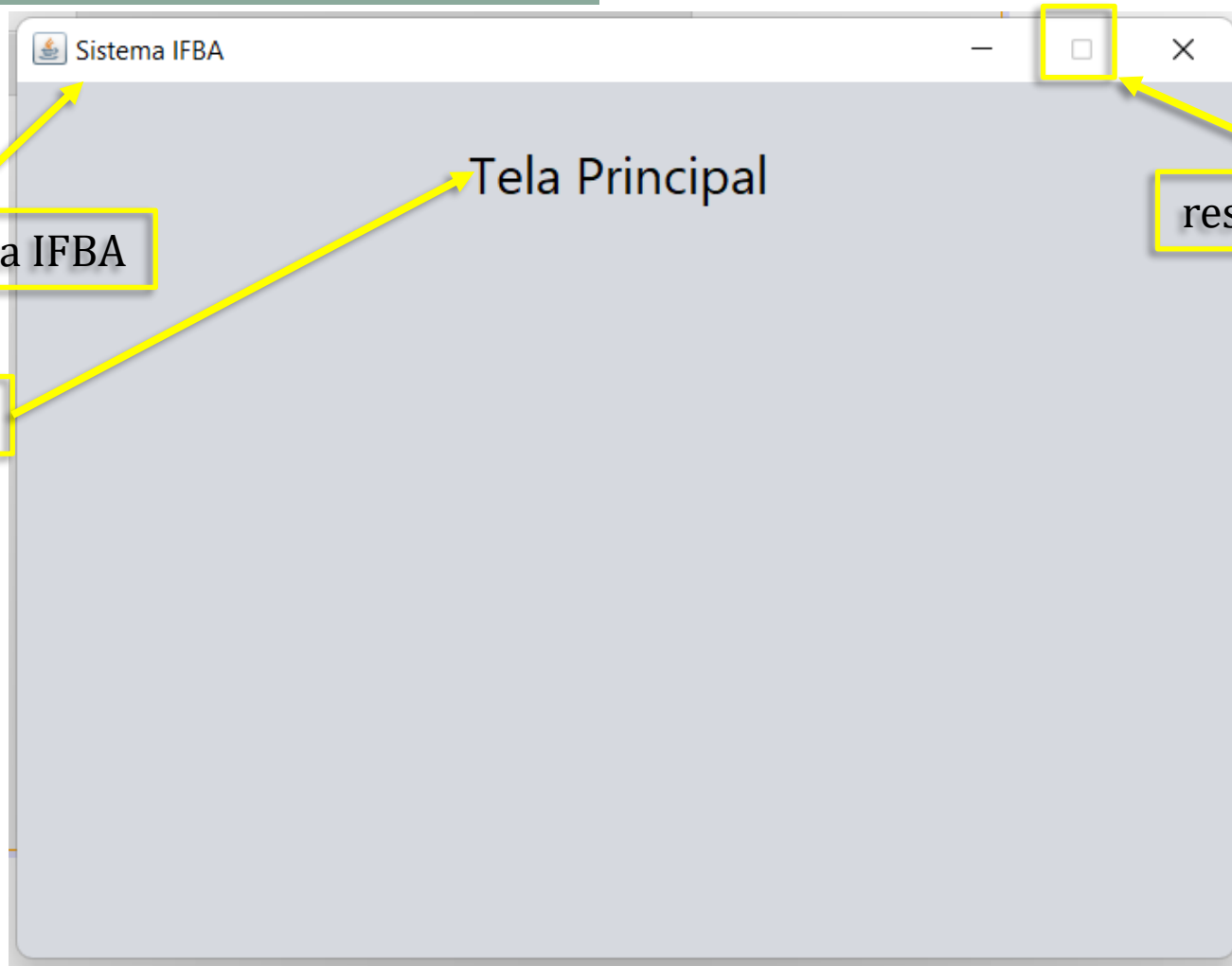
- Média Aritmética**: A title label centered at the top.
- Nota 1:** A text label followed by a text input field containing the value "7".
- Nota 2:** A text label followed by a text input field containing the value "6".
- Nota 3:** A text label followed by a text input field containing the value "4".
- Calcular**: A button with a light blue gradient and rounded corners.
- Resultado:** A text label followed by a text input field containing the value "5.66".
- Situação:** A text label followed by a text input field containing the value "Recuperação".



# Java Swing – Exercício – Prog. Login



# Java Swing – Exercício – Prog. Principal



TelaPrincipal



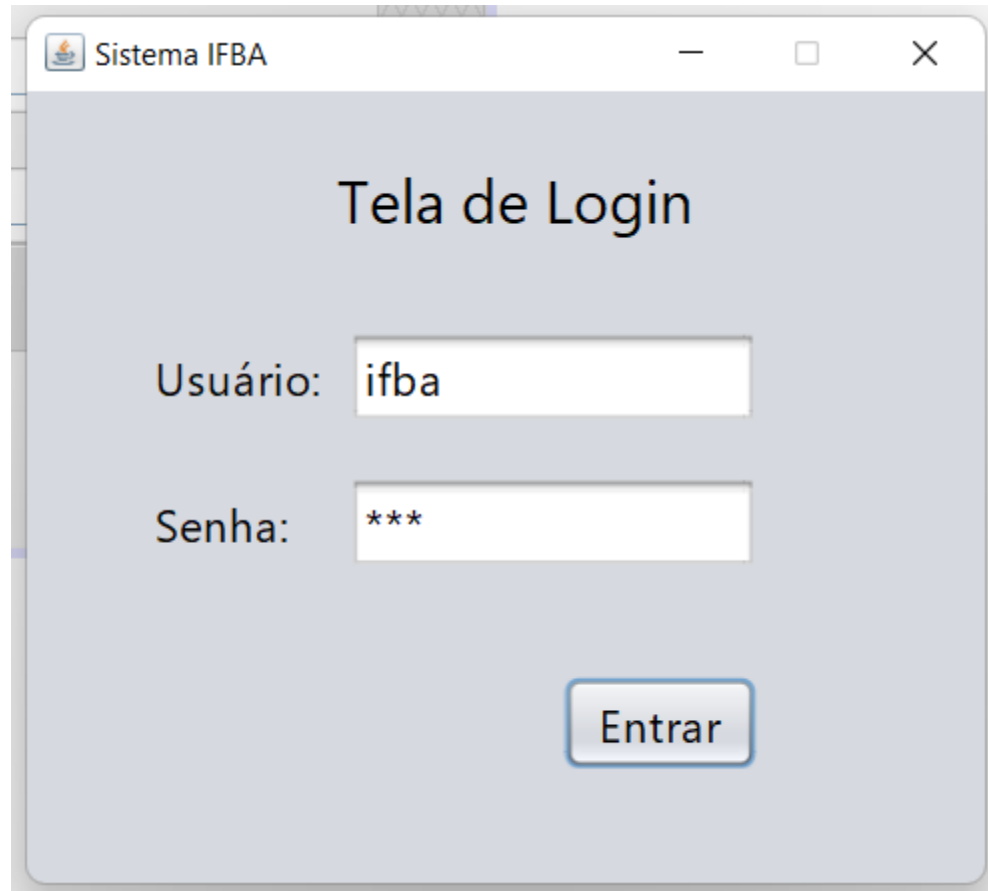
# Java Swing – Exercício – Prog. Login

```
private void btnEntrarActionPerformed(java.awt.event.ActionEvent evt) {  
  
    String usuario = txtUsuario.getText();  
  
    String senha = String.valueOf(txpSenha.getPassword());  
  
    if(usuario.equals("ifba") && senha.equals("1234"))  
    {  
        new TelaPrincipal().setVisible(true);  
  
        this.dispose();  
    }  
    else  
    {  
        JOptionPane.showMessageDialog(this, "Acesso negado!");  
    }  
}
```



# Java Swing – Exercício – Prog. Login

Execução

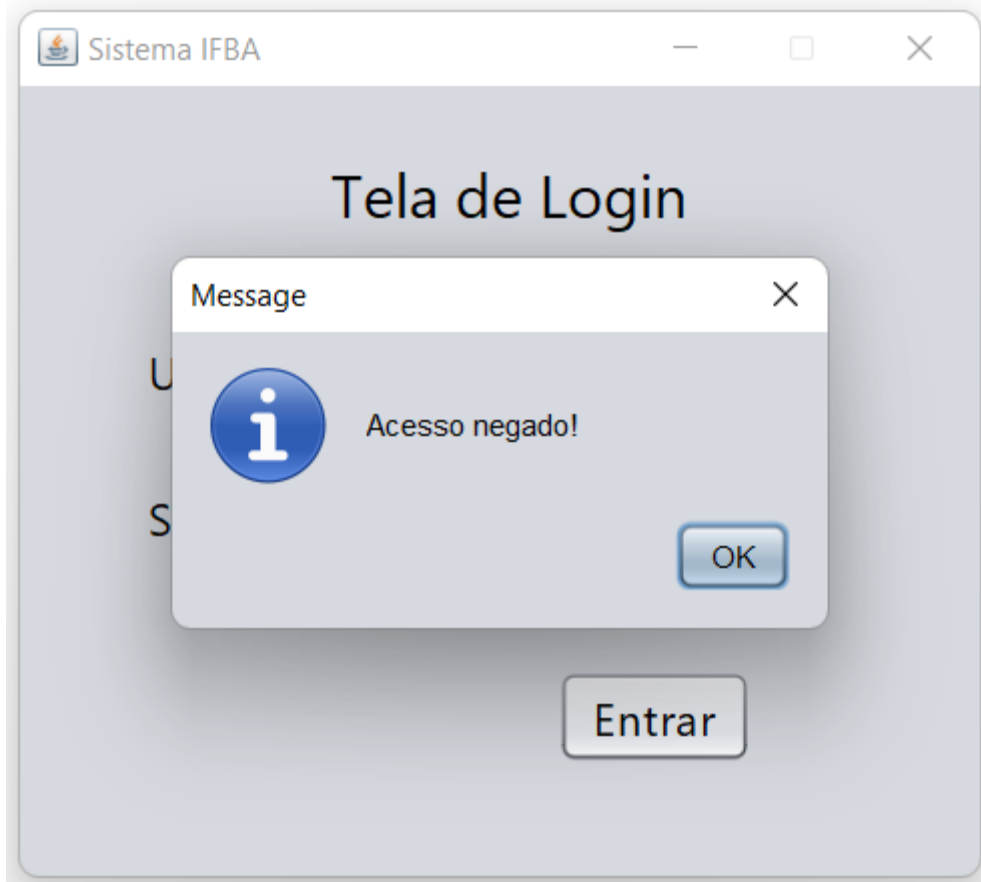


The screenshot shows a Java Swing window titled "Sistema IFBA" with standard window controls (minimize, maximize, close). The window contains a login form with the title "Tela de Login". It features two input fields: "Usuário:" with the text "ifba" and "Senha:" with three asterisks "\*\*\*". A button labeled "Entrar" is positioned at the bottom right of the form area.



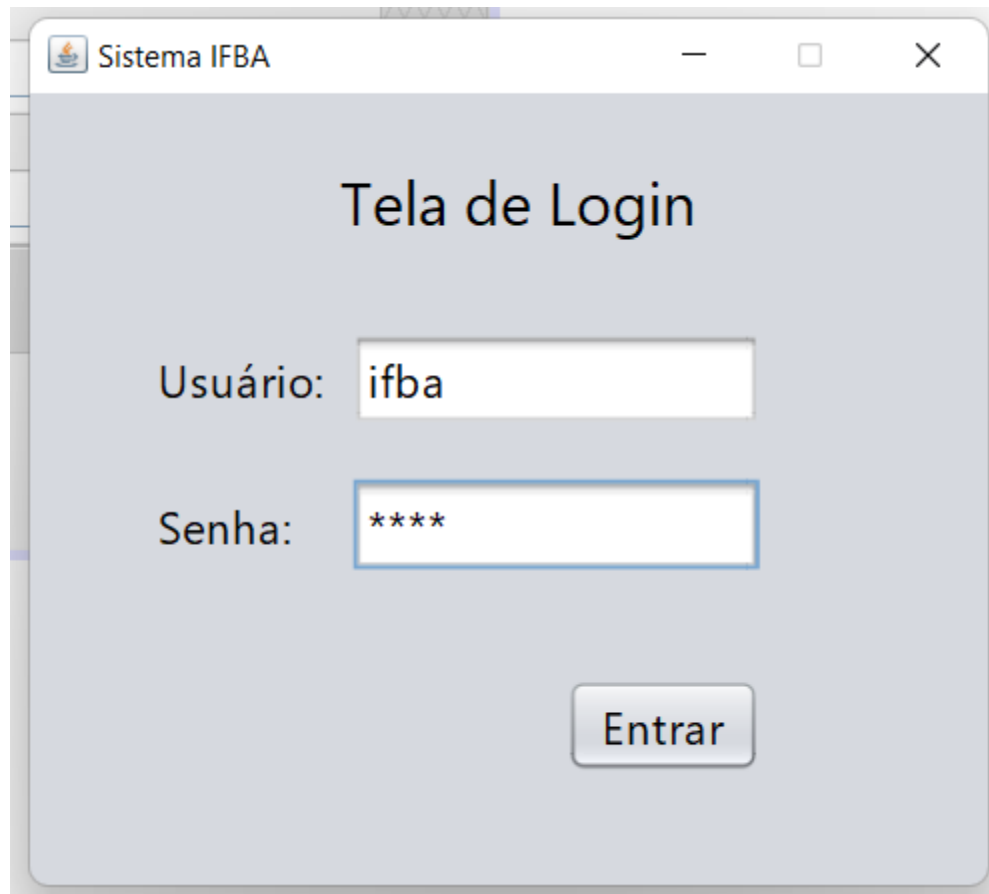
# Java Swing – Exercício – Prog. Login

Execução



# Java Swing – Exercício – Prog. Login

Execução

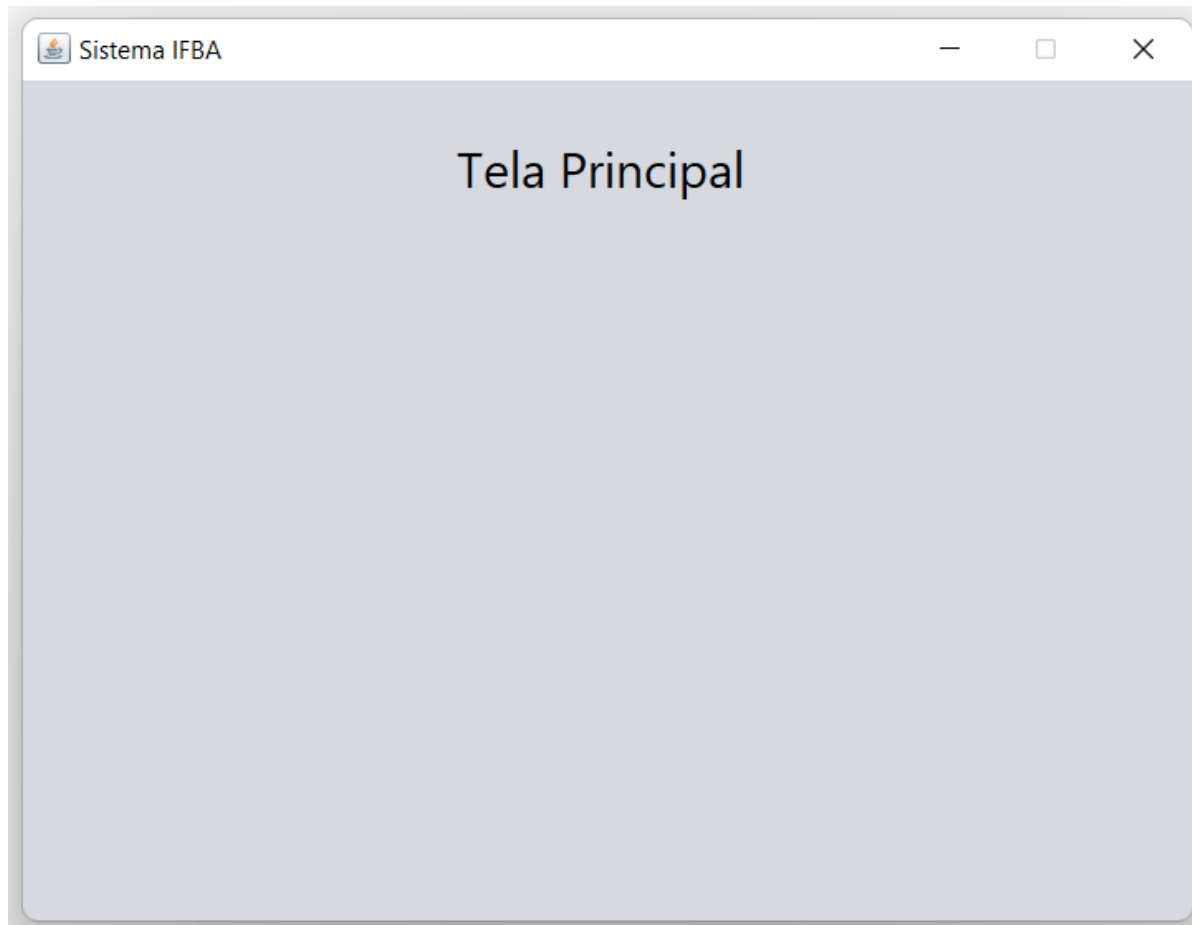


The screenshot shows a Java Swing window titled "Sistema IFBA". Inside the window, the text "Tela de Login" is centered. Below this, there are two input fields. The first is labeled "Usuário:" and contains the text "ifba". The second is labeled "Senha:" and contains four asterisks "\*\*\*\*". Below these fields is a button labeled "Entrar".



# Java Swing – Exercício – Prog. Login

Execução





# Referências

- Junior, Peter Jandl. Java Guia do Programador - 4ª Edição. Novatec Editora.
- SÉRGIO FURGERI. Java Ensino Didático: Desenvolvimento e Implementação de Aplicações. Editora Érica.
- <https://www.youtube.com/playlist?list=PLwQkYMetu0OYFOU71txhtvSYTVUCHjJYD>
- [https://www.youtube.com/playlist?list=PLWd\\_VnthxxLfeEUK08gB7G3316OS5xIT3](https://www.youtube.com/playlist?list=PLWd_VnthxxLfeEUK08gB7G3316OS5xIT3)



# Obrigado!

- Canais de Comunicação;
- Horário de Atendimento.

