

# Instalação

## Ferramentas de Trabalho

- Java Development Kit (OpenJDK)
  - Eclipse IDE
  - Plugin WindowBuilder
  - StarUML

# Créditos

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# Eclipse IDE

- **IDE**

- Integrated Development Environment (Ambiente de Desenvolvimento de Software)
- Há várias IDE's para Java, como NetBeans e IntelliJ, mas vamos trabalhar com o Eclipse.

- **Eclipse**

- Ambiente de Desenvolvimento adotado
- Há várias instalações de “Eclipse”: PHP, C, R, ...
- **Endereço:** <https://www.eclipse.org/downloads/packages/>
- Baixe a versão **Eclipse IDE for Enterprise Java and Web Developers** (2a da lista)

# Eclipse IDE

The screenshot shows the Eclipse IDE download page. At the top, there's a navigation bar with the Eclipse logo and the text 'Eclipse Packages | The Eclipse Foundation'. Below this, a dark blue banner displays statistics: 'Find out more', '1,584,262 Installer Downloads', and '709,538 Package Downloads and Updates'. The main heading is 'Eclipse IDE 2022-12 R Packages'. On the left, two packages are listed: 'Eclipse IDE for Java Developers' (302 MB, 347,472 downloads) and 'Eclipse IDE for Enterprise Java and Web Developers' (516 MB, 246,300 downloads). Each package has a description and a list of supported operating systems and architectures. On the right, there's a section titled 'Get Eclipse IDE 2022-12' with a 'Download x86\_64' button. Below this, there's a 'RELATED LINKS' section with links to 'Compare & Combine Packages', 'New and Noteworthy', 'Install Guide', 'Documentation', 'Updating Eclipse', 'Forums', and 'Simultaneous Release'.

Eclipse Packages | The Eclipse Foundation

Find out more  
1,584,262 Installer Downloads  
709,538 Package Downloads and Updates

## Eclipse IDE 2022-12 R Packages

**Eclipse IDE for Java Developers**  
302 MB 347,472 DOWNLOADS

The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle integration

Windows x86\_64  
macOS x86\_64 | AArch64  
Linux x86\_64 | AArch64

**Eclipse IDE for Enterprise Java and Web Developers**  
516 MB 246,300 DOWNLOADS

Tools for developers working with Java and Web applications, including a Java IDE, tools for JavaScript, TypeScript, JavaServer Pages and Faces, Yaml, Markdown, Web Services, JPA and Data Tools, Maven and Gradle, Git, and more.

Click here to open a bug report with the Eclipse Web Tools Platform.  
Click here to raise an issue with the Eclipse Platform.  
Click here to raise an issue with Maven integration for web projects.  
Click here to raise an issue with Eclipse Wild Web Developer (incubating).

Windows x86\_64  
macOS x86\_64 | AArch64  
Linux x86\_64 | AArch64

**Get Eclipse IDE 2022-12**  
Install your favorite desktop IDE packages.

[Download x86\\_64](#)

[Download Packages](#) | [Need Help?](#)

### RELATED LINKS

- Compare & Combine Packages
- New and Noteworthy
- Install Guide
- Documentation
- Updating Eclipse
- Forums
- Simultaneous Release

Basta descompactar a pasta para uso. Faça um *shortcut* para eclipse.exe

# Java SE Development Kit (JDK)

- **JDK (*Java Development Kit*)**
  - Composto de uma série de ferramentas básicas para o desenvolvimento com Java
  - Engloba:
    - **JRE (*Java Runtime Enviroment*)** → Basicamente a Máquina Virtual Java, Arquivos JAR (Java Archives) com o bytecode das classes Standard Edition (Java SE)
    - **Compilador** (Javac) e outros programas acessórios
  - Há a várias versões (inclusive da Oracle), mas prefira a **OpenJDK** (<https://jdk.java.net/>)

# OpenJDK



The screenshot shows a web browser window with the address bar displaying "jdk.java.net". The page content includes the "jdk.java.net" logo, a subtitle "Production and Early-Access OpenJDK Builds, from Oracle", and sections for "Ready for use: JDK 19, JMC 8" and "Early access: JDK 21, JDK 20, Generational ZGC, JavaFX 20, JavaFX 21, Jextract, Loom, Metropolis, Panama, & Valhalla". It also contains links to "dev.java" for developer news and the "Oracle JDK Download page" for enterprise products. The footer features the Oracle logo and copyright information for 2023.

JDK Builds from Oracle

jdk.java.net

**Production and Early-Access OpenJDK Builds, from Oracle**

**Ready for use: JDK 19, JMC 8**

**Early access: JDK 21, JDK 20, Generational ZGC, JavaFX 20, JavaFX 21, Jextract, Loom, Metropolis, Panama, & Valhalla**

*Looking to learn more about Java? Visit [dev.java](#) for the latest Java developer news and resources.*

*Looking for Oracle JDK builds and information about Oracle's enterprise Java products and services? Visit the [Oracle JDK Download page](#).*

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# JRE (Java Runtime Environment)

- Recomendo também ter uma versão do **Java 8 Runtime Environment** (<https://www.java.com/pt-BR/download/>)



# Configuração no Painel de Controle

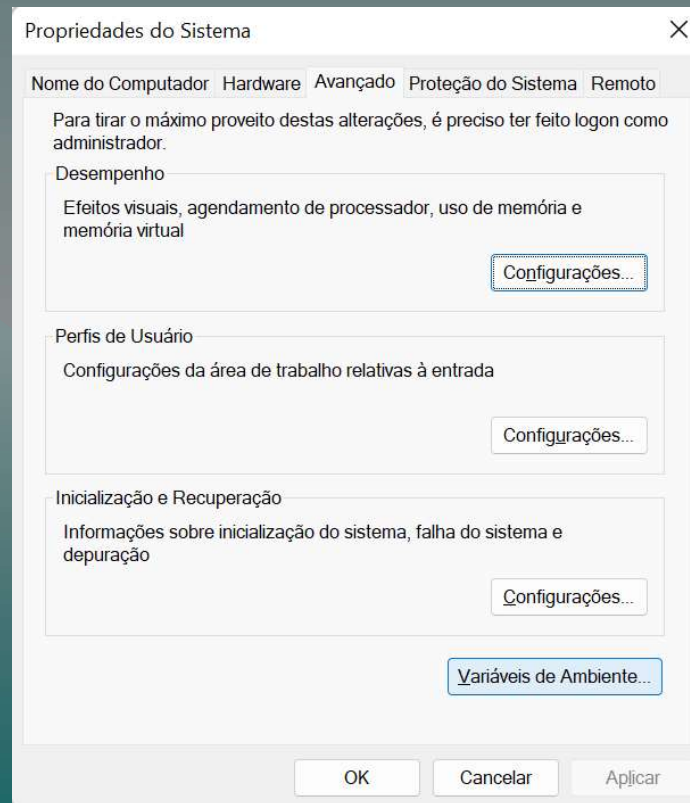
- **Painel de Controle** → [Sistema e Segurança] → [Sistema] → [Configurações Avançadas do Sistema]





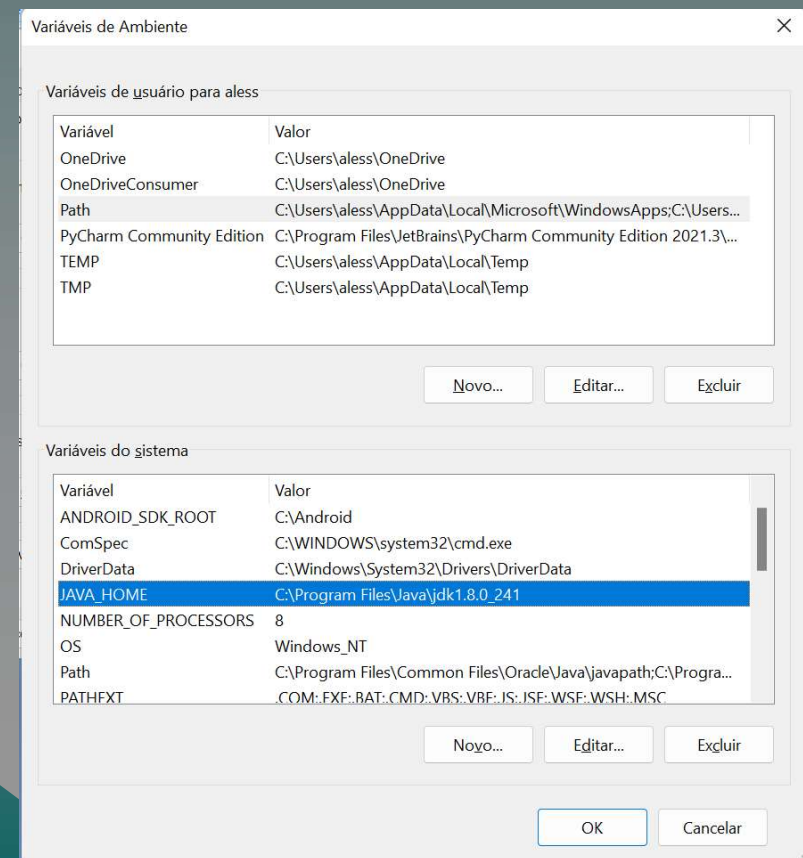
# Configuração no Painel de Controle

- Acesse a opção [Variáveis de Ambiente]



# Configuração no Painel de Controle

- Adicionar a variável de ambiente **JAVA\_HOME** indicando o caminho para o JDK ou JRE.
- Verifique se em **PATH** há a indicação para a pasta **bin** do seu JDK ou JRE.

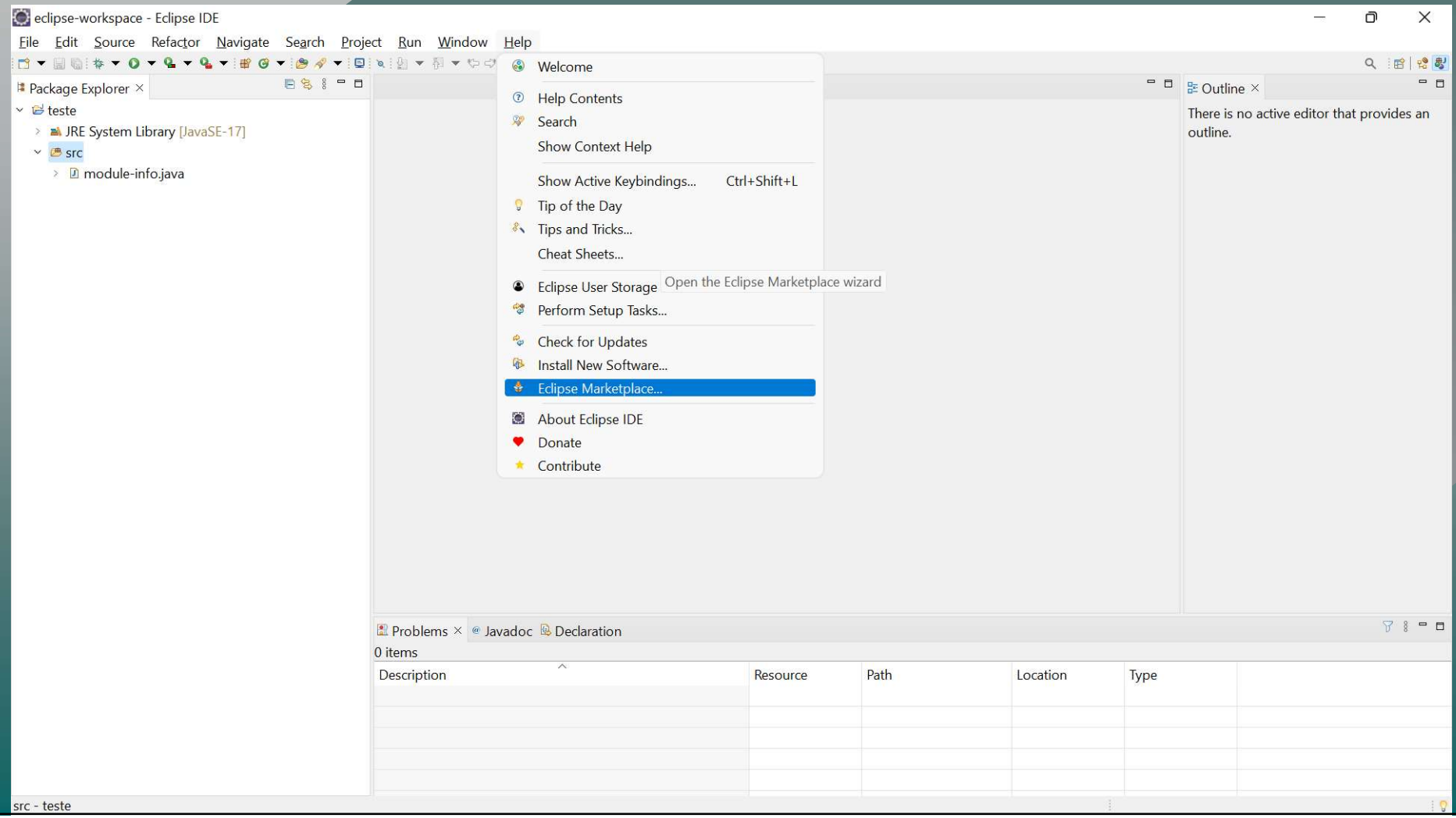


# WindowBuilder

- **Plugin**
  - Extensões que podem ser anexadas em um programa
- **WindowBuilder**
  - Plugin do Eclipse que permite fazer o desenvolvimento de Interfaces Desktop
  - Instalação via *Eclipse Marketplace*

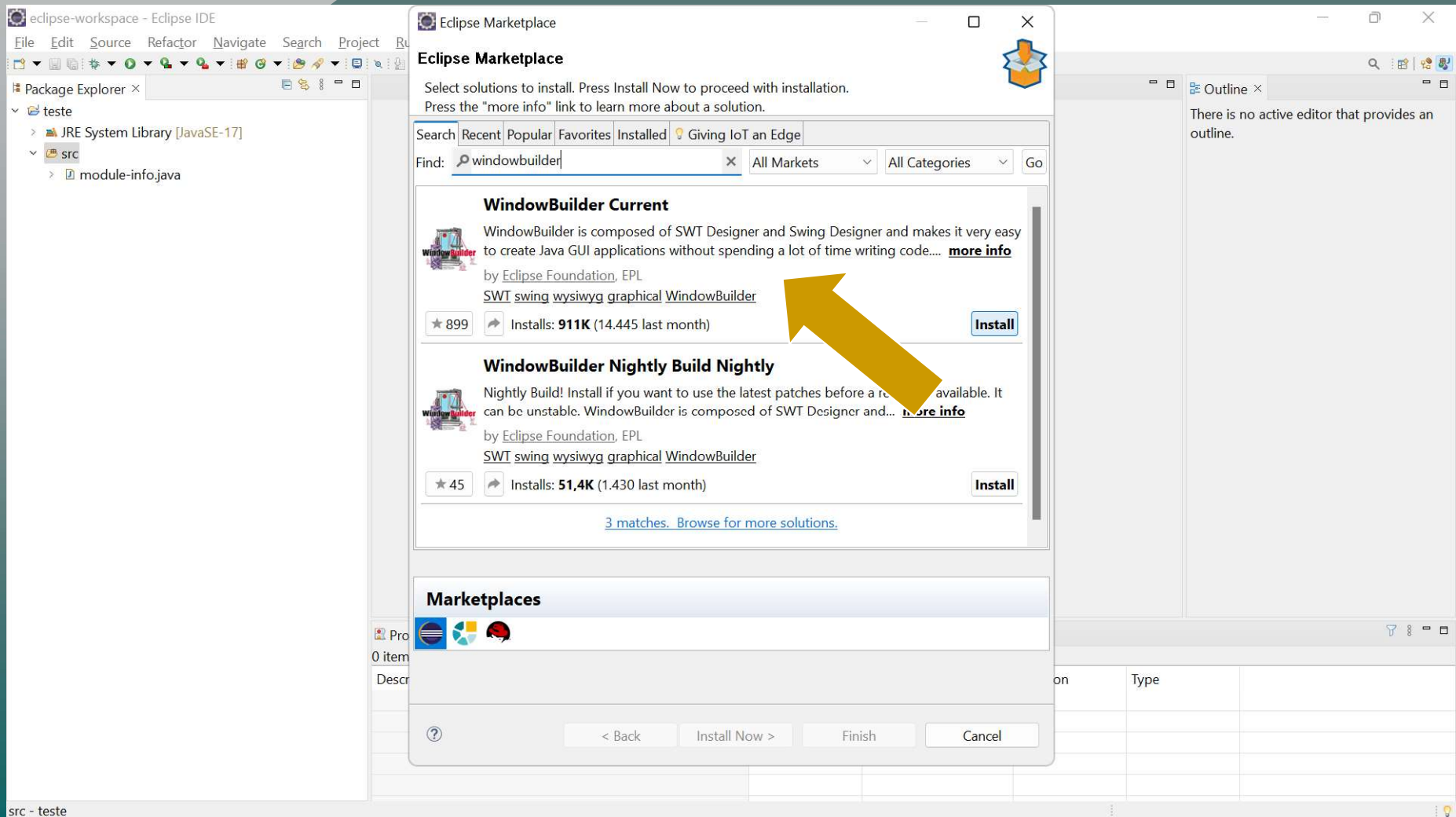
# Window Builder

(Instalação)

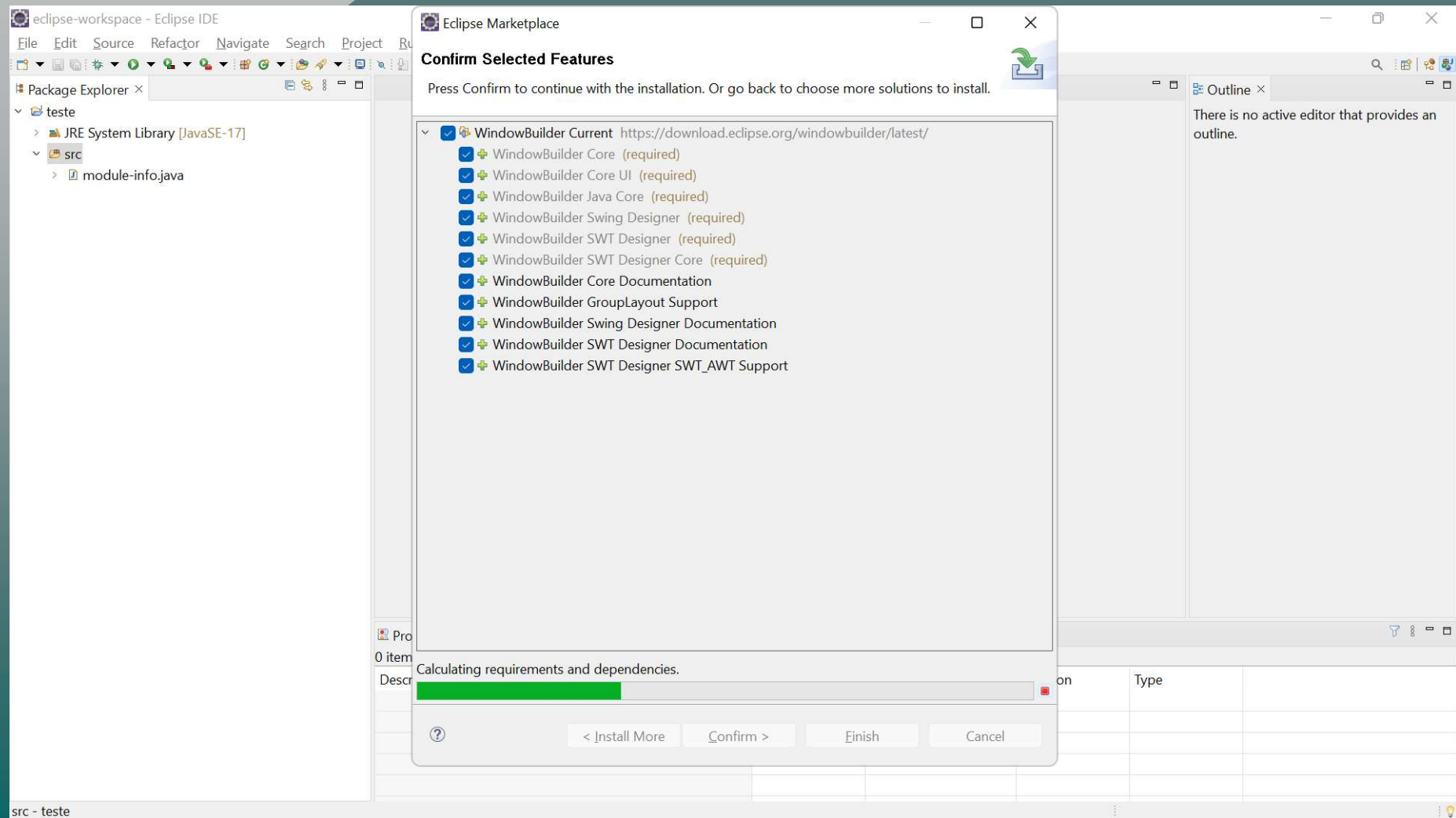


# WindowBuilder

(Instalação)

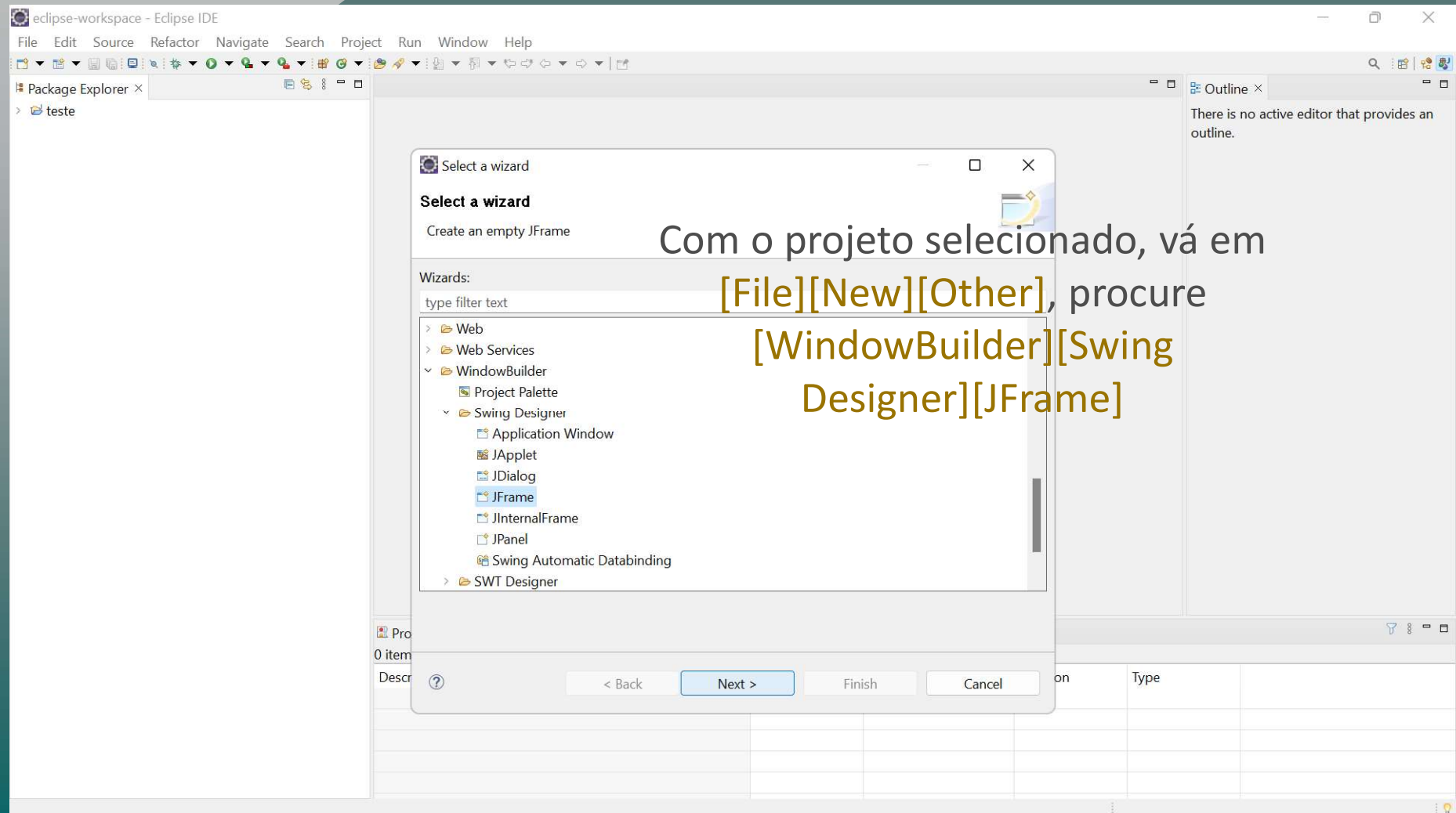


# WindowBuilder (Instalação)

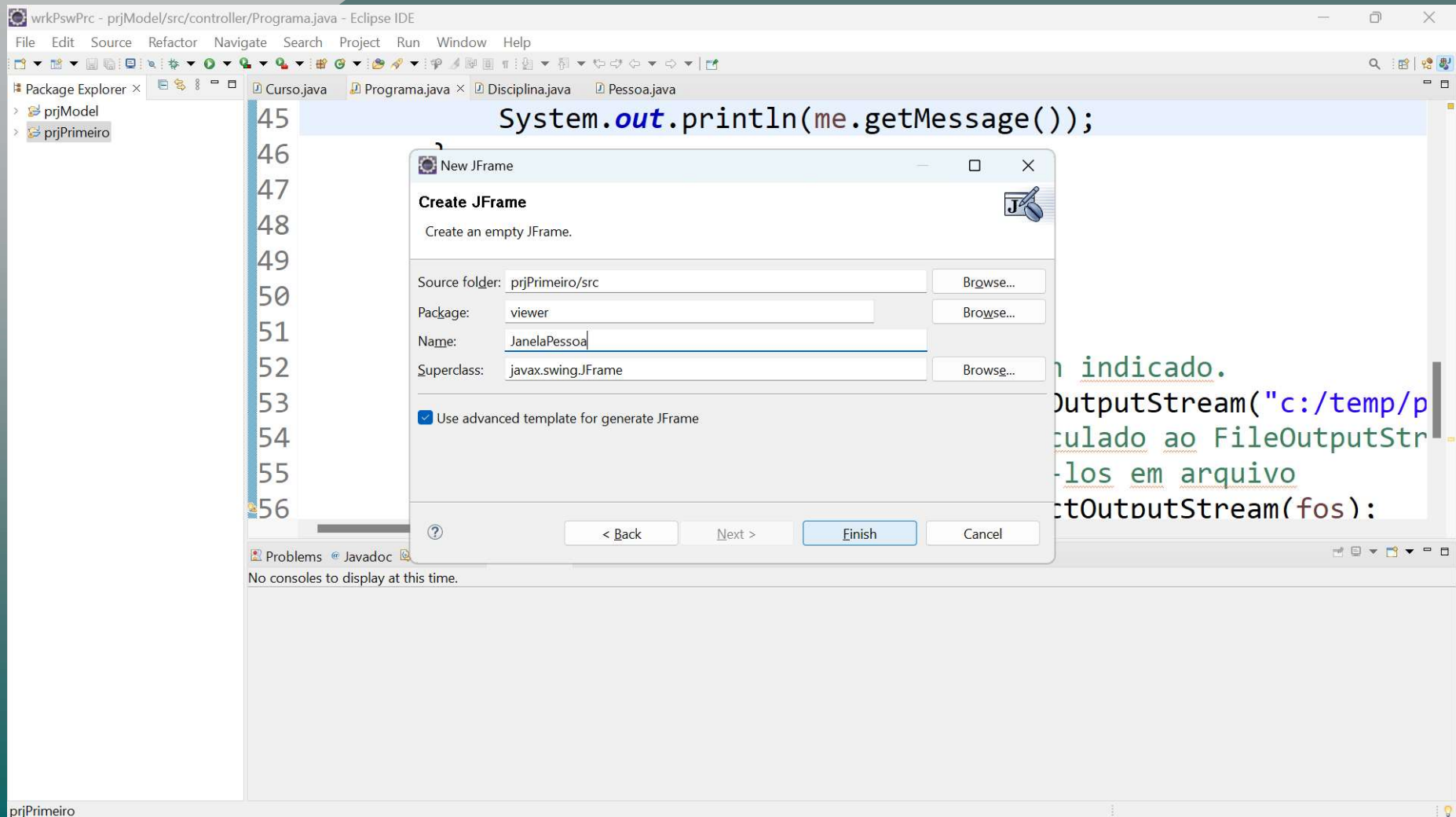


# WindowBuilder

(Uso do Plugin)

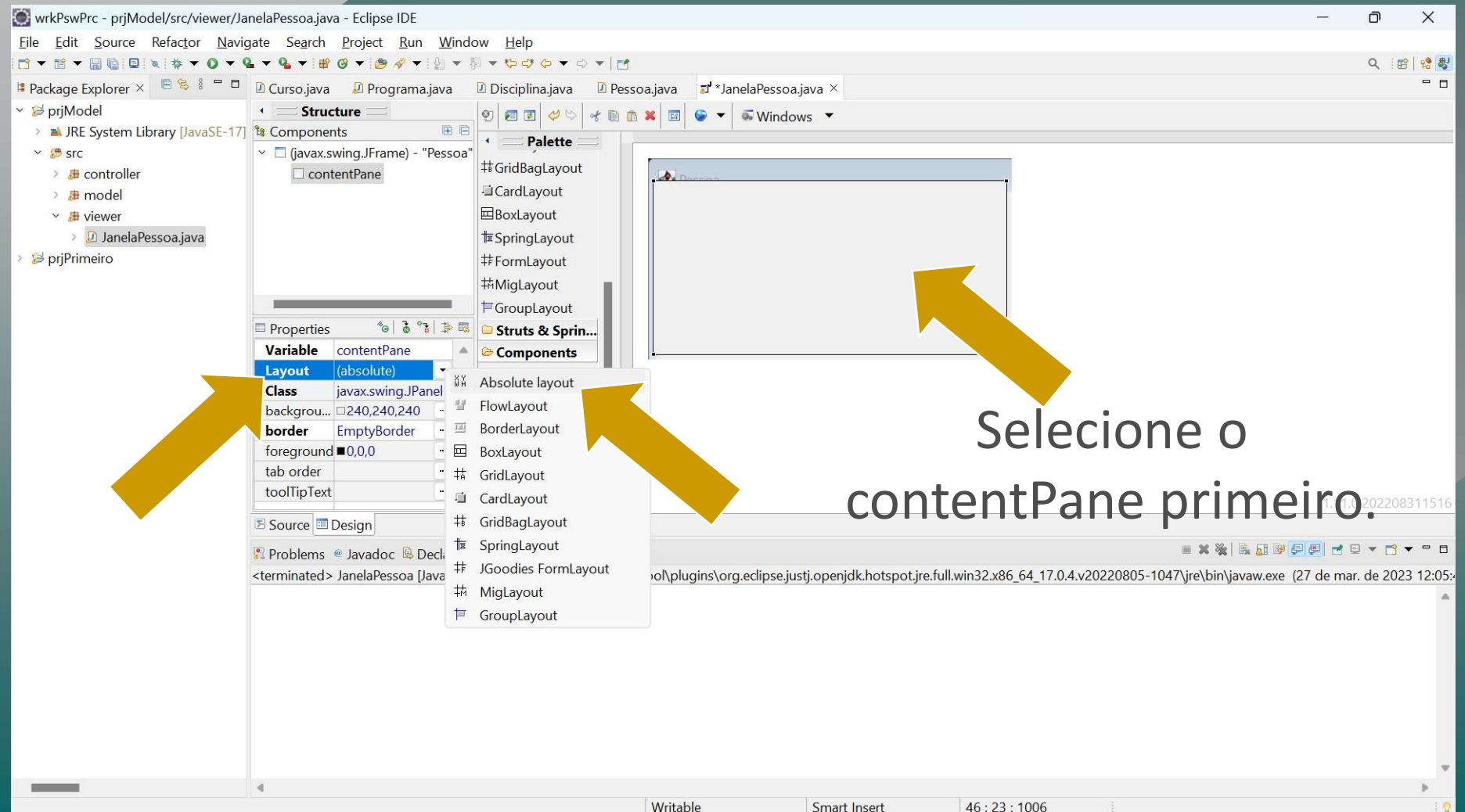


# Criando a Classe Viewer

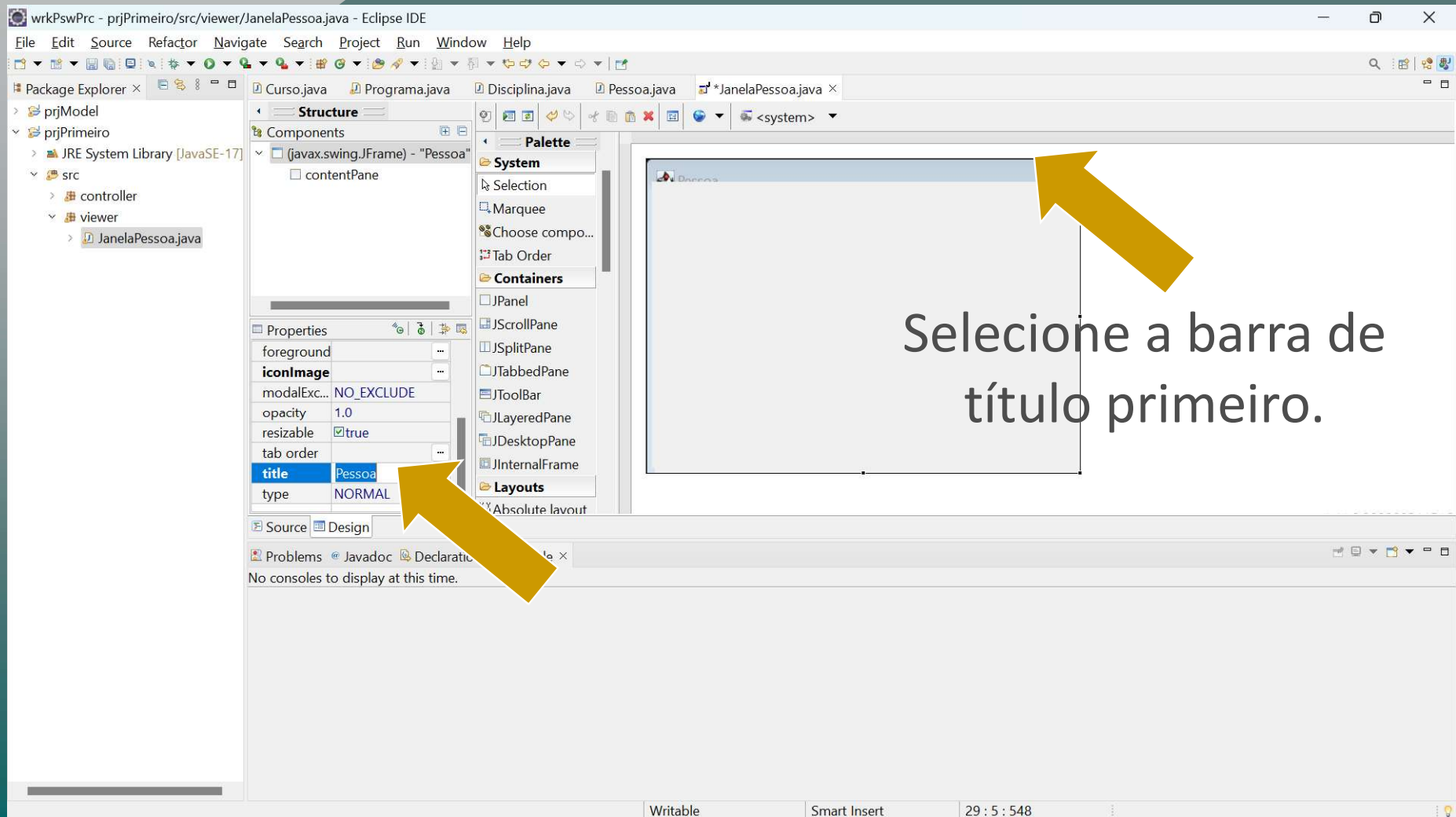




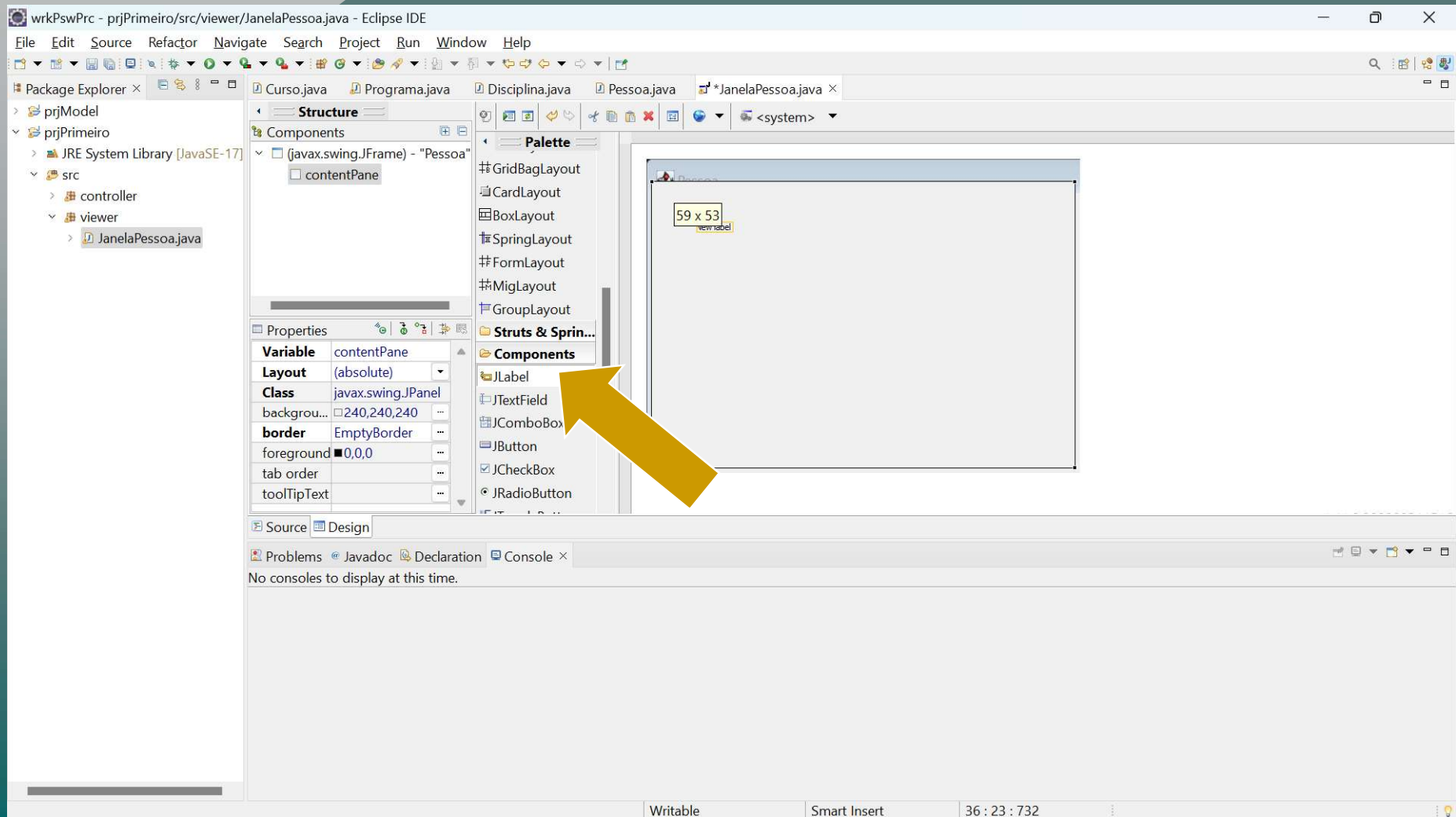
# Alterando o Layout Manager da Janela



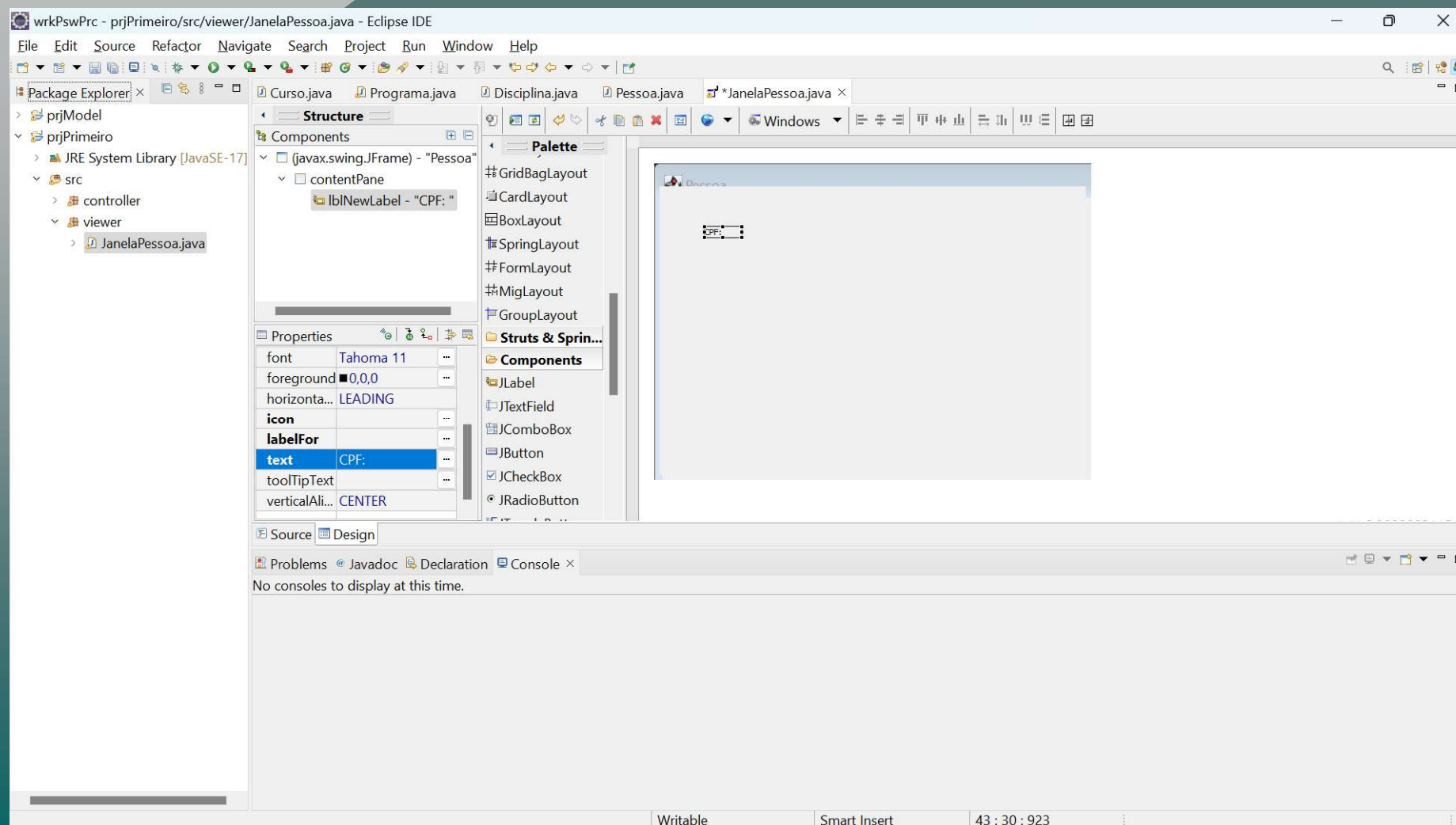
# Alterando o Título da Jane



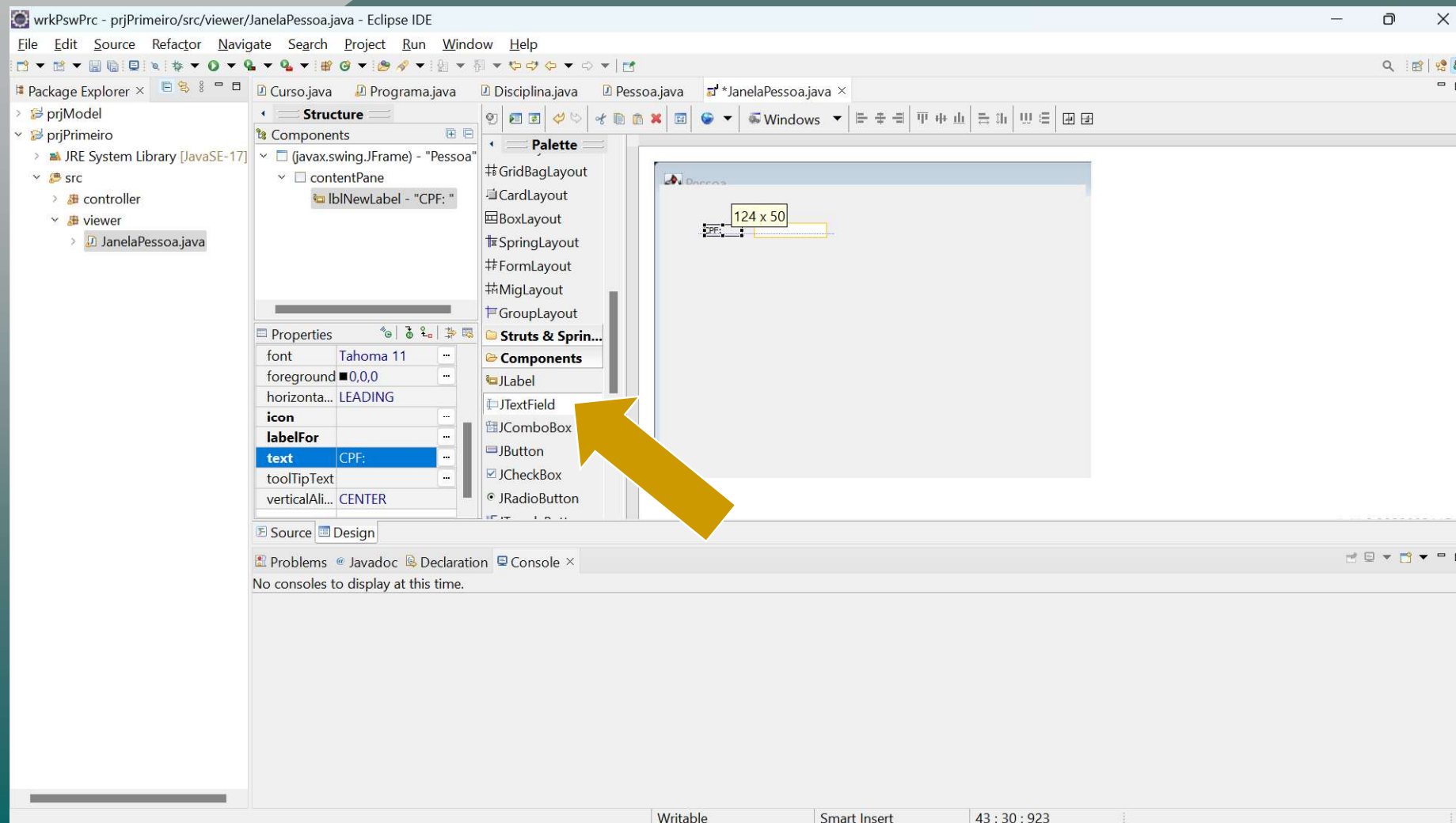
# Adicionando Labels



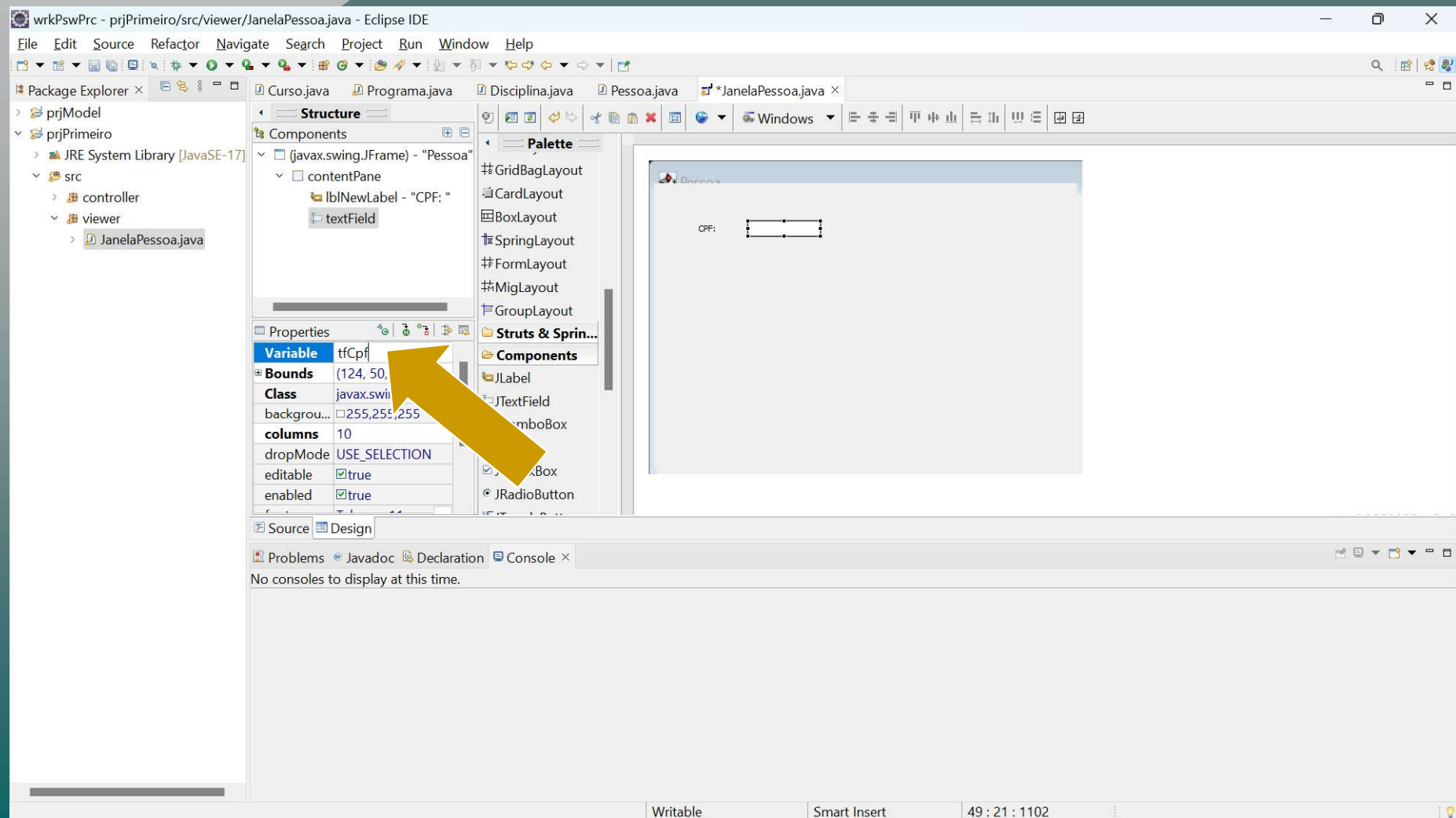
# Alterando o Texto do Label



# Adicionando TextFields

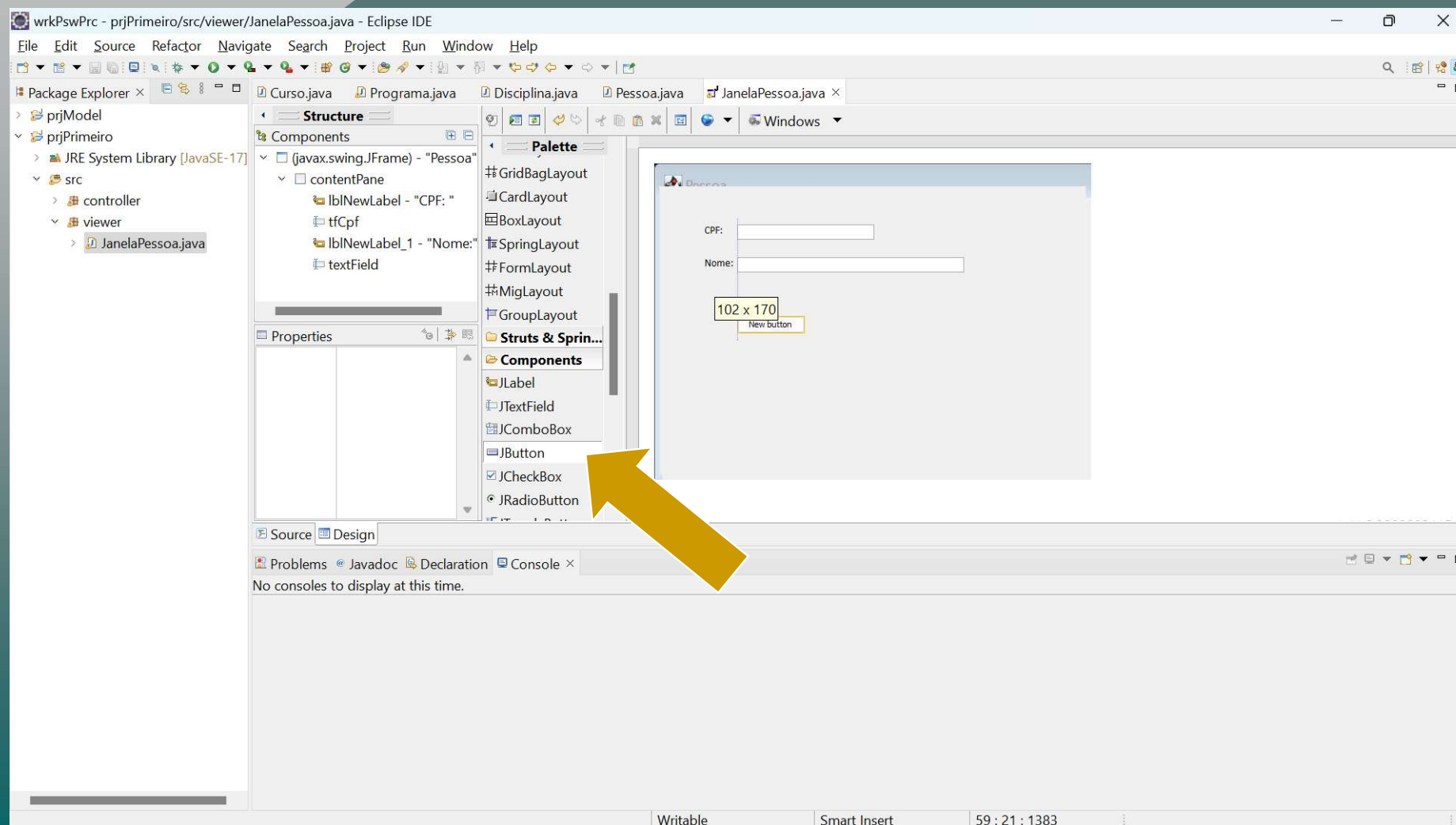


# Definindo o nome do TextField

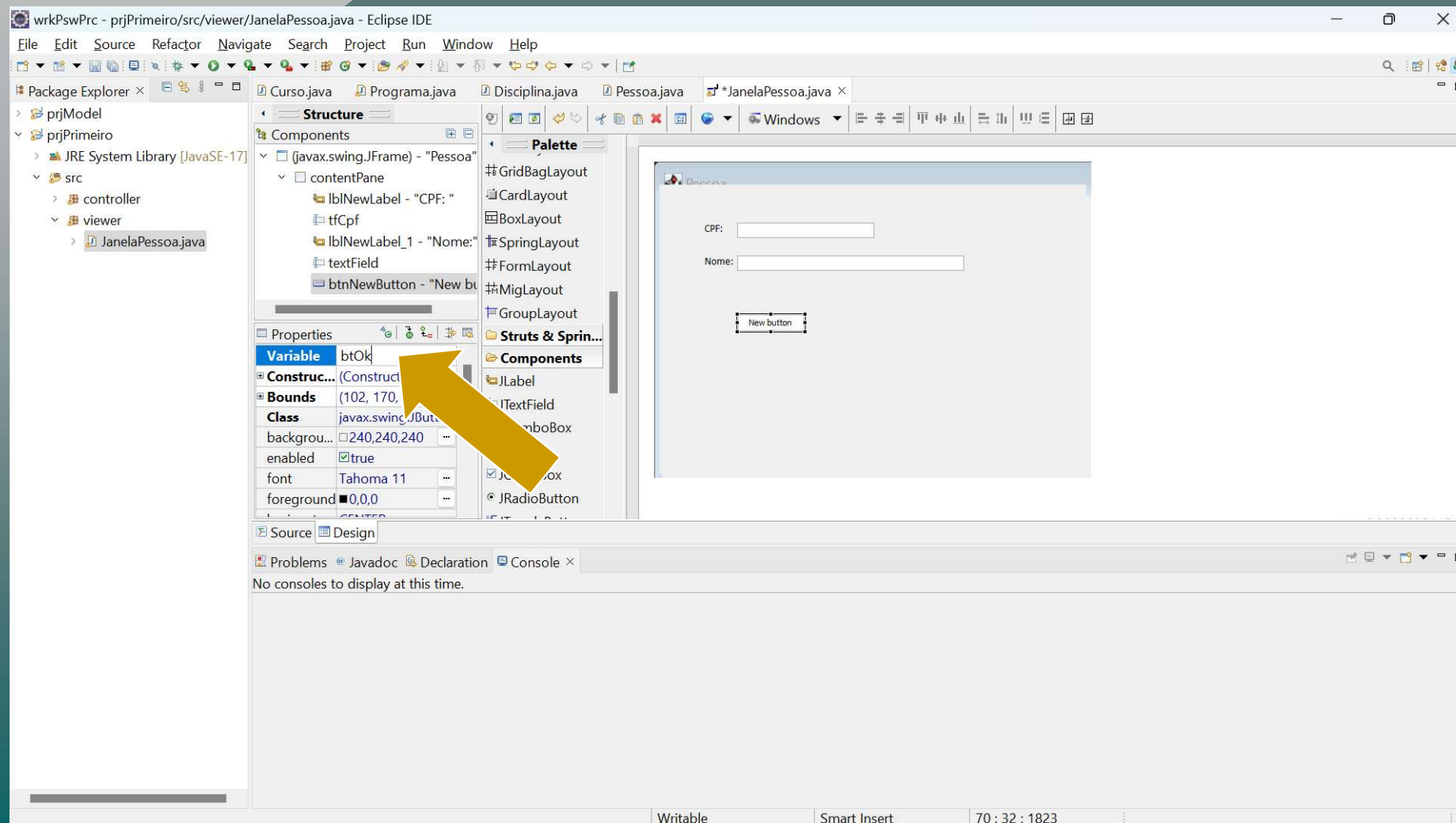




# Adicionando Botões

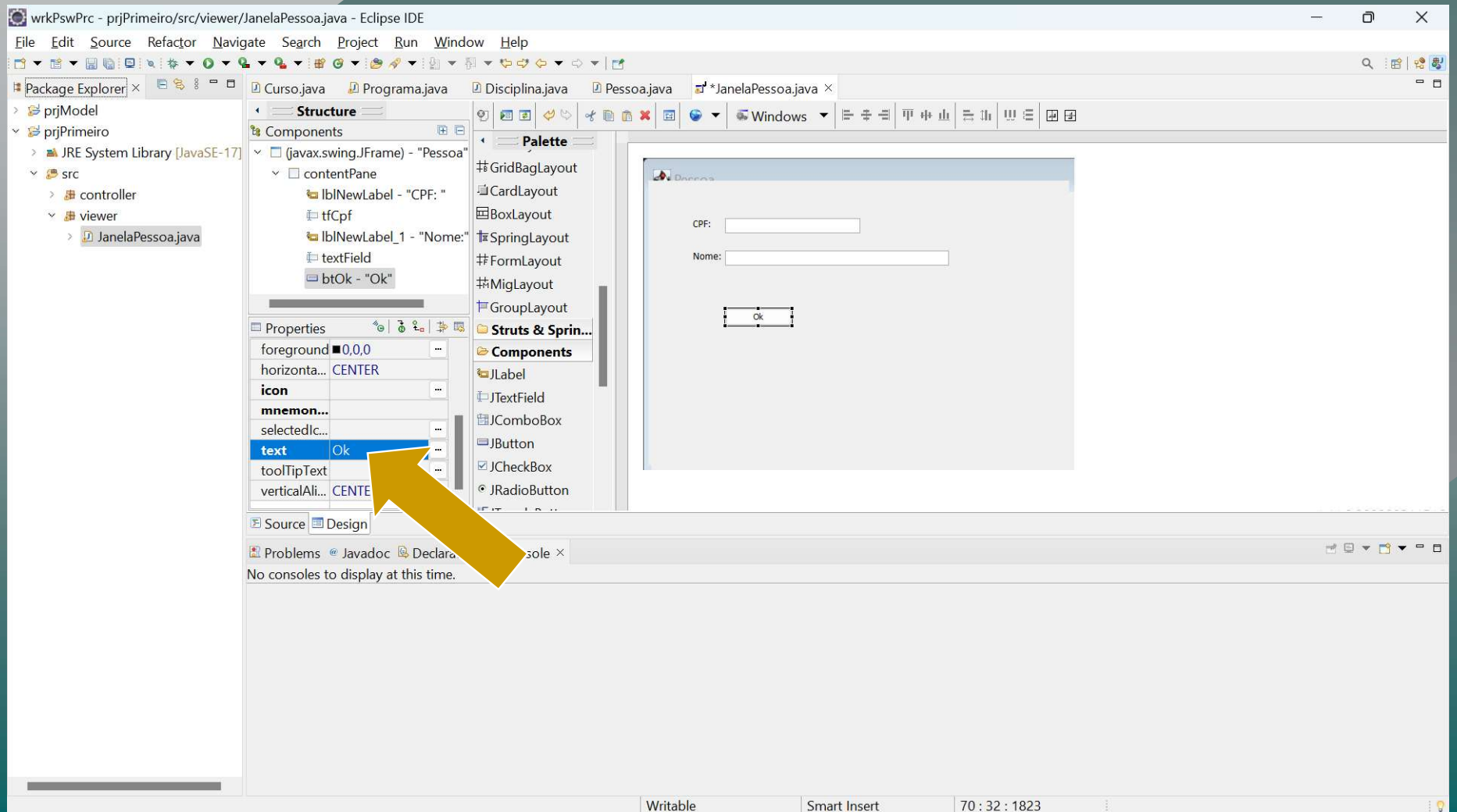


# Definindo Nomes para os Botões

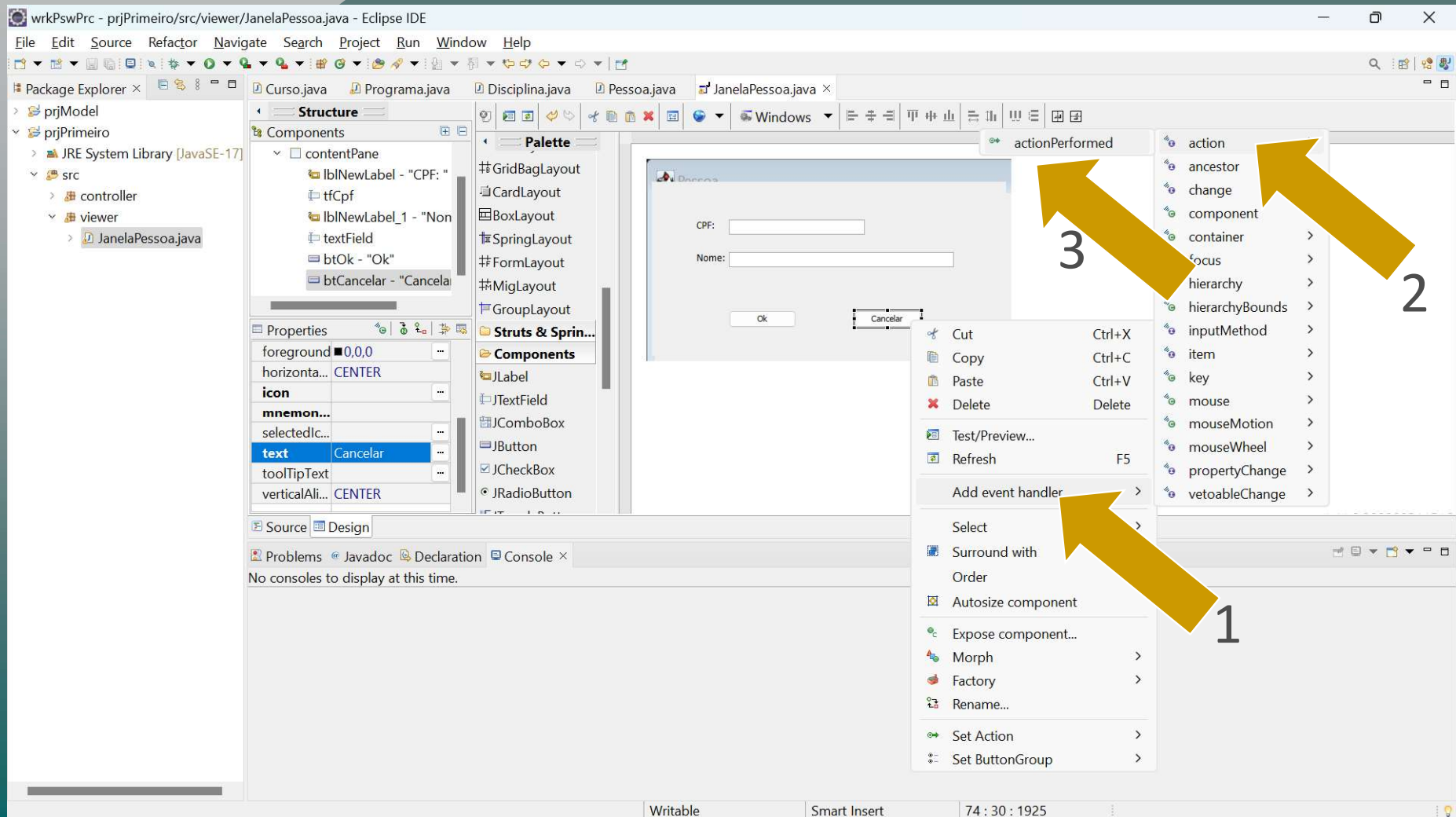




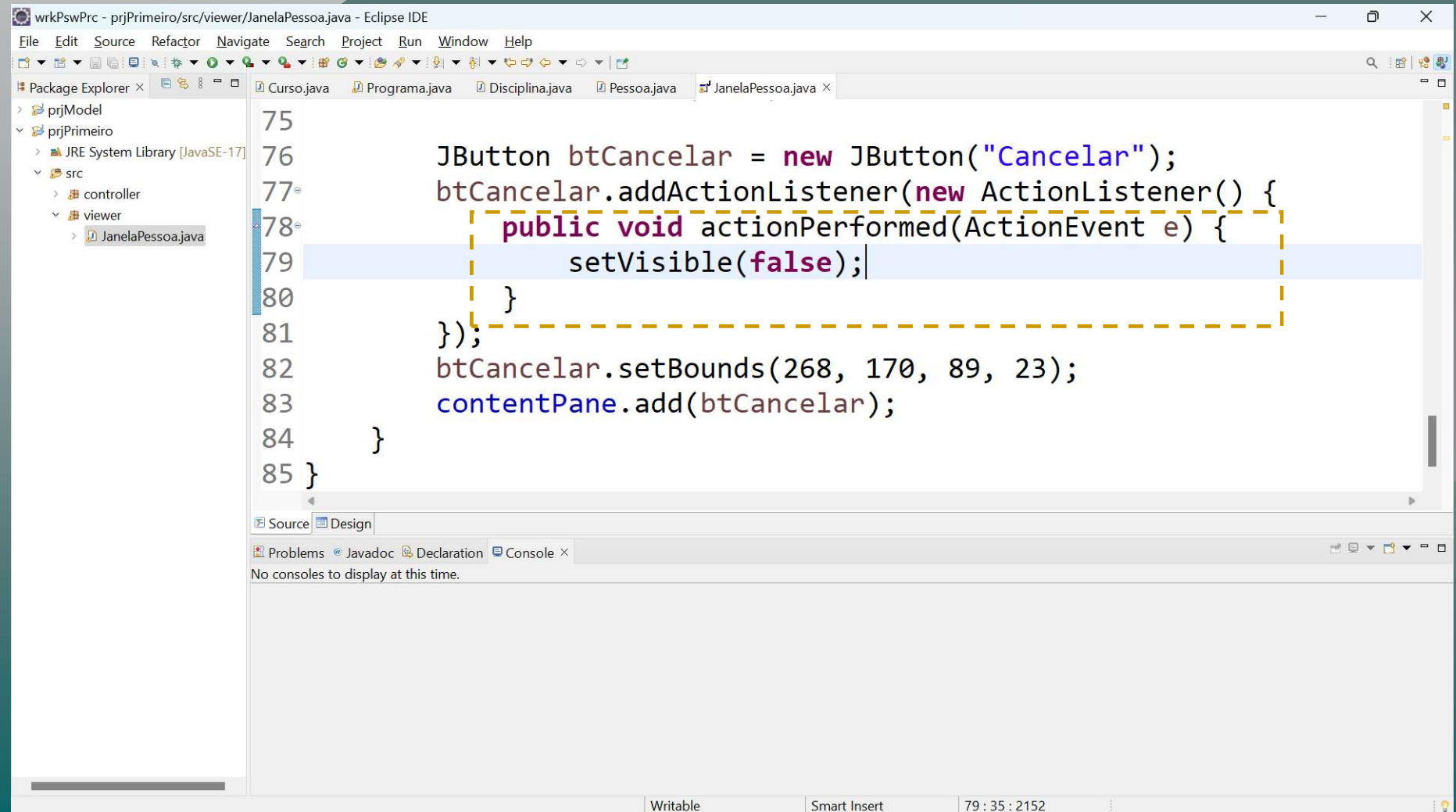
# Alterando o Texto dos Botões



# Programando Callbacks para os Botões



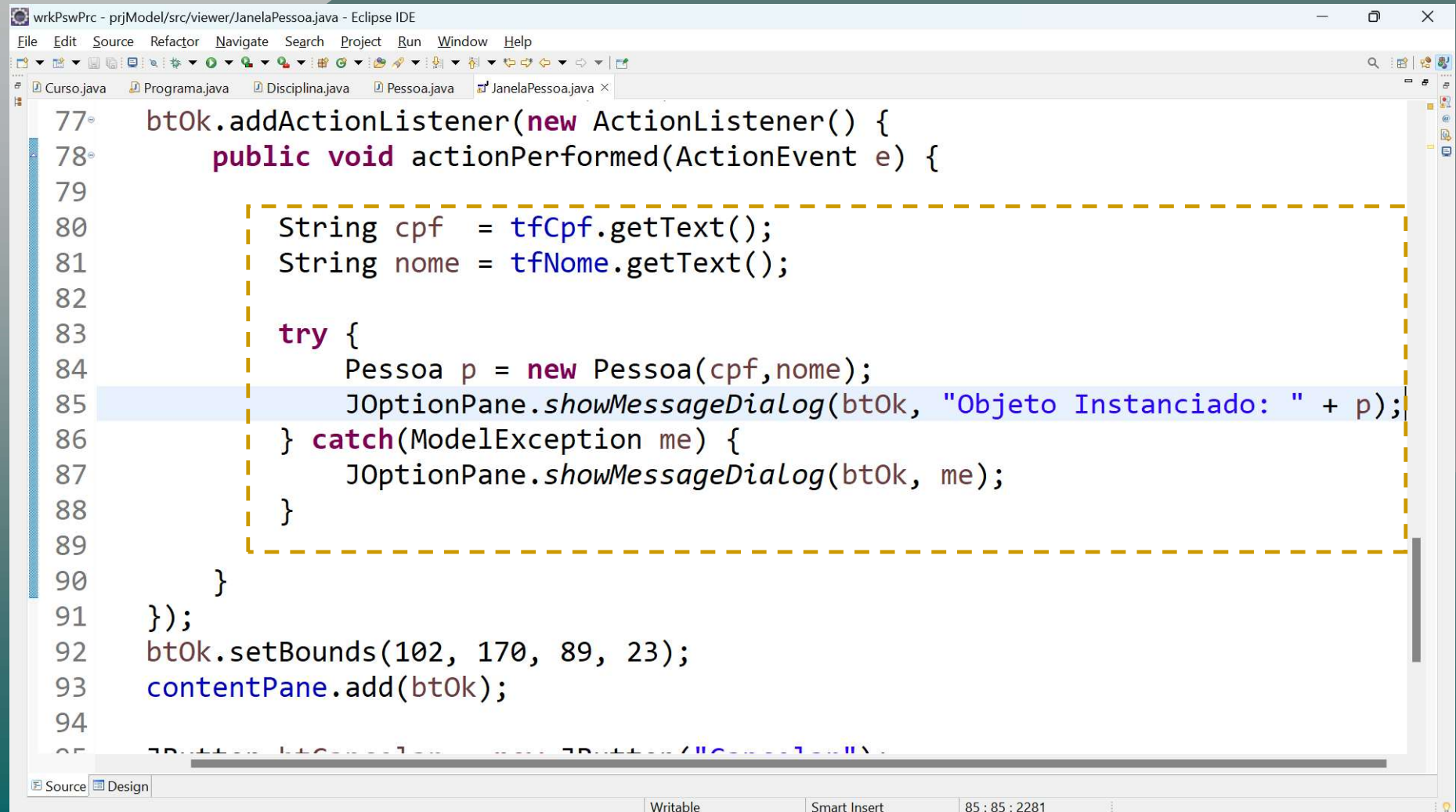
# actionPerformed: Callback do Botão



The screenshot shows the Eclipse IDE with the file `JanelaPessoa.java` open. The code defines a `JButton` named `btCancelar` and adds an `ActionListener` to it. The `actionPerformed` method is highlighted with a dashed yellow box, showing it calls `setVisible(false)` when the button is clicked. The IDE interface includes a Package Explorer on the left, a Source/Design editor at the bottom, and a Problems/Console panel at the very bottom.

```
75  
76 JButton btCancelar = new JButton("Cancelar");  
77 btCancelar.addActionListener(new ActionListener() {  
78     public void actionPerformed(ActionEvent e) {  
79         setVisible(false);  
80     }  
81 });  
82 btCancelar.setBounds(268, 170, 89, 23);  
83 contentPane.add(btCancelar);  
84 }  
85 }
```

# actionPerformed: Callback do Botão

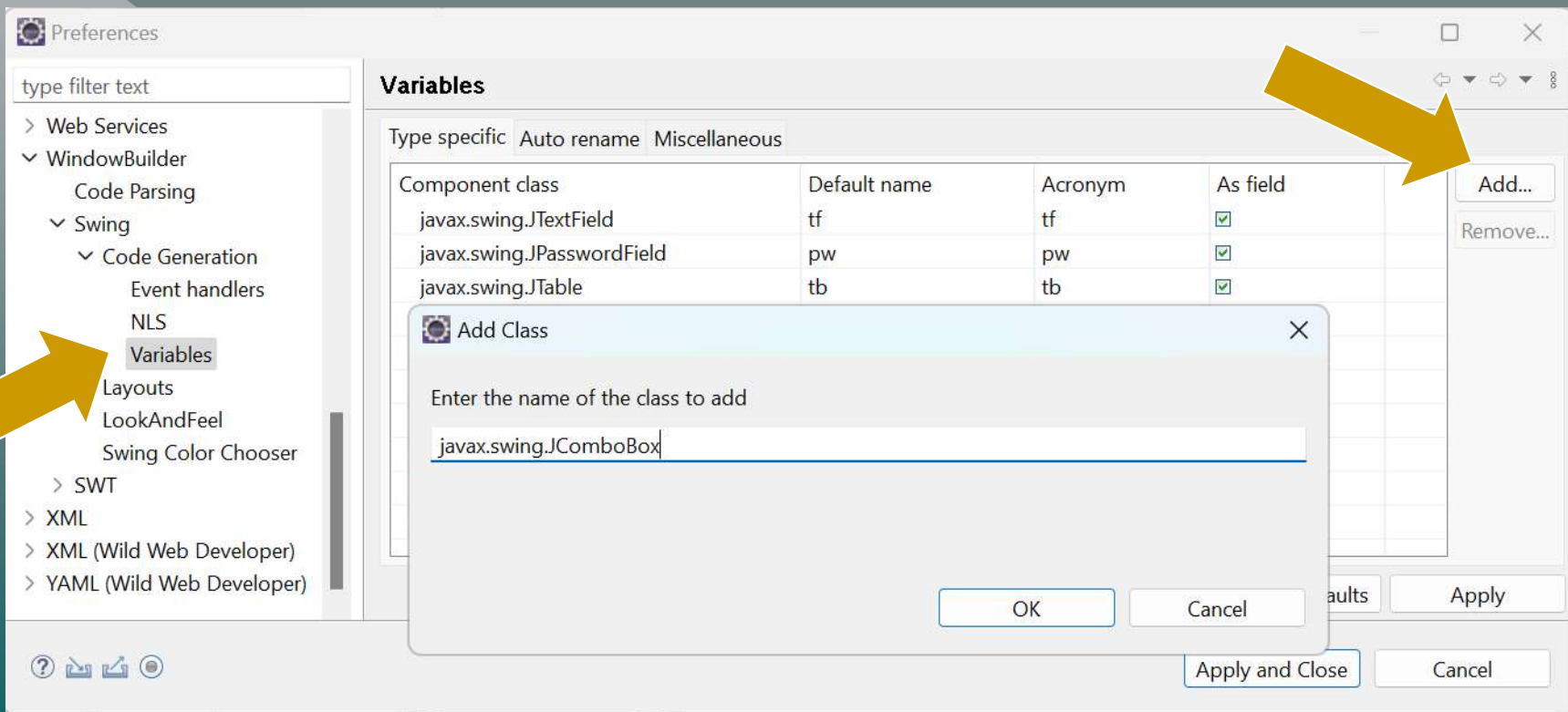


The screenshot shows the Eclipse IDE with the file `JanelaPessoa.java` open. The code defines the `actionPerformed` method for a button `btOk`. A dashed yellow box highlights the logic inside the `try` block, which includes retrieving text from text fields, creating a `Pessoa` object, and displaying a message dialog.

```
77 btOk.addActionListener(new ActionListener() {
78     public void actionPerformed(ActionEvent e) {
79
80         String cpf = tfCpf.getText();
81         String nome = tfNome.getText();
82
83         try {
84             Pessoa p = new Pessoa(cpf,nome);
85             JOptionPane.showMessageDialog(btOk, "Objeto Instanciado: " + p);
86         } catch (ModelException me) {
87             JOptionPane.showMessageDialog(btOk, me);
88         }
89     }
90 }
91 });
92 btOk.setBounds(102, 170, 89, 23);
93 contentPane.add(btOk);
94
95 JButton btCancelar = new JButton("Cancelar");
```

# Configurações do WindowBuilder

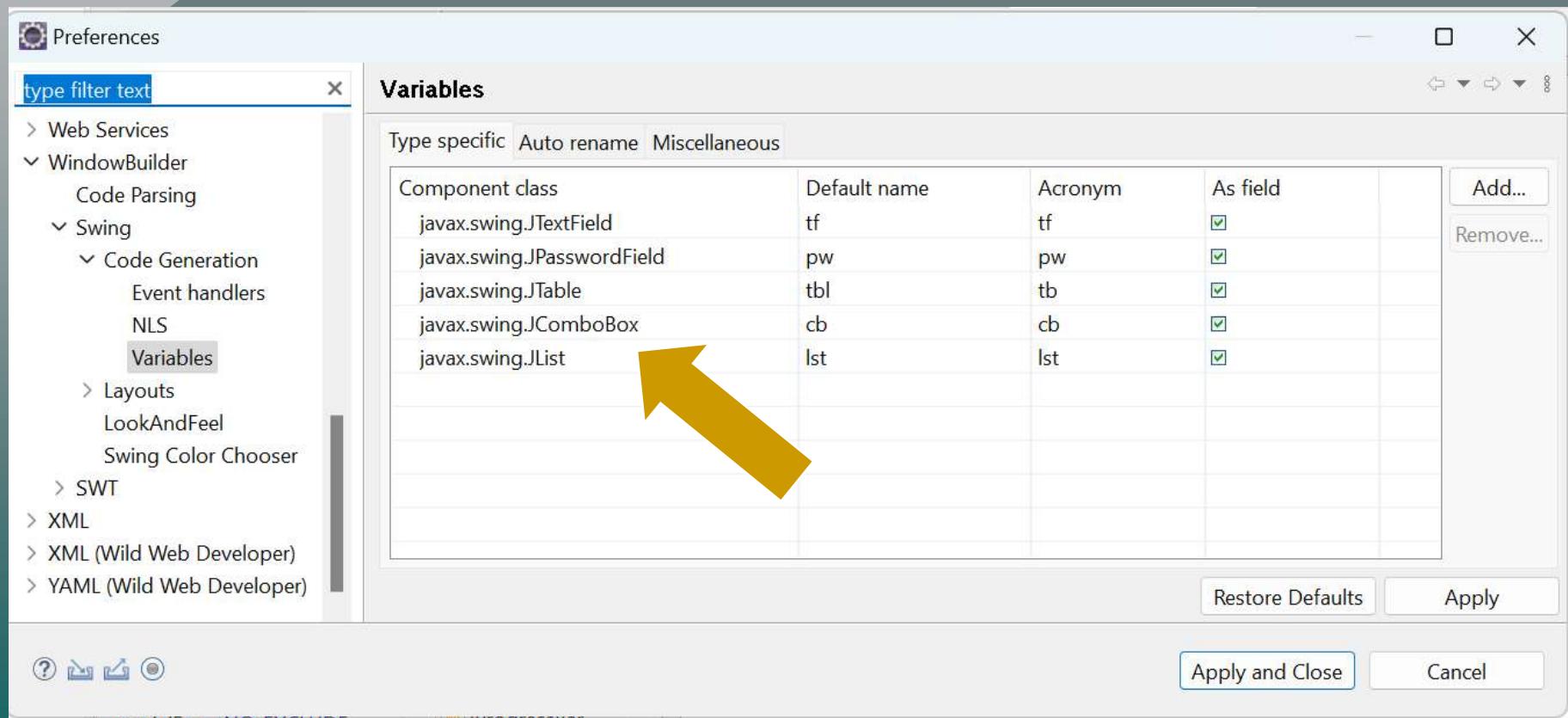
- Acessar: [Window][Preferences]
- Como indicar quais componentes se tornam atributos?





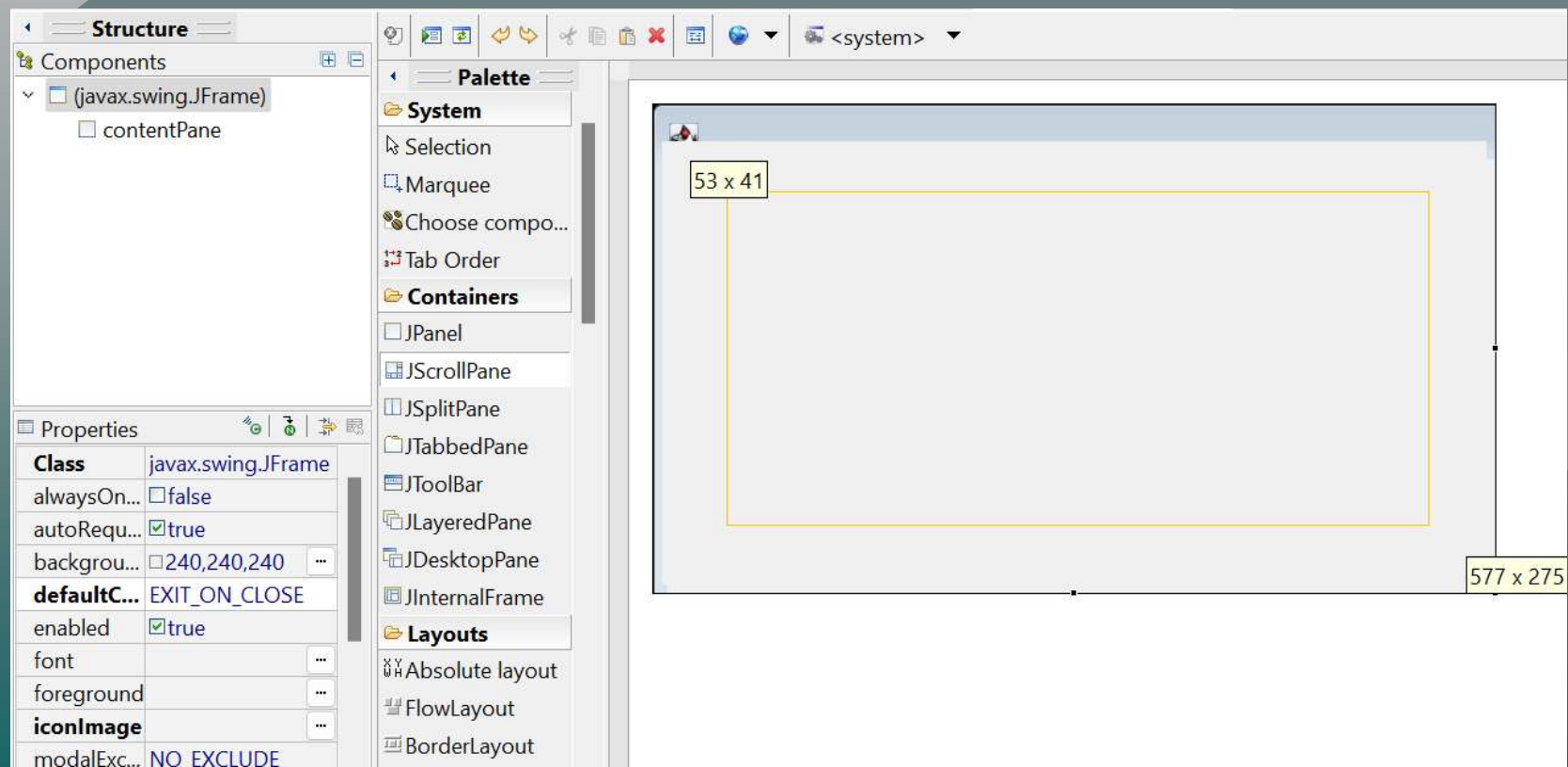
# Configurações do WindowBuilder

- Como indicar quais componentes se tornam atributos?



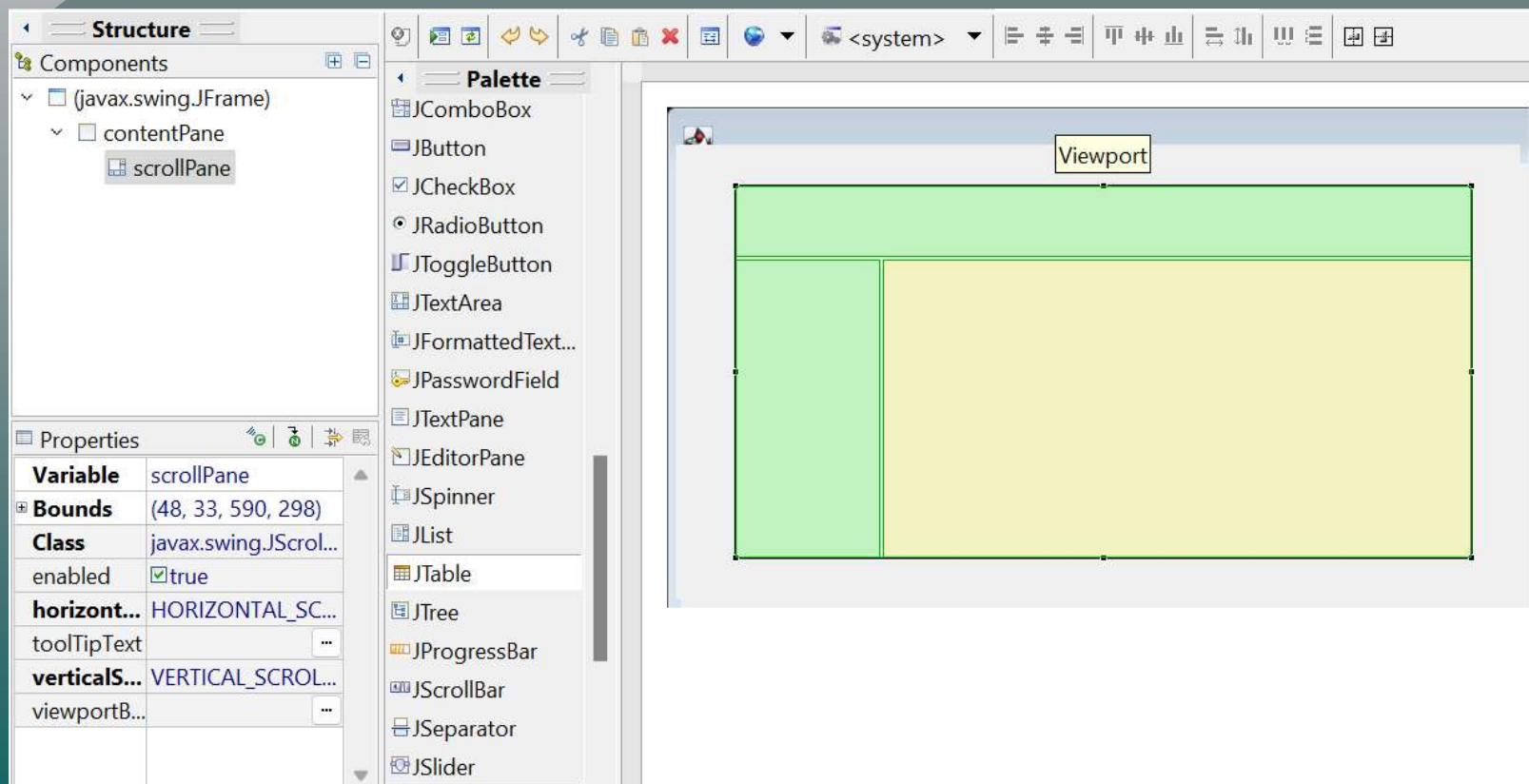
# Trabalhando com JTable

- **Passo 1)** Colocar objeto JScrollPane



# Trabalhando com JTable

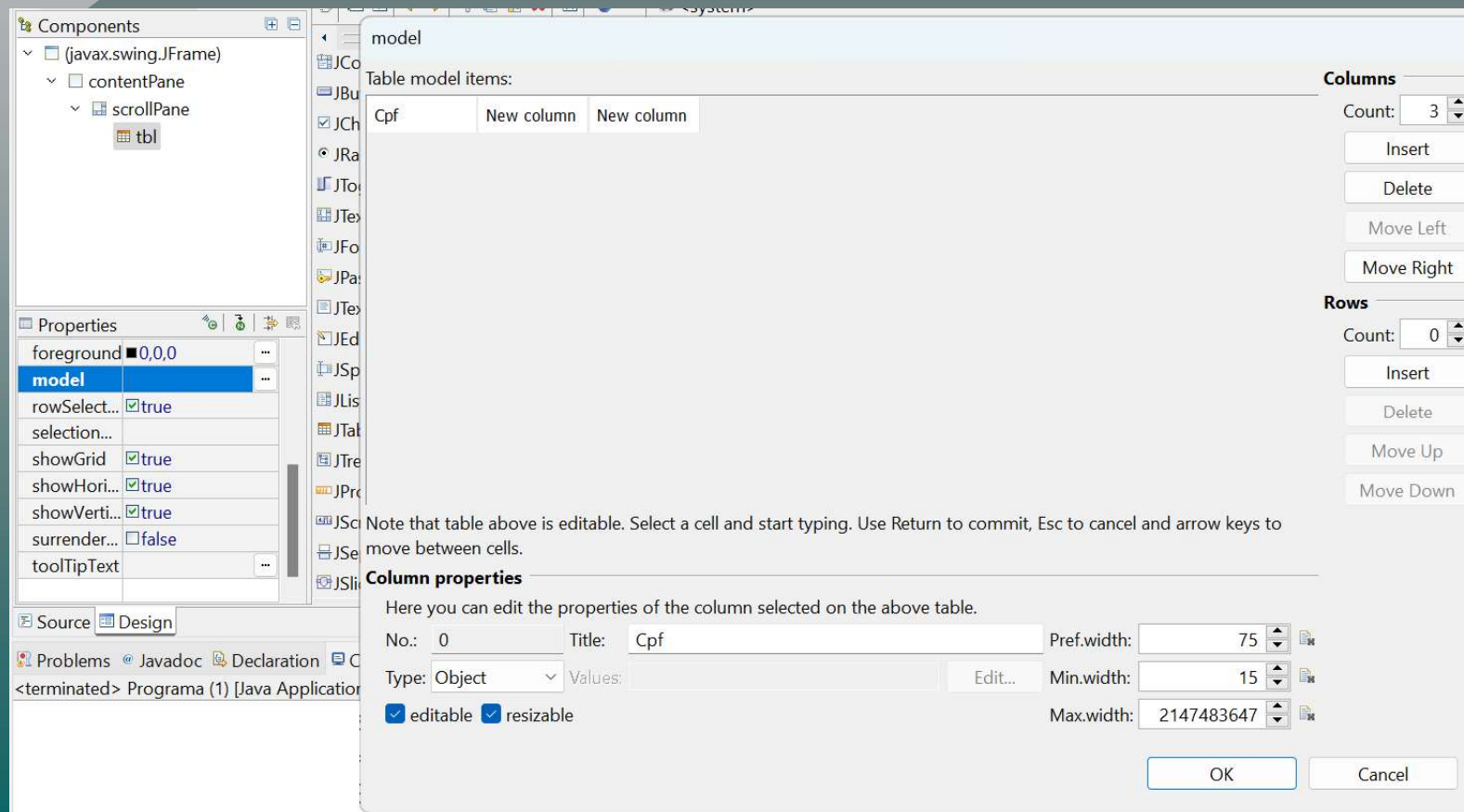
- **Passo 2)** Dentro do JScrollPane colocar o JTable





# Trabalhando com JTable

- Passo 3) Ajustando o TableModel



## Dicas Finais

- Se o projeto tiver o arquivo “**module-info.java**”, **apague** esse arquivo.
- Apague a implementação do método **main** que o **WindowBuilder** coloca em todas as janelas que você criar.

Apagar este código!

```
/**
 * Launch the application.
 */
public static void main(String[] args) {
    EventQueue.invokeLater(new Runnable() {
        public void run() {
            try {
                Janela frame = new Janela();
                frame.setVisible(true);
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    });
}
```