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What is Eclipse WindowBuilder?

- Eclipse WindowBuilder is a bi-directional Java GUI designer plugin for Eclipse.
- It is bi-directional because the developer can easily move between a Drag n' Drop designer and the generated code.
- WindowBuilder is composed of Standard Window Toolkit (SWT) Designer and Swing Designer



What is Eclipse WindowBuilder?

- It is possible to add controls using drag-and-drop and add event handlers to those controls
- WindowBuilder is also able to work with the different Eclipse-based IDEs
- The plug-in builds an abstract syntax tree (AST) to navigate the source code



What is Eclipse WindowBuilder?

- Generated code doesn't require any additional libraries to compile and run, it can be used without having WindowBuilder installed
- Code can be manually edited anywhere
- It allows most user refactorings (move, rename and subdivide methods without problems)



WindowBuilder History

1991 – Original release from Smalltalk/V by Cooper & Peters

1993 – VisualSmalltalk release by ObjectShare 1994 – VisualAge Smalltalk release by ObjectShare

1997 – VisualAge Smalltalk release by Instantiations

2003 – New Eclipse/Java version for SWT/RCP (SWT Designer)



WindowBuilder History

2004 – Swing support added (Swing Designer)

2006 – Google Web Toolkit (GWT) support added (GWT Designer)

2009 – Eclipse community awarded for the best Commercial Add-on

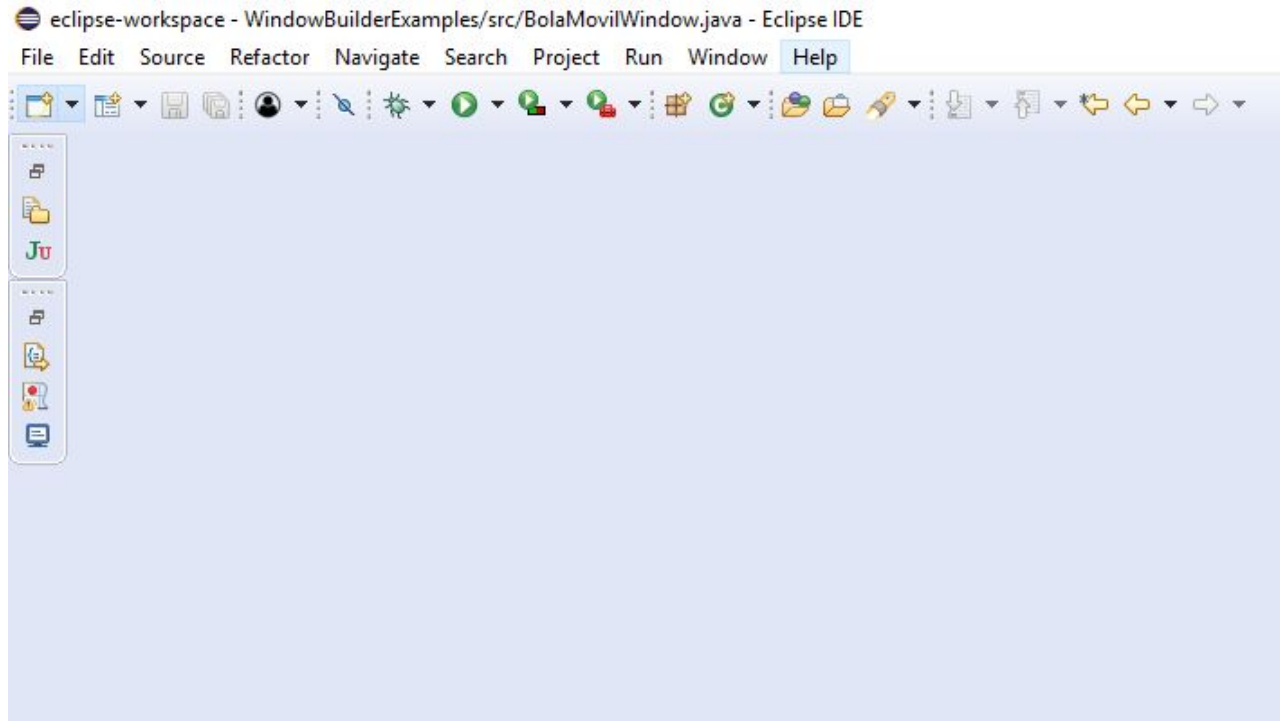
2010 – Acquired by Google and released free to the world



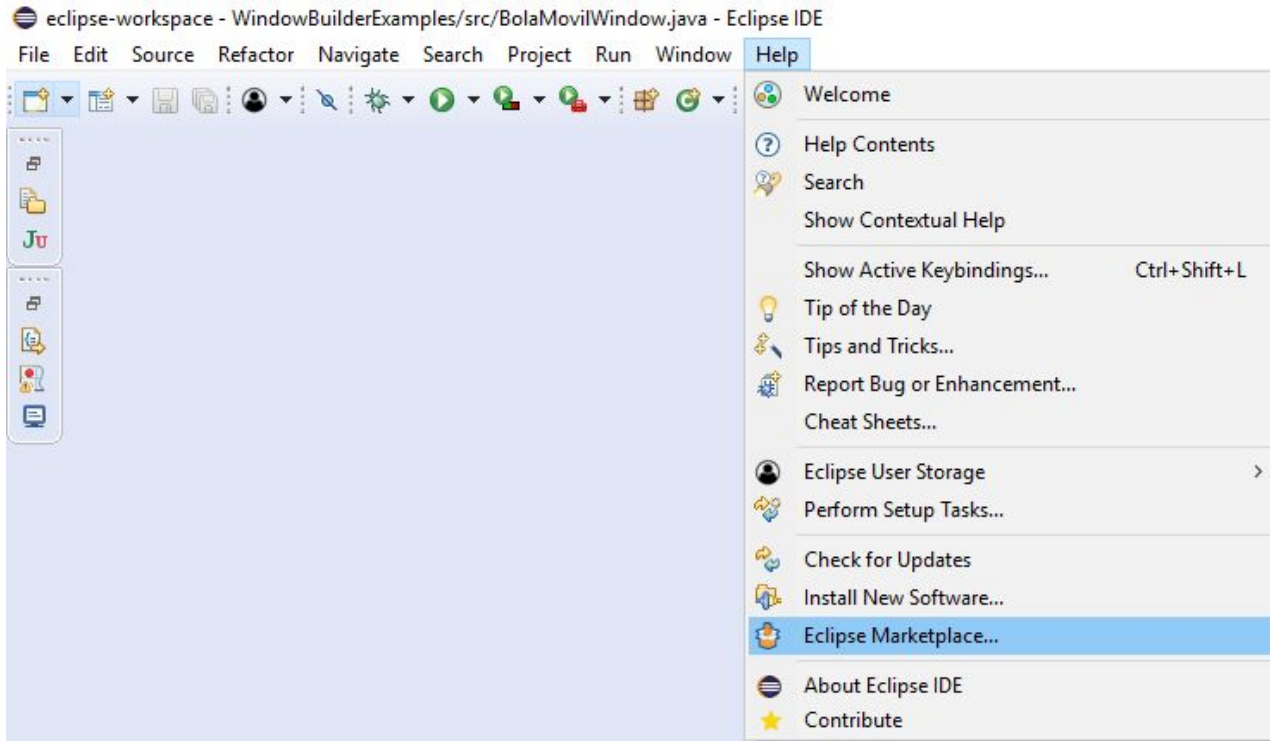
Install Eclipse WindowBuilder

1. Install some flavor of Eclipse
2. Install from the eclipse MarketPlace

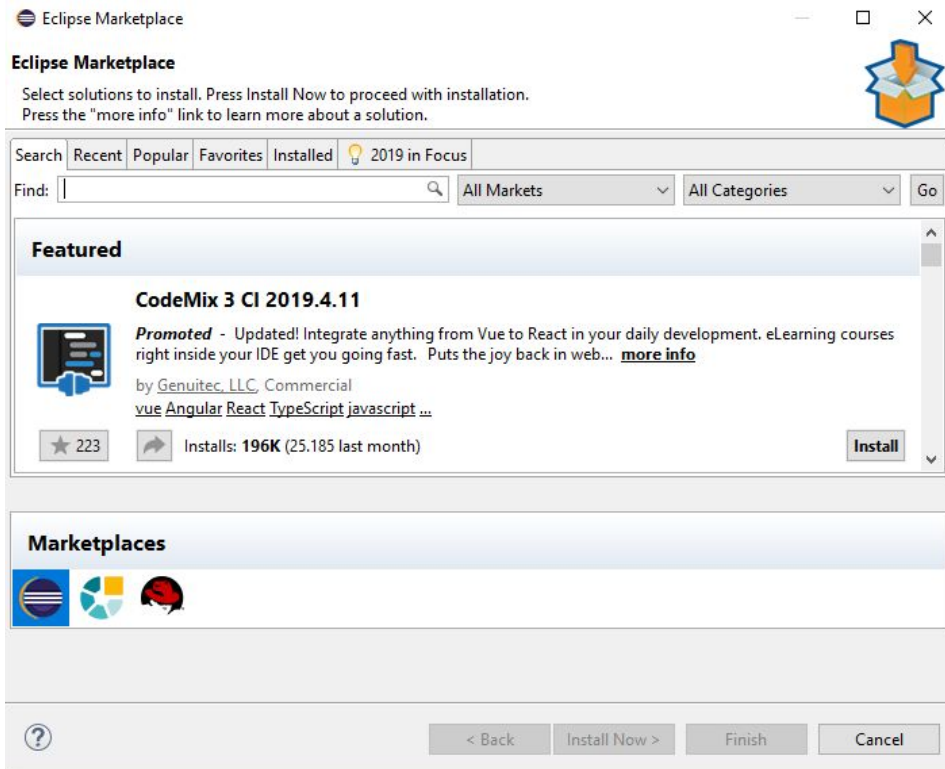
Install Eclipse WindowBuilder



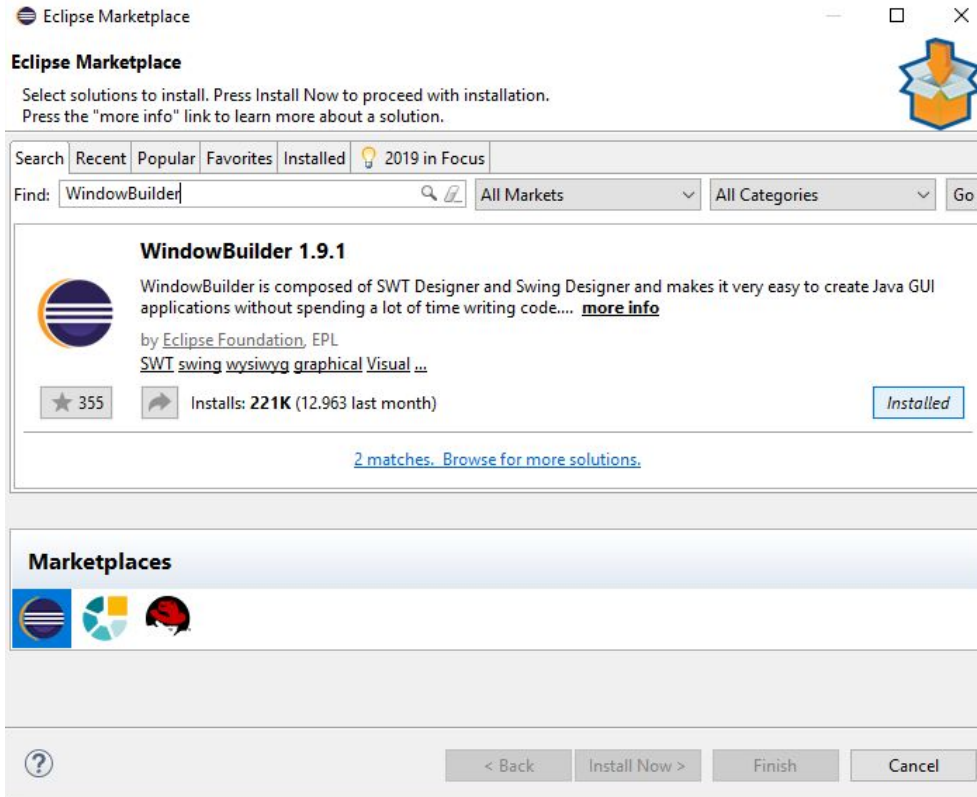
Install Eclipse WindowBuilder



Install Eclipse WindowBuilder



Install Eclipse WindowBuilder



The screenshot shows the Eclipse Marketplace interface. At the top, the title bar reads "Eclipse Marketplace" with standard window controls. Below the title bar, the text "Eclipse Marketplace" is followed by instructions: "Select solutions to install. Press Install Now to proceed with installation. Press the 'more info' link to learn more about a solution." A blue cube icon with an orange arrow is visible in the top right corner.

The main content area features a search bar with the text "WindowBuilder" and a magnifying glass icon. To the right of the search bar are dropdown menus for "All Markets" and "All Categories", and a "Go" button. Below the search bar, the results for "WindowBuilder 1.9.1" are displayed. The results include the Eclipse logo, the text "WindowBuilder is composed of SWT Designer and Swing Designer and makes it very easy to create Java GUI applications without spending a lot of time writing code.... [more info](#)", and the text "by Eclipse Foundation, EPL" and "SWT swing wysiwyg graphical Visual ...". Below this, there is a star icon with the number "355", a download icon, and the text "Installs: 221K (12.963 last month)". A blue button labeled "Installed" is positioned to the right of the install information. At the bottom of the results section, there is a link that says "2 matches. [Browse for more solutions.](#)".

Below the search results, there is a section titled "Marketplaces" with three icons: the Eclipse logo, a green and yellow icon, and a red and black icon.

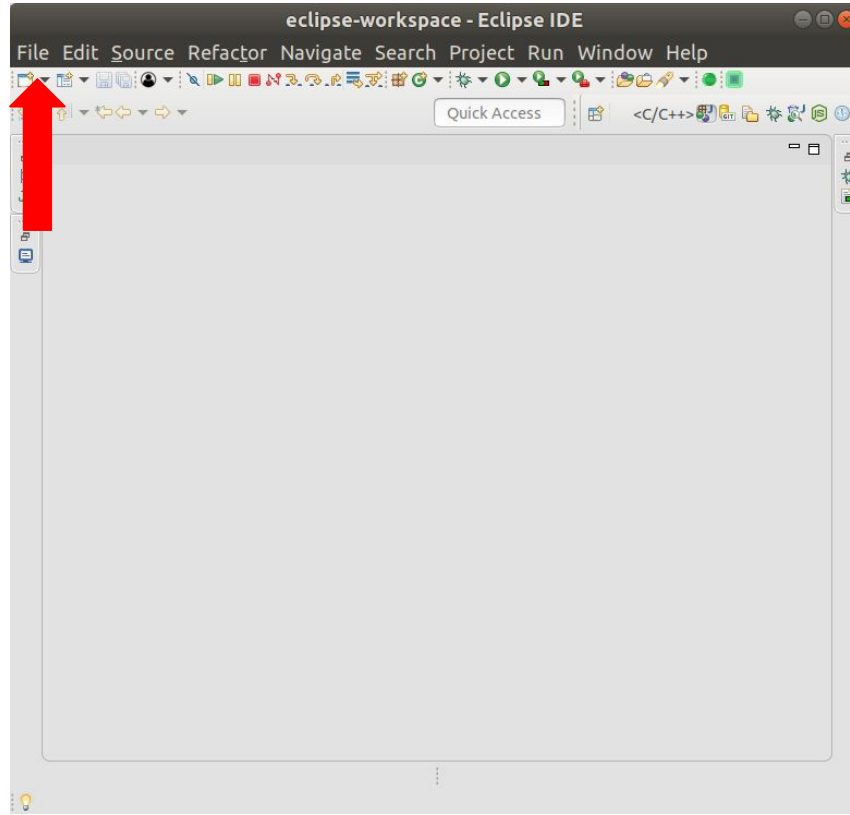
At the bottom of the window, there is a navigation bar with a question mark icon, a "< Back" button, an "Install Now >" button, a "Finish" button, and a "Cancel" button.



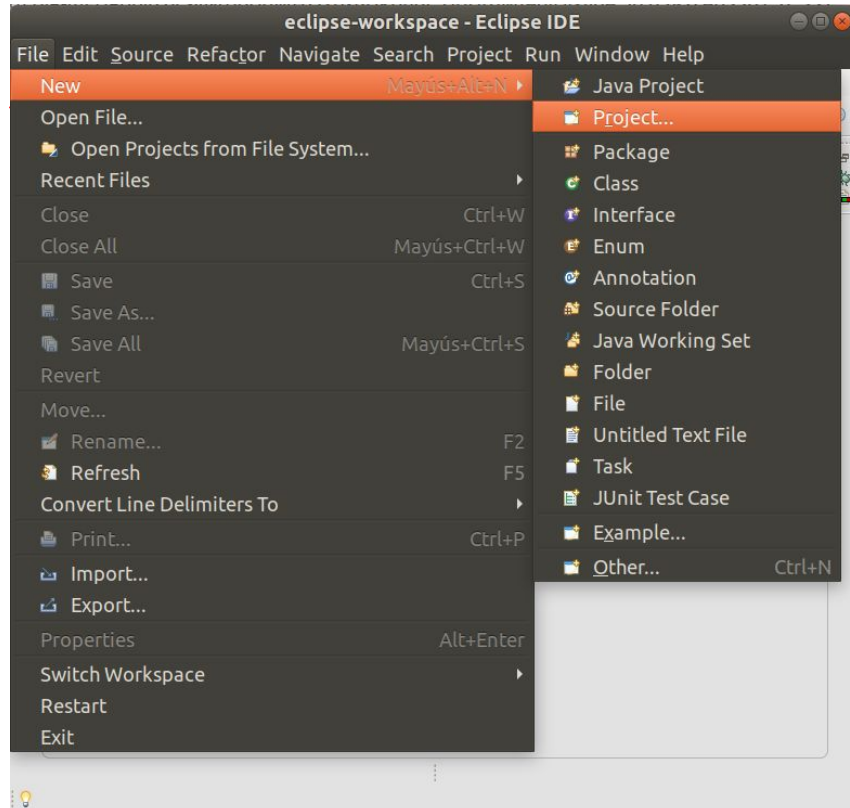
Create a new WindowBuilder Project

- File -> New -> Project -> WindowBuilder -> SWT Designer -> SWT/JFace Java Project
- This makes all the necessary JARs and native libraries to be included by the IDE itself

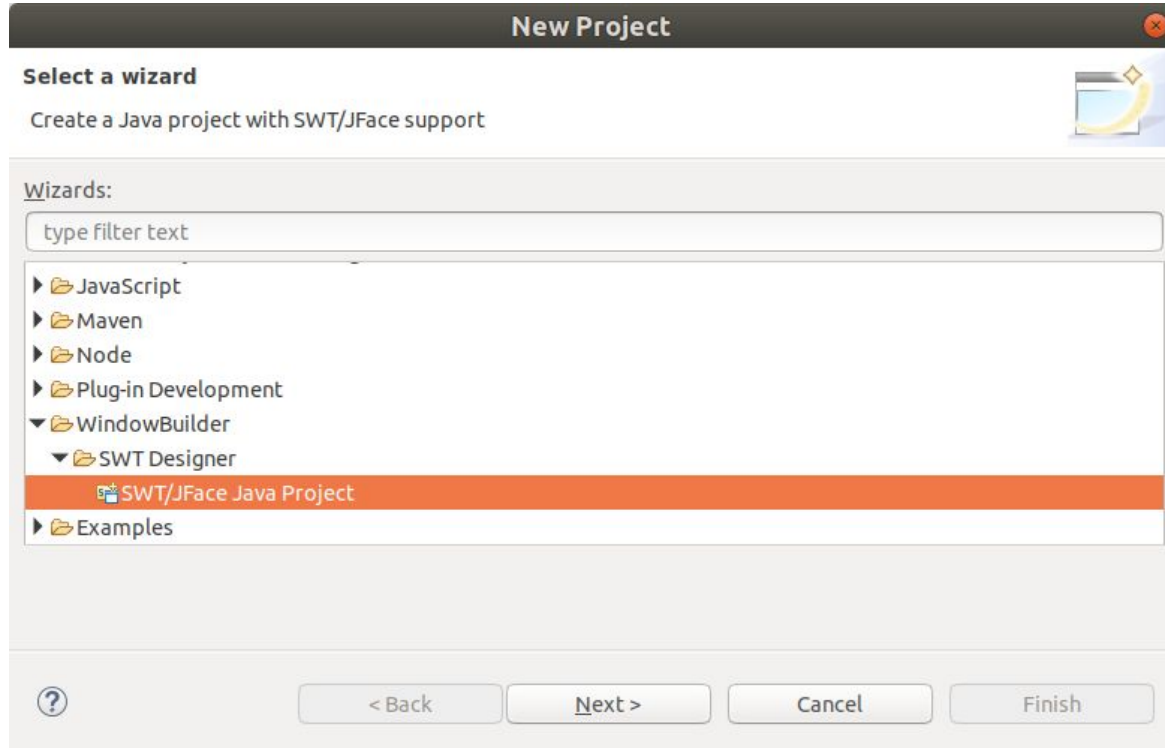
Create a new WindowBuilder Project



Create a new WindowBuilder Project



Create a new WindowBuilder Project

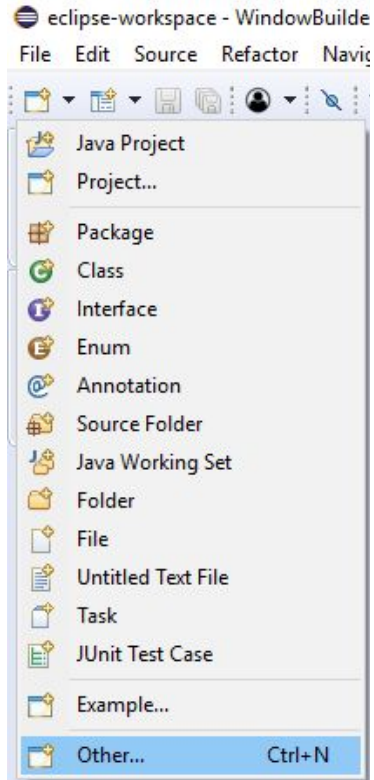




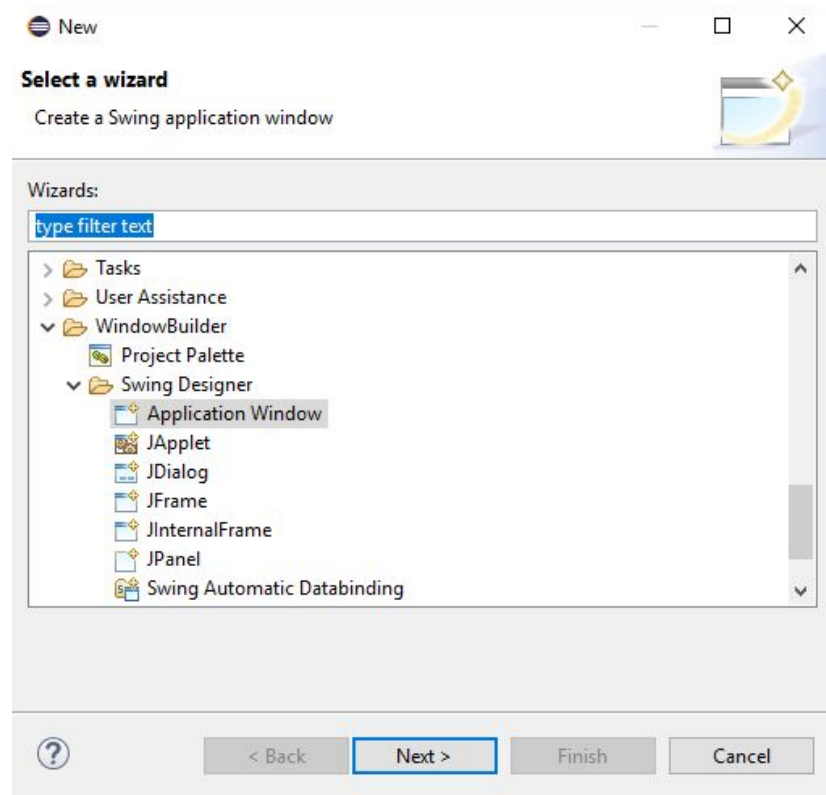
Create a new WindowBuilder Project

- Other Way it's to select "Other" -> "WindowBuilder", and create a new SWT/JFace Java Project
- This makes all the necessary JARs and native libraries to be included by the IDE itself

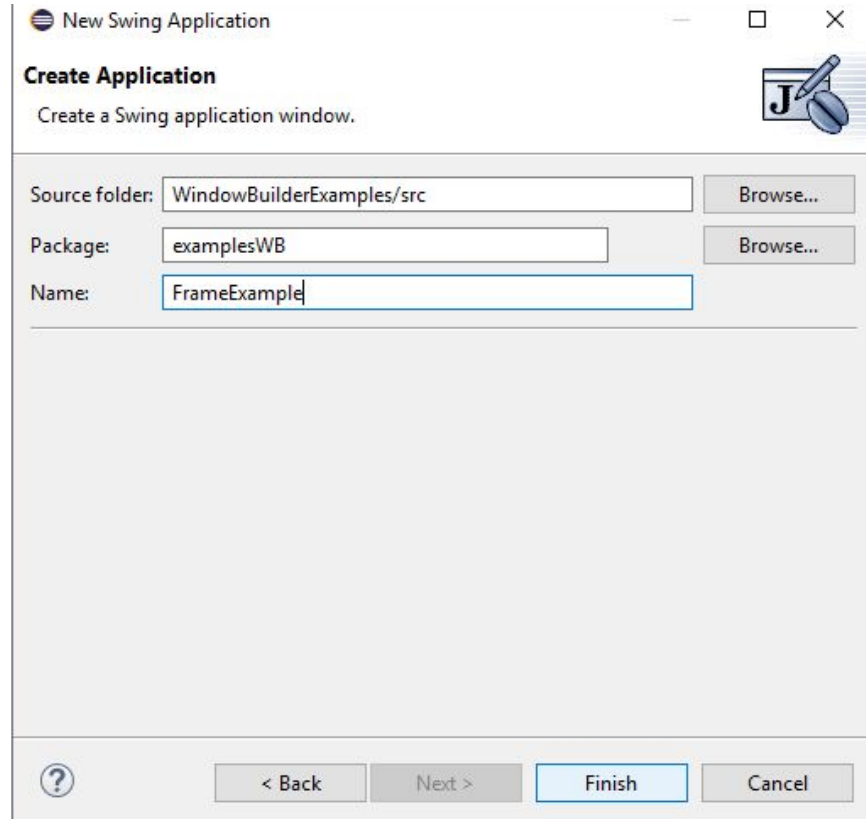
Create a new WindowBuilder Project



Create a new WindowBuilder Project



Create a new WindowBuilder Project



New Swing Application

Create Application
Create a Swing application window.

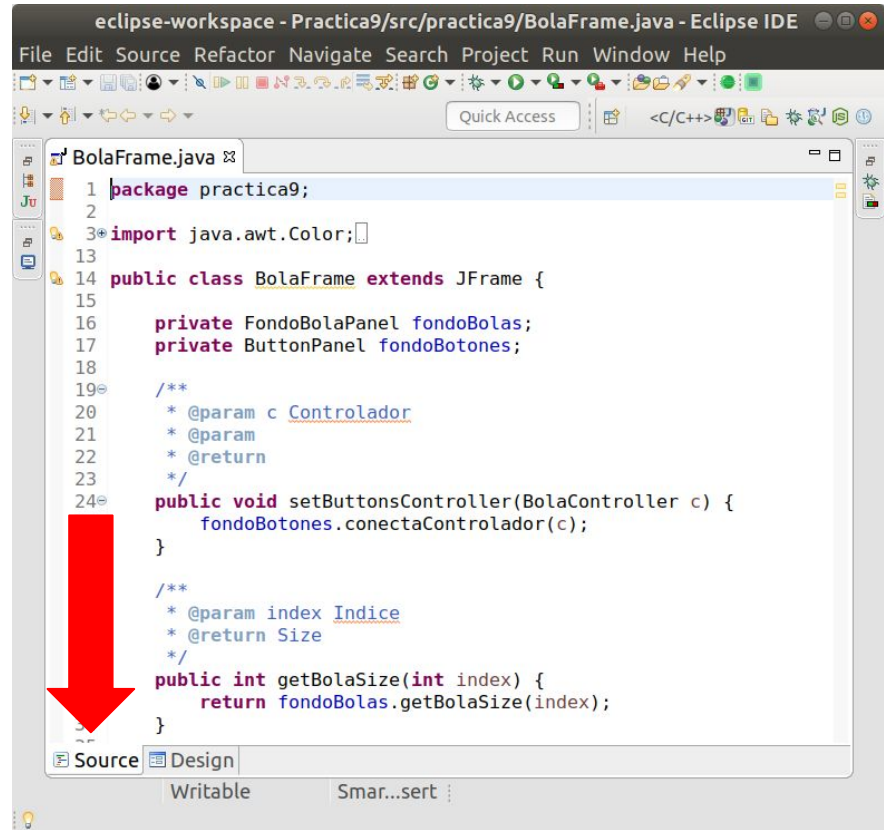
Source folder:

Package:

Name:

Source View

- As the regular Java view
- The code can be edited manually
- Appears the generated code automatically

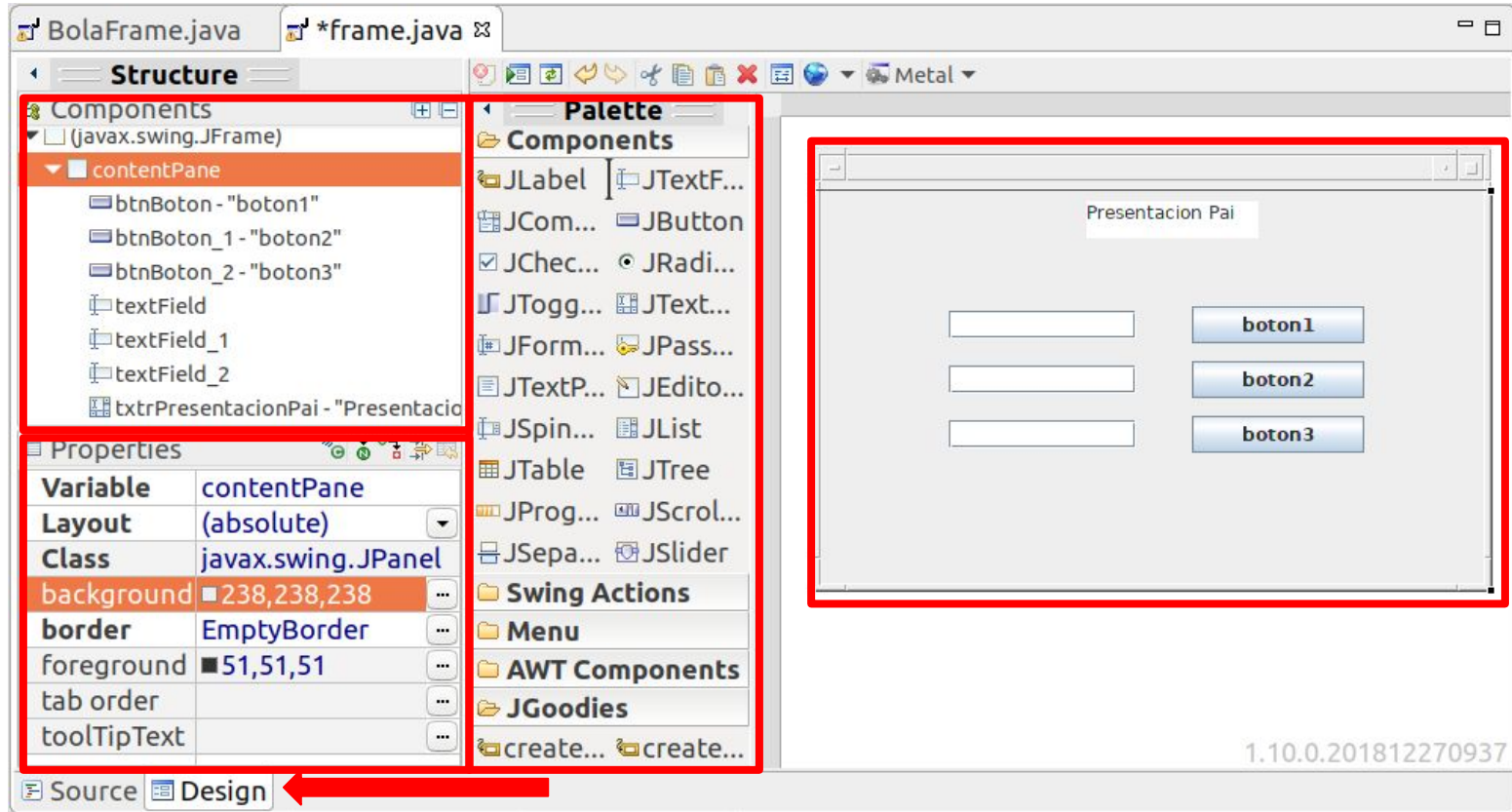


The screenshot shows the Eclipse IDE interface with the 'Source View' of the file 'BolaFrame.java'. The code is as follows:

```
1 package practica9;
2
3 import java.awt.Color;
4
13
14 public class BolaFrame extends JFrame {
15
16     private FondoBolaPanel fondoBolas;
17     private ButtonPanel fondoBotones;
18
19     /**
20      * @param c Controlador
21      * @param
22      * @return
23      */
24     public void setButtonsController(BolaController c) {
25         fondoBotones.conectaControlador(c);
26     }
27
28     /**
29      * @param index Indice
30      * @return Size
31      */
32     public int getBolaSize(int index) {
33         return fondoBolas.getBolaSize(index);
34     }
35 }
```

A large red arrow points from the code area down to the 'Source' tab at the bottom of the editor, which is currently selected. Other tabs visible are 'Design', 'Writable', and 'Smar...sert'.

Desing View



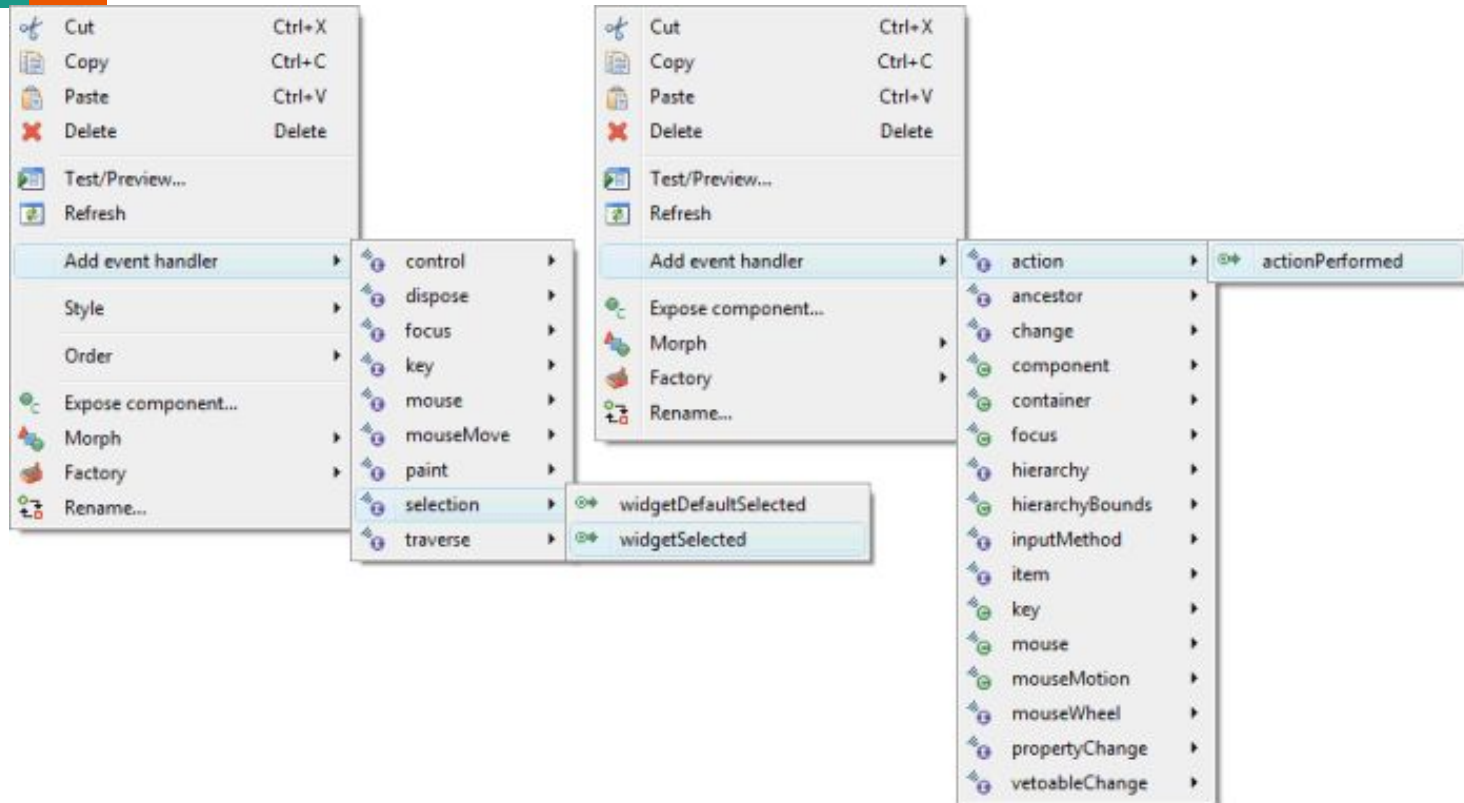
Event Handling



(DESING VIEW)

- Simply right-click on a component , select Add event handler > [name of the event] > [name of the event handler to implement].
- The tool will automatically create an event handler for the selected event method. The editor will then switch to the Source View and go directly to the new event handler method.

Event Handling



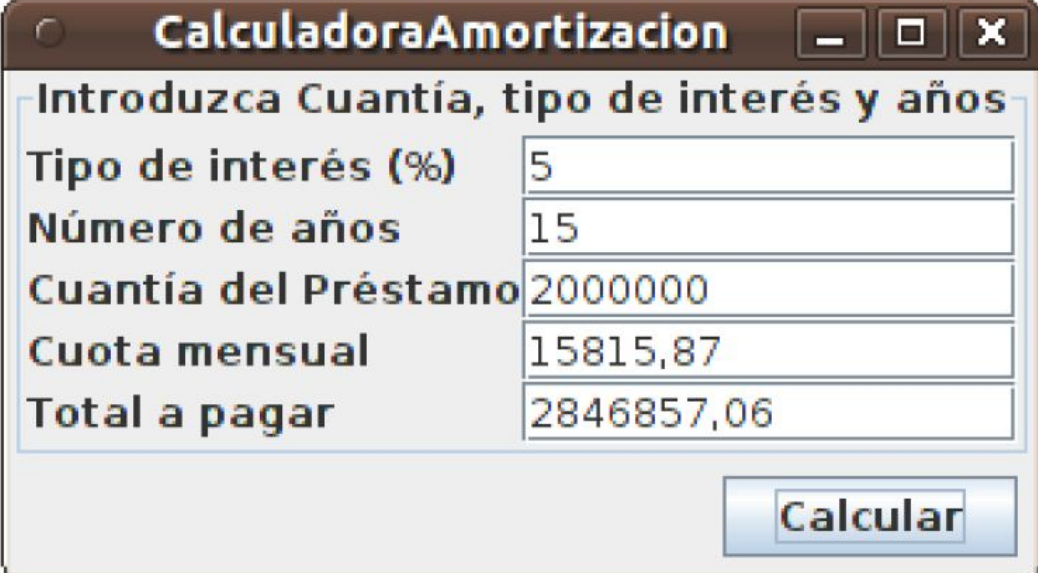
Usage Examples

-DemoTextField



Usage Examples

-Calculadora Amortización



Calculadora Amortización

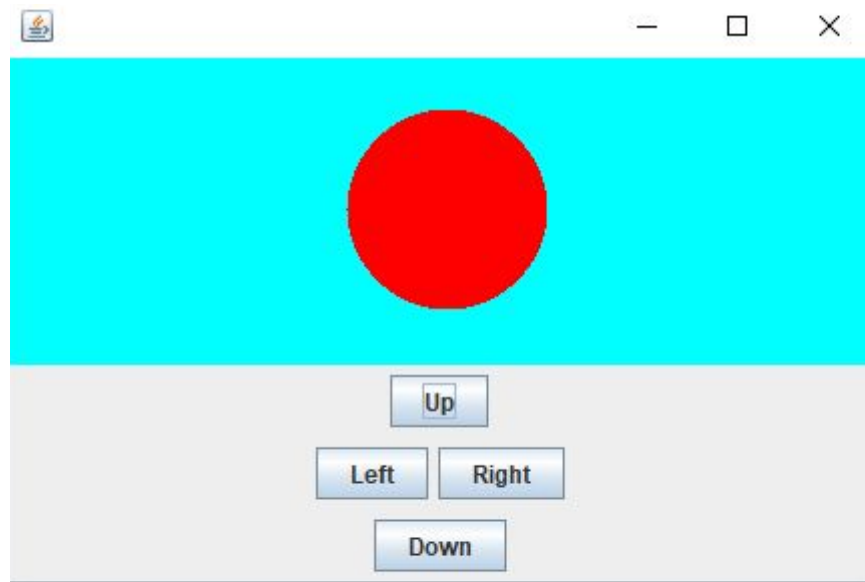
Introduzca Cuantía, tipo de interés y años

Tipo de interés (%)	5
Número de años	15
Cuantía del Préstamo	2000000
Cuota mensual	15815,87
Total a pagar	2846857,06

Calcular

Usage Examples

-BolaMovil



Tips and Tricks



Quick way to create Event Handlers to buttons (including check and radio buttons) and menu items.

- Double-click on the button or menu item.

Tips and Tricks



Open previously generated components with WindowBuilder

-Right Click on the file in the explorer tree > Open With > WindowBuilder Editor



Conclusions

- Eclipse WindowBuilder (and GUI builders in general) are a good option for a fast-simple UI application
- For a bigger application they may still be a decent option, but generated code is in general not easy to read
- If code will require further manual maintenance, it is definitely not a good option



Bibliography

[https://en.wikipedia.org/wiki/Graphical user interface builder](https://en.wikipedia.org/wiki/Graphical_user_interface_builder)

<https://www.eclipse.org/windowbuilder/>

<https://www.espai.es/blog/2014/05/disenio-de-interfaces-en-java-con-windowbuilder/>



Questions

Any
questions ?

