# Eclipse – Creating a SWT Window with Windowbuilder

How-To by stepping through the 2024 06 dialog boxes

# Document Overview

There are three major steps involved in creating an SWT Window in the Eclipse IDE. They are:

1. Create the Eclipse workspace if one is not already available. The workspace will hold all the project files. It can also hold any number of projects.
2. Create the SWT Project. This will allow the appropriate SWT libraries to be managed for the SWT application.
3. Create the SWT Window. This will provide the GUI elements through the source code and the design modes as well as host the display of the Window.

The pages below contain the steps to proceed through each of the dialog boxes that must be filled-in so as to provide the Eclipse IDE with the necessary information to build the application. These dialogs are in effect for Eclipse 2024 06 and the latest Windowbuilder available at that time (June, 2024).

There are two sets of instructions. The first is the **verbose instruction set** and the second is the **image-based instruction set** with all the necessary dialog boxes displayed with the written instructions.

# Verbose Instruction Set

Open Eclipse 2024 06
Create or launch into new workspace or where a new project is to be created.

1. Left upper corner of IDE – select “Create a project” from the list of project types. Do not click on ‘Create a Java Project’ because the SWT libraries will not be included.
   = Select Windowbuilder from the list
   == Select ‘SWT Designer’
   === Select ‘SWT/Face Java Project’
   ==== Click the ‘Finish’ button at the bottom of the New Project/Select a Wizard dialog

2. New dialog: “Create a Java Project” will appear
   = Enter the project name in the ‘Project Name’ text box
   == Uncheck ‘Module’ selections
   === Click the ‘Finish’ buttonat bottom of the dialog

IDE: The Project Explorer is fills in and prepares the environment for adding the SWT Window source program.

3. Select the project’s ‘src’ (Source) item in the project tree and right click on the SRC item.
   = Select ‘New’ then select ‘Other’ and then the ‘Select a Wizard’ dialog appears.

4. The ‘Select a Wizard’ Dialog will provide the SWT libraries:
   = Select ‘SWT Designer’
   == Select ‘SWT’
   === Select ‘Application Window’
   ==== Click the ‘Next’ button at the bottom of the ‘Select a Wizard’ dialog box

5. The ‘New SWT Application’ dialog appears
   = Do not modify the Source Folder contents
   = Do not modify the Package folder
   = Leave the method as ‘Protected’
   == Enter the name of the Window code class in the ‘Name’ text box
   === Click the ‘Finish’ button at the bottom of the dialog box.

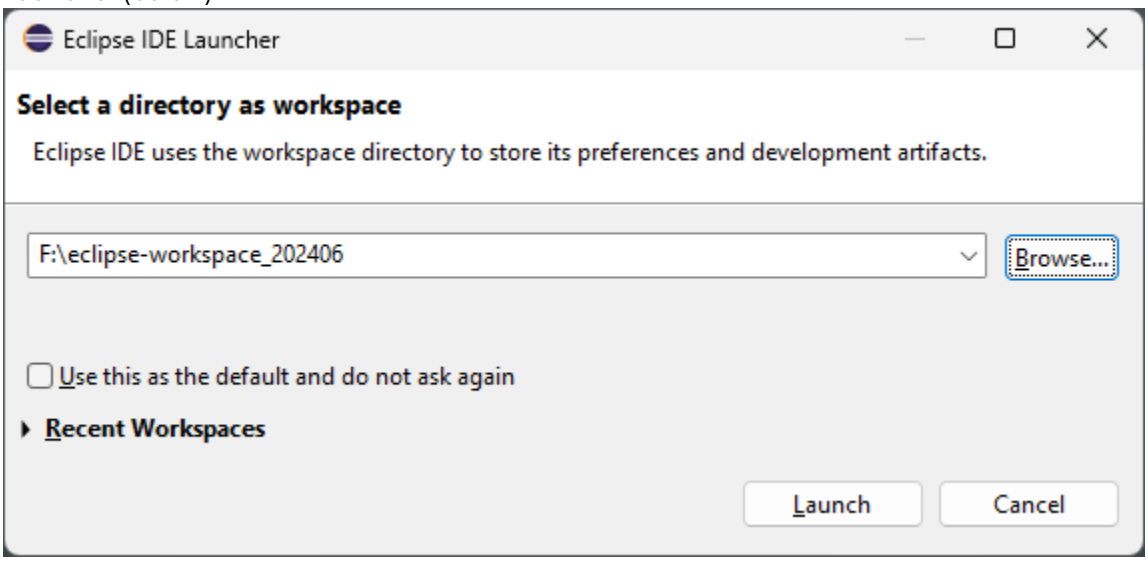
6. The IDE should now appear with a clean set of code for the SWT application in the ‘src hierarchy and allow the use of the design and source features the complete the Window design.

# Image-Based Instruction Set

CREATE A WORKSPACE

Before any project can be created, a workspace directory must be created to store one or more projects relating to the Eclipse version being utilized.
Open Eclipse and create a workspace for the project(s) relating to the version that is being used. Here, the 2024 06 Eclipse version
Is being used, and the workspace directory is F:\eclipse-workspace_202406. This is where any number of 2024 06 projects will be stored.

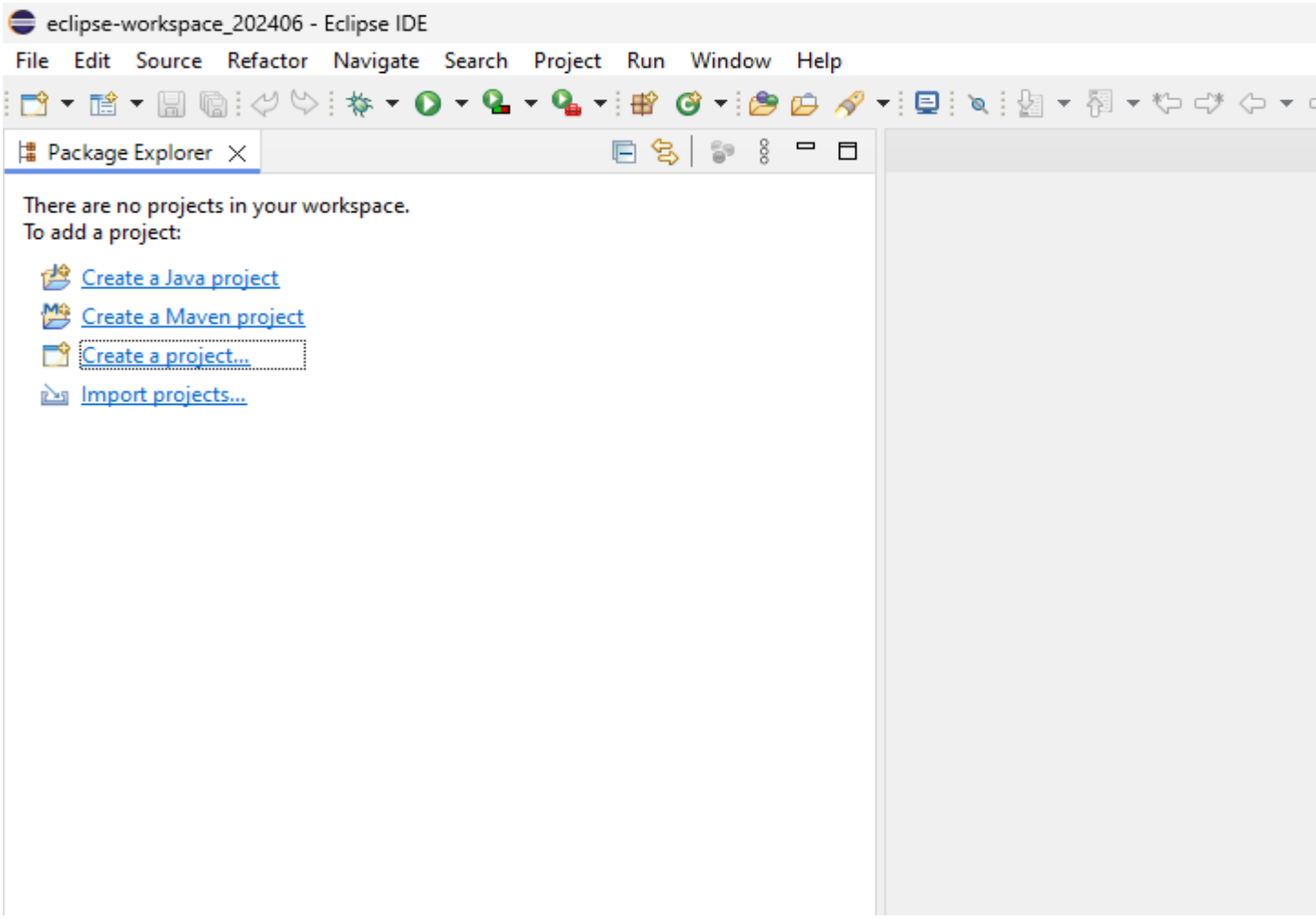
By entering the path and clicking the 'Launch' button the first step is completed in the Eclipse IDE Launcher (below)




Eclipse IDE Launcher dialog – create a workspace

CREATE AN SWT PROJECT

When the ‘Launch’ button is clicked a list of project types are displayed:

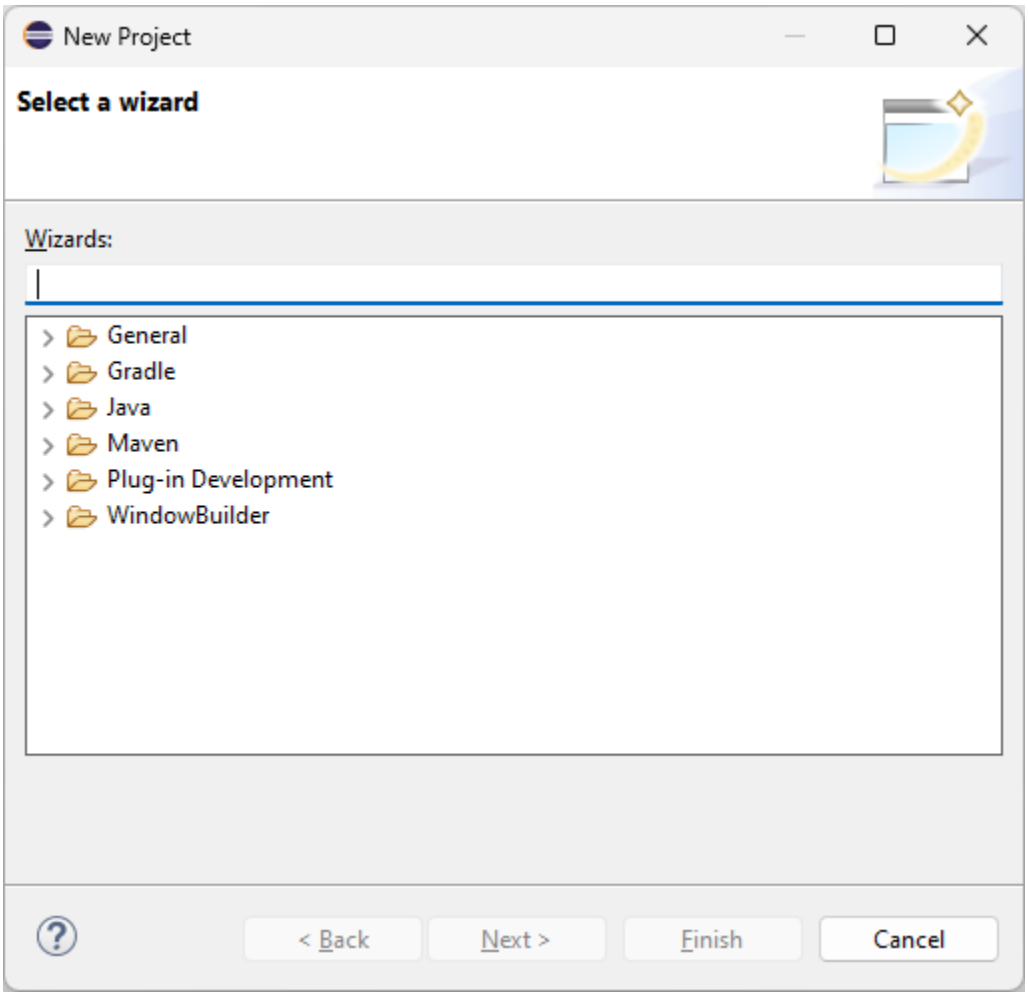


CREATE AN SWT PROJECT

1. Create a Project Dialog in Windowbuilder

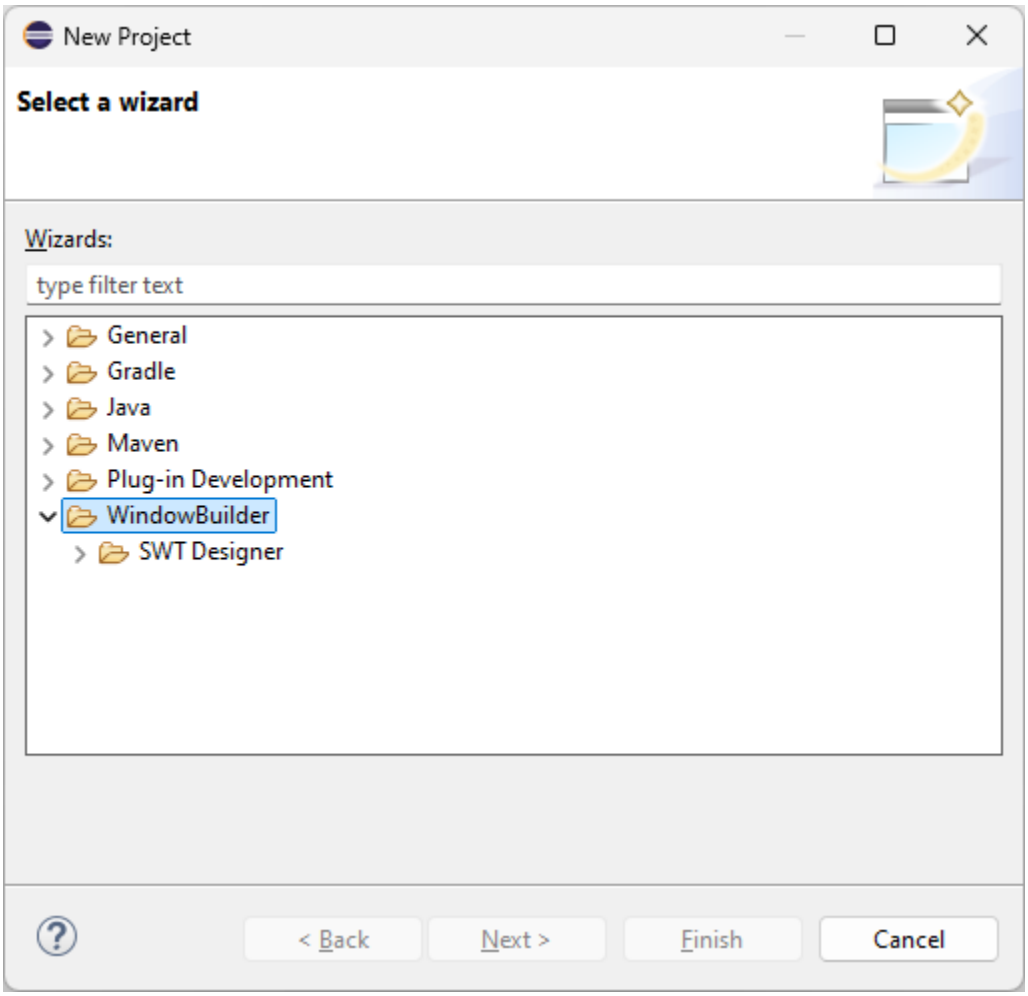
In the left, upper corner select “Create a project” which is lightly outlined in the above clip from the Package Explorer.

The ‘Select a wizard’ dialog appears.




. Select Windowbuilder from the list. SWT Designer appears (below)

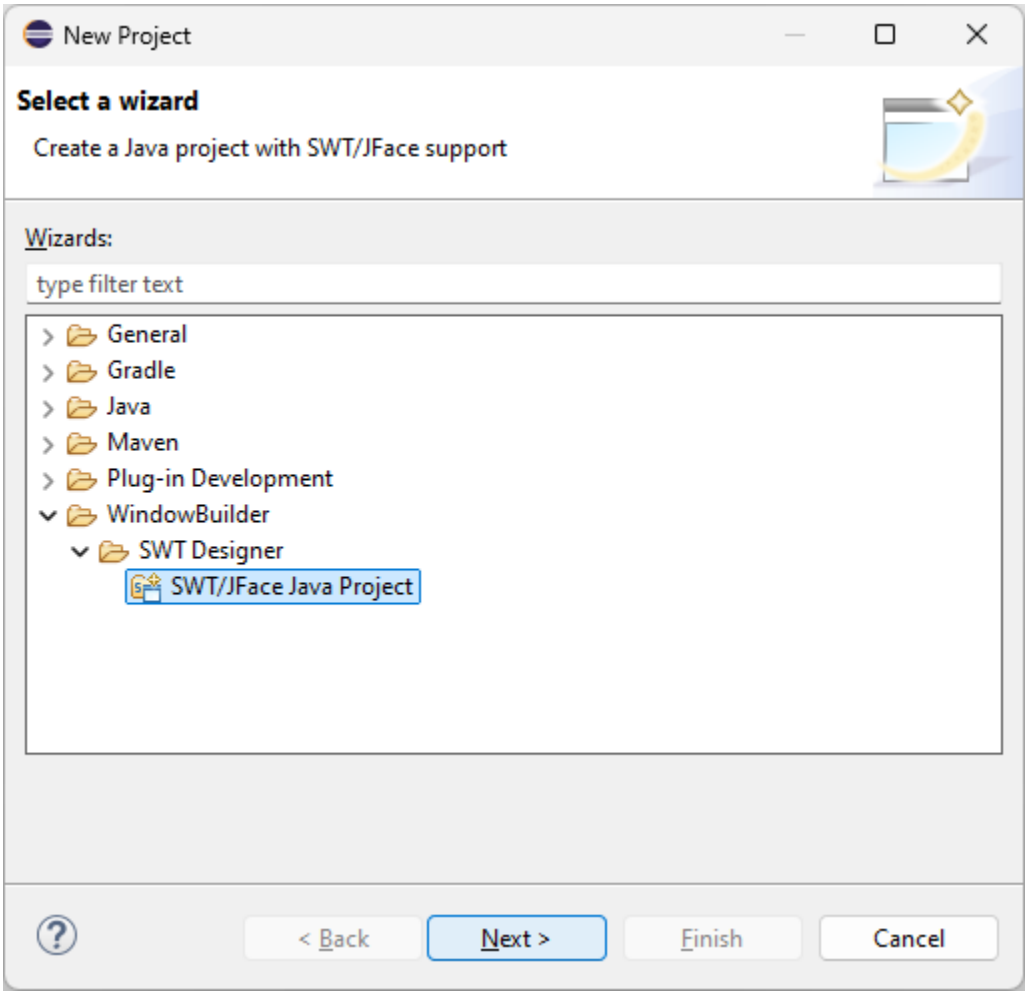
CREATE AN SWT PROJECT




.. Select ‘SWT Designer’ from the Wizards dialog list (above)

CREATE AN SWT PROJECT

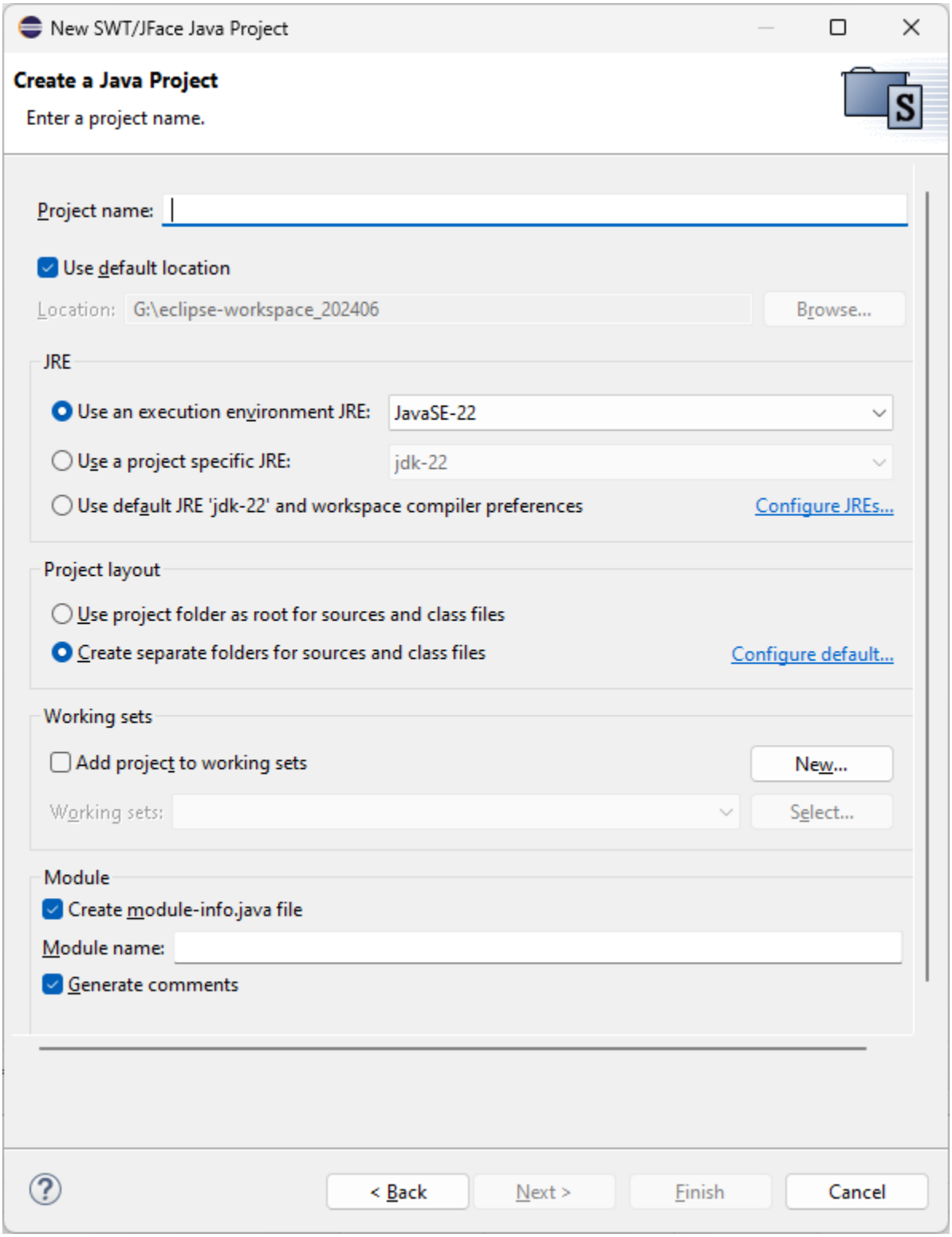
... Select ‘SWT/Face Java Project’ from the Wizards dialog list and then press the ‘Next’ button (see below)



CREATE AN SWT PROJECT

New SWT/Face Java Project setup dialog

The ‘New SWT/Face Java Project’ dialog box appears for the ‘Create a Java Project’ in Windowbuilder step (see below)




CREATE AN SWT PROJECT

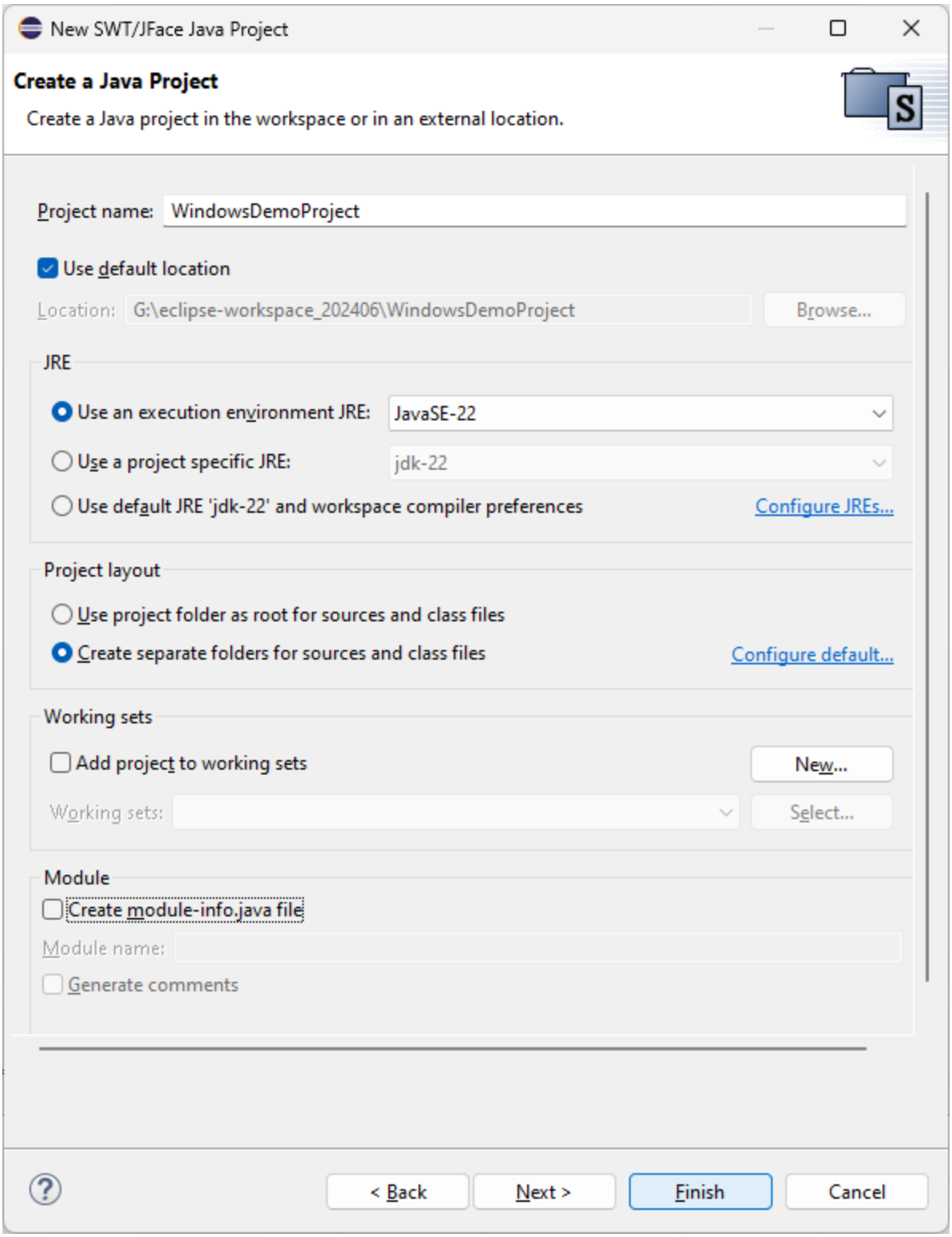
. Enter the ‘Projet name’ text: This will be “WindowDemoProject”

.. Uncheck Module/ ‘Create module-info.java file’

... Uncheck Module/ ‘Generate comments’

....Click “Finish” at the bottom of the New SWT/Face Java Project dialog box
after assuring the correct Java SE and jdk environments are displayed. The dialog box
should appear as follows (below):

CREATE AN SWT PROJECT

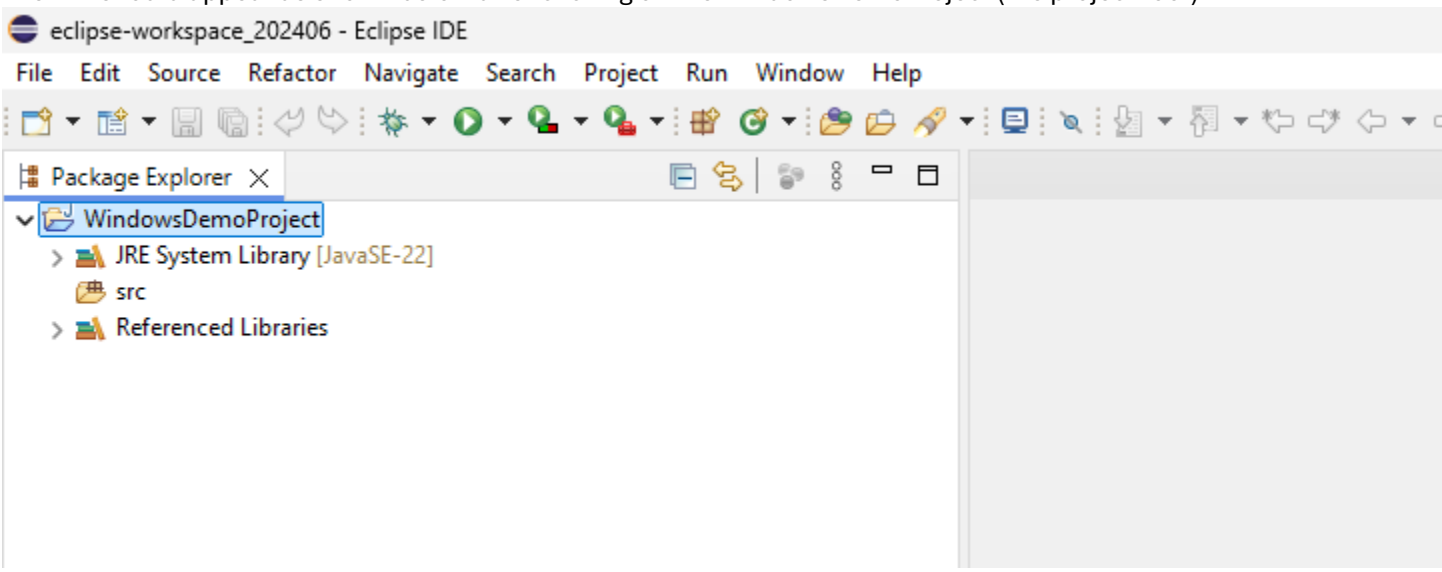



Clicking the 'Finish' button will set the IDE with an environment for adding source files. Since this is a Windowsbuilder
CREATE AN SWT WINDOW

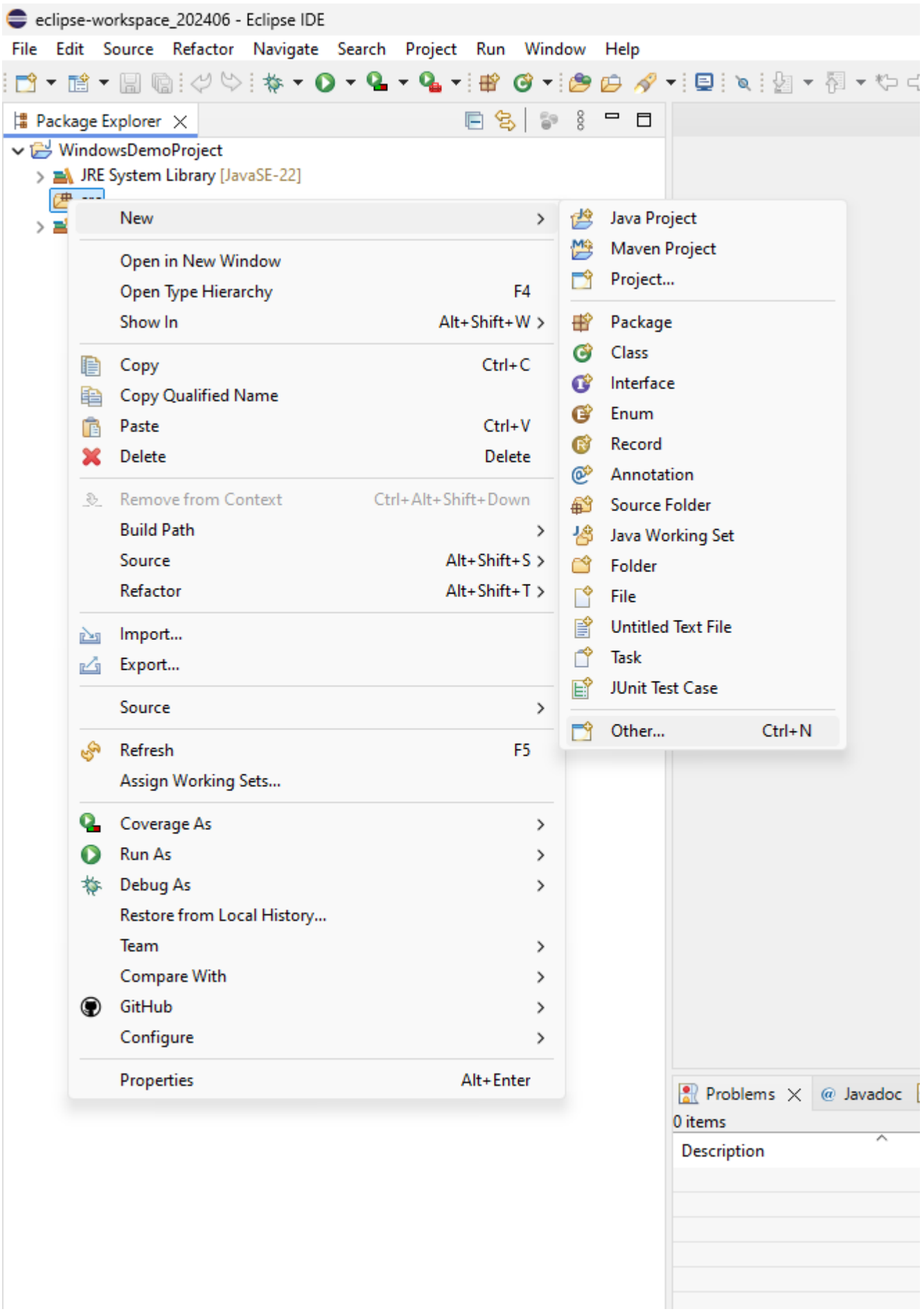
Project, the next step should be to create a Window, and lastly, the classes that will serve the functionality of the application.

1. Create an SWT Window.

The IDE should appear as shown below after clicking on the WindowsDemoProject (the project root):

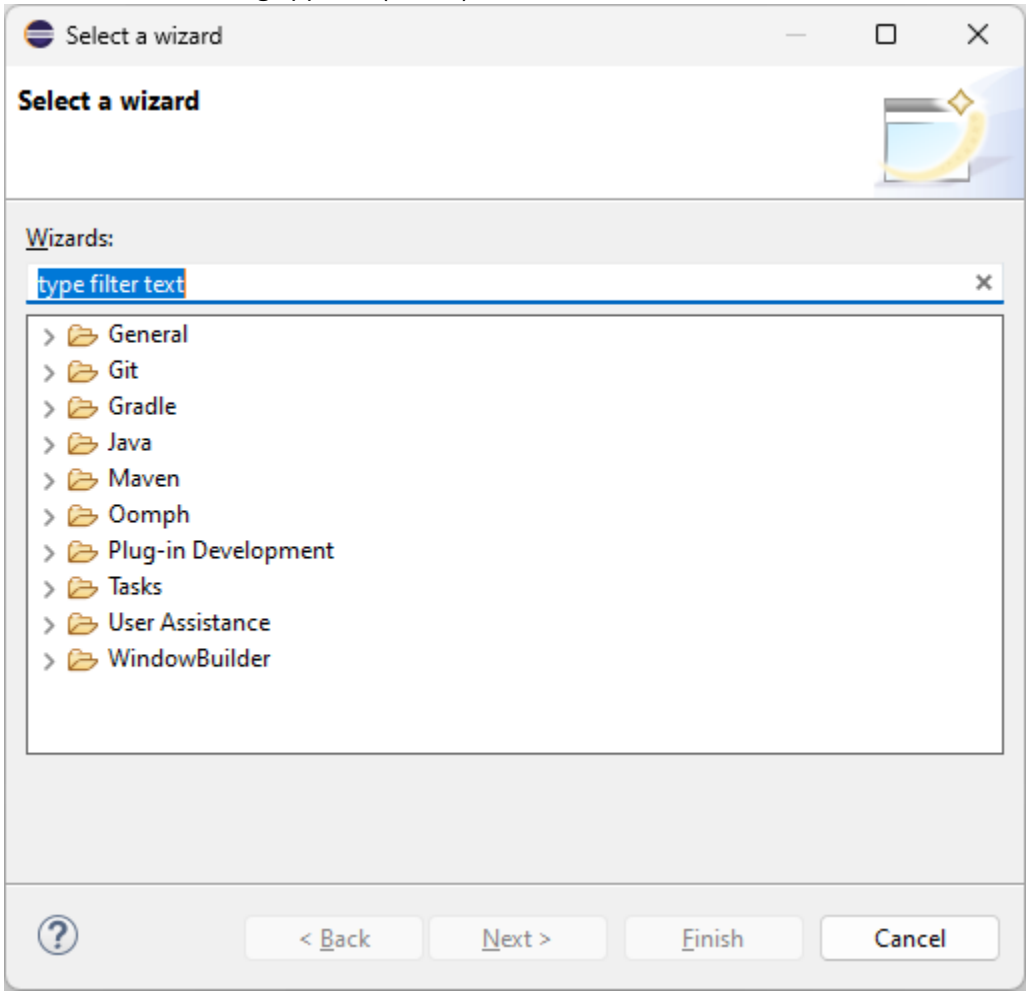



The JRE System Library should be correct, otherwise the build path will need to be adjusted.
. Select 'Source' and RIGHT-CLICK to bring up the source selection listing
.. Click on the 'Other... Ctrl+N' item from the 'New' children list. This will provide the Windowbuilder options.


eclipse-workspace_202406 - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
WindowsDemoProject
JRE System Library [JavaSE-22]
New
Open in New Window
Open Type Hierarchy F4
Show In Alt+Shift+W
Copy Ctrl+C
Copy Qualified Name
Paste Ctrl+V
Delete Delete
Remove from Context Ctrl+Alt+Shift+Down
Build Path
Source Alt+Shift+S
Refactor Alt+Shift+T
Import...
Export...
Source
Refresh F5
Assign Working Sets...
Coverage As
Run As
Debug As
Restore from Local History...
Team
Compare With
GitHub
Configure
Properties Alt+Enter
Java Project
Maven Project
Project...
Package
Class
Interface
Enum
Record
Annotation
Source Folder
Java Working Set
Folder
File
Untitled Text File
Task
JUnit Test Case
Other... Ctrl+N
Problems
Javadoc
0 items
Description

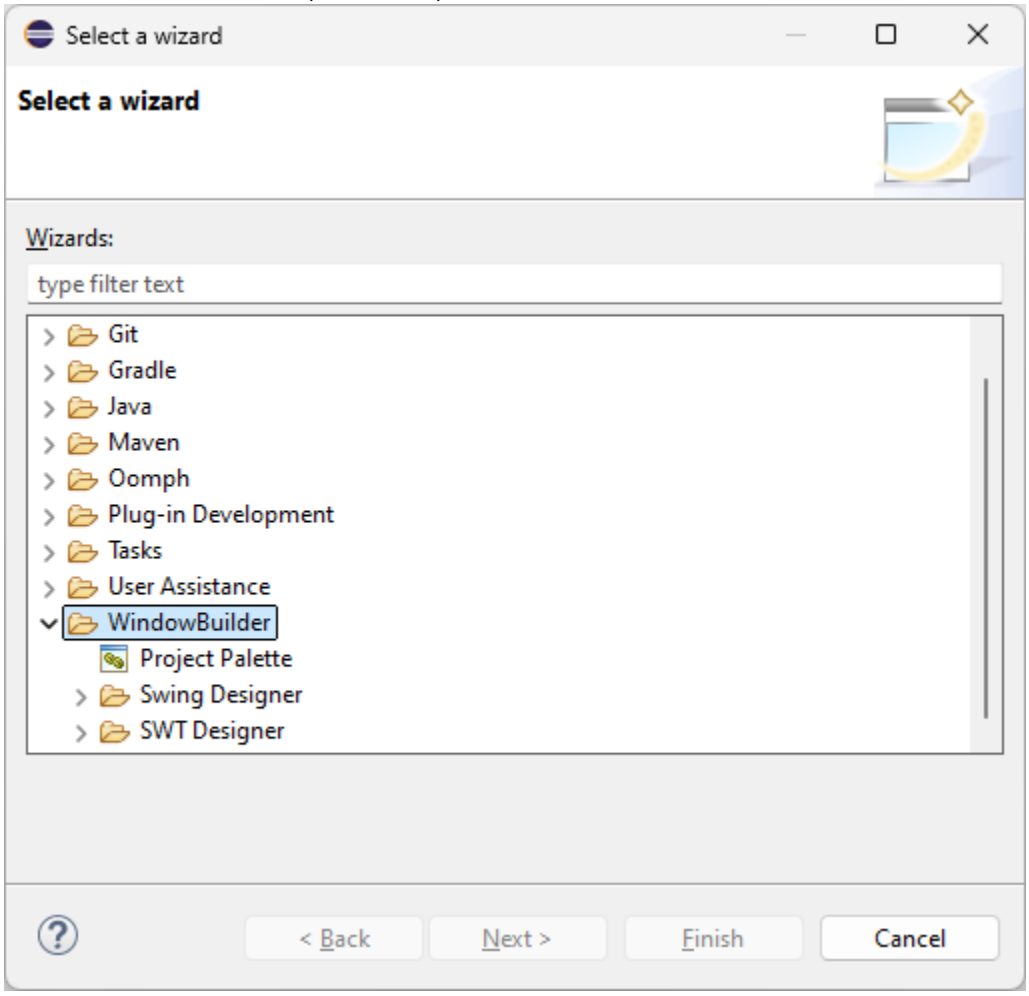
2. ‘Select a Wizard’ Dialog

The ‘Select a Wizard’ appears after clicking the Src / New / Other items shown above. Select a Wizard dialog appears (below):



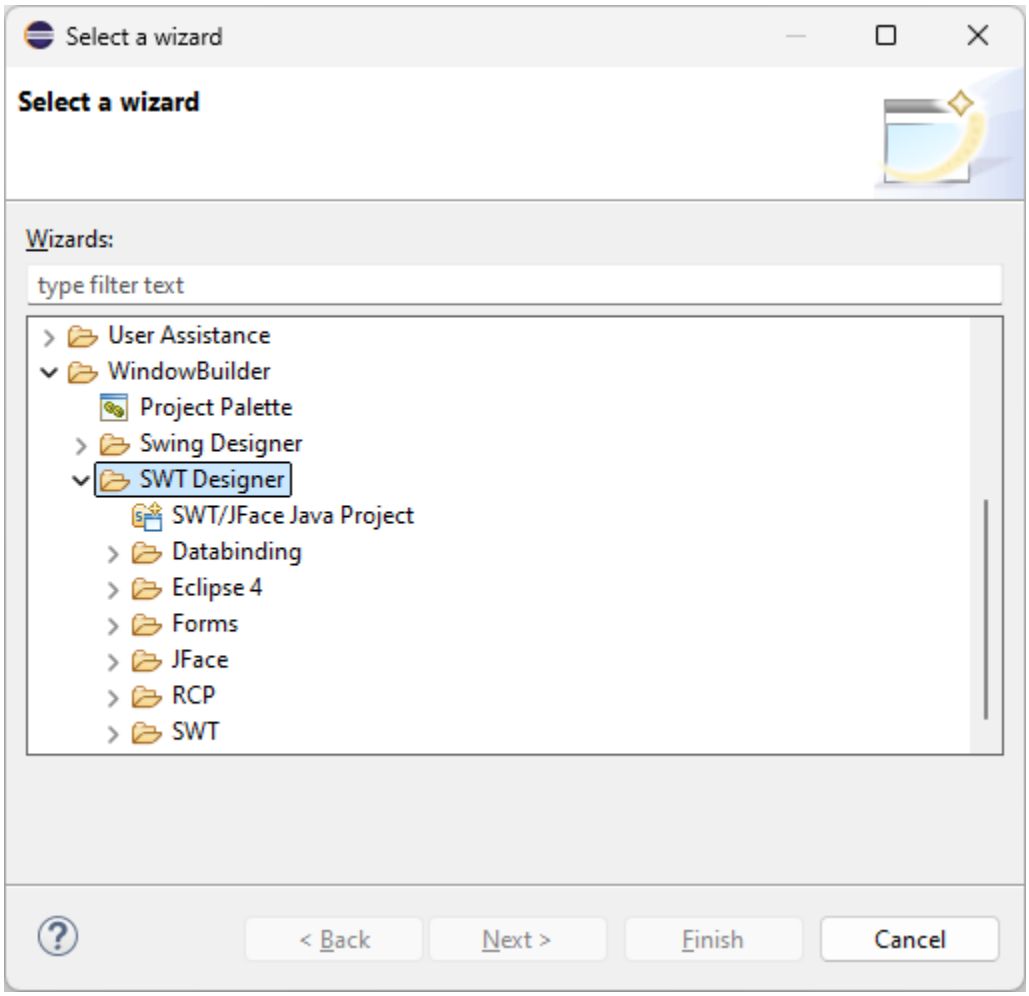
CREATE AN SWT WINDOW

. Select ‘WindowBuilder’ (see below):



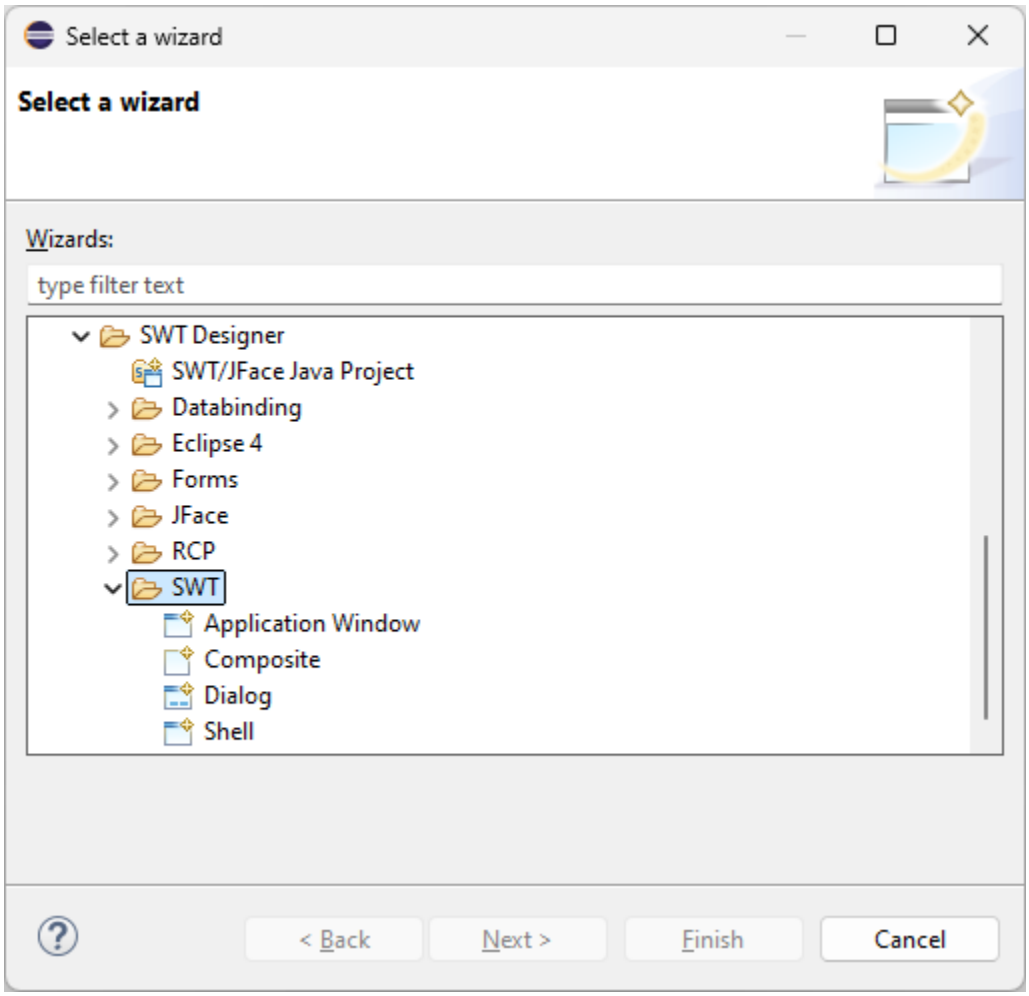

.. Select ‘SWT Designer’ (see below):

CREATE AN SWT WINDOW



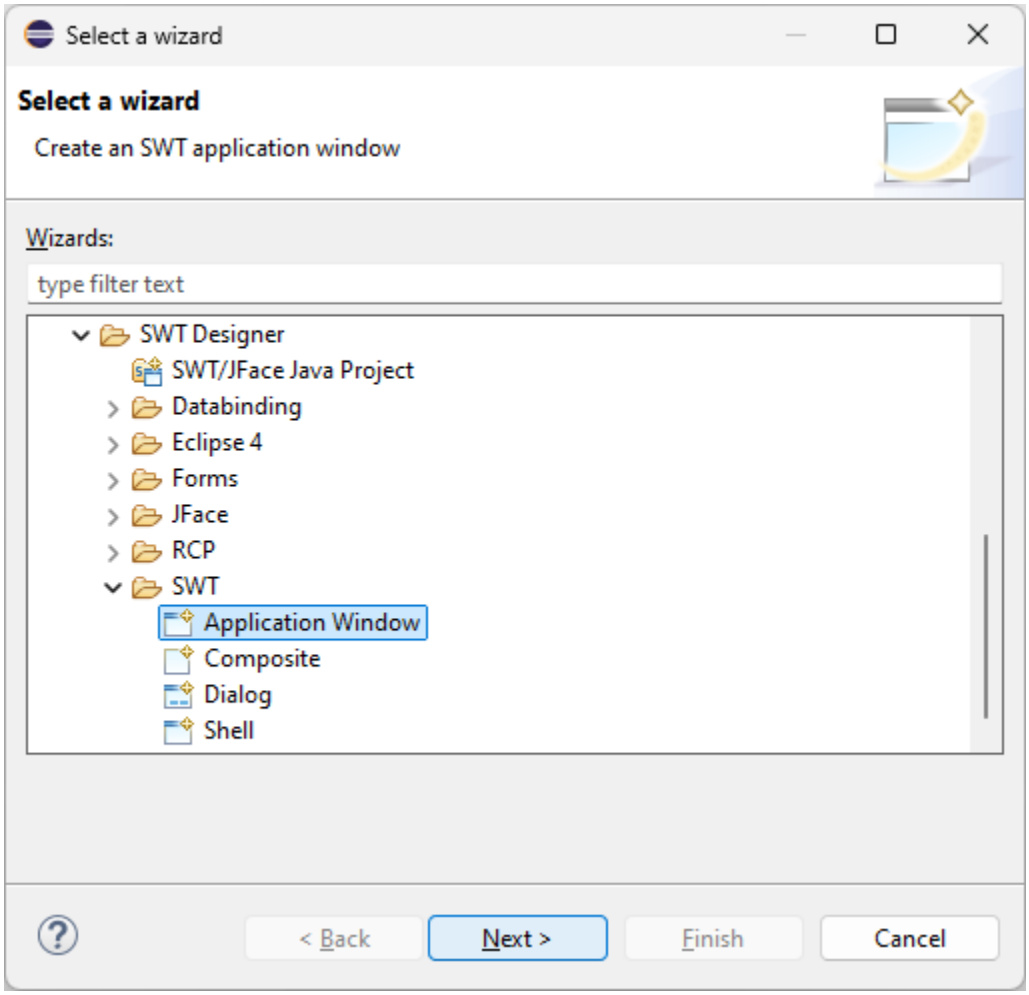

... Select 'SWT' (see below):

CREATE AN SWT WINDOW



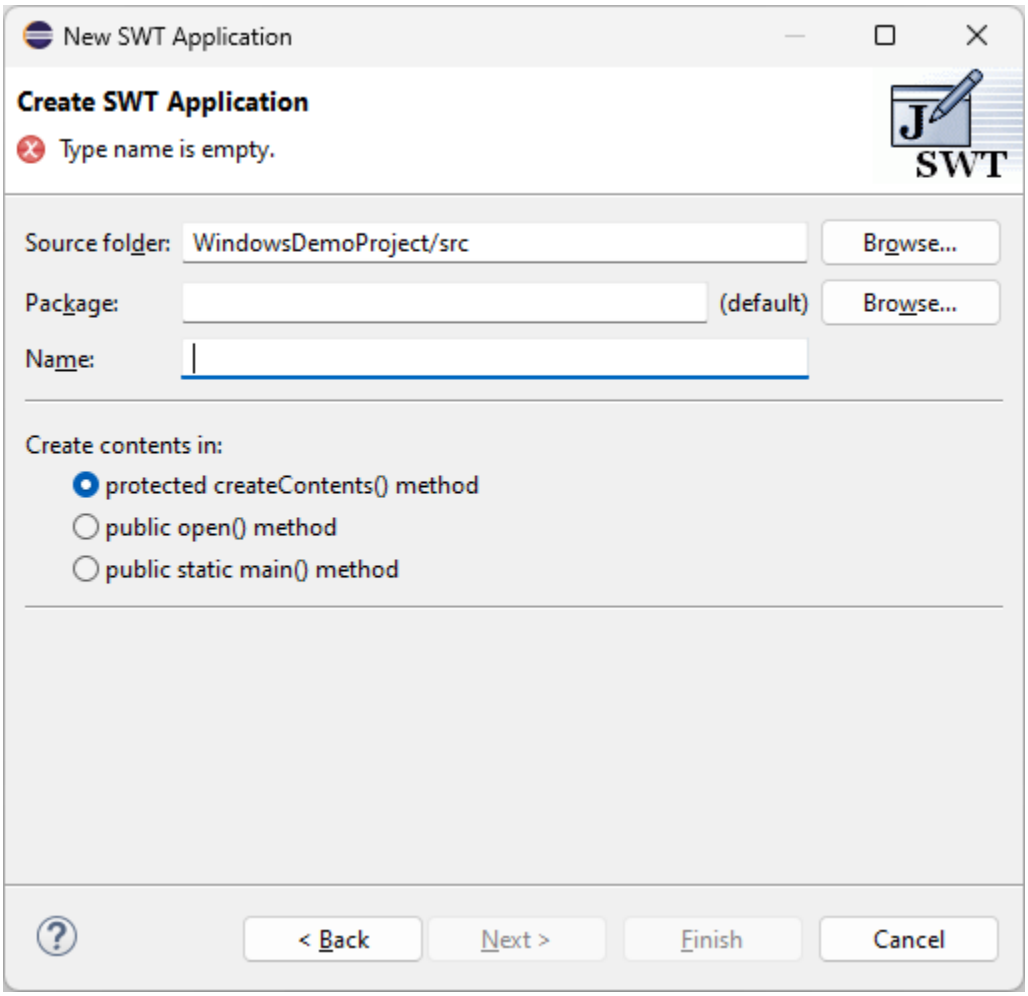

....Select 'Application Window' (see below):

CREATE AN SWT WINDOW




.... Click on the 'Next' button in order to begin creating the Application Window.
A new dialog box, 'SWT Application' appears (see below):

CREATE AN SWT WINDOW




3. ‘New SWT Application’ dialog appears (above). Fill the ‘Name:’ text with an appropriate File name for the java SWT application, leaving the protected createContents() method the selection for ‘Create contents in:” listing selected.

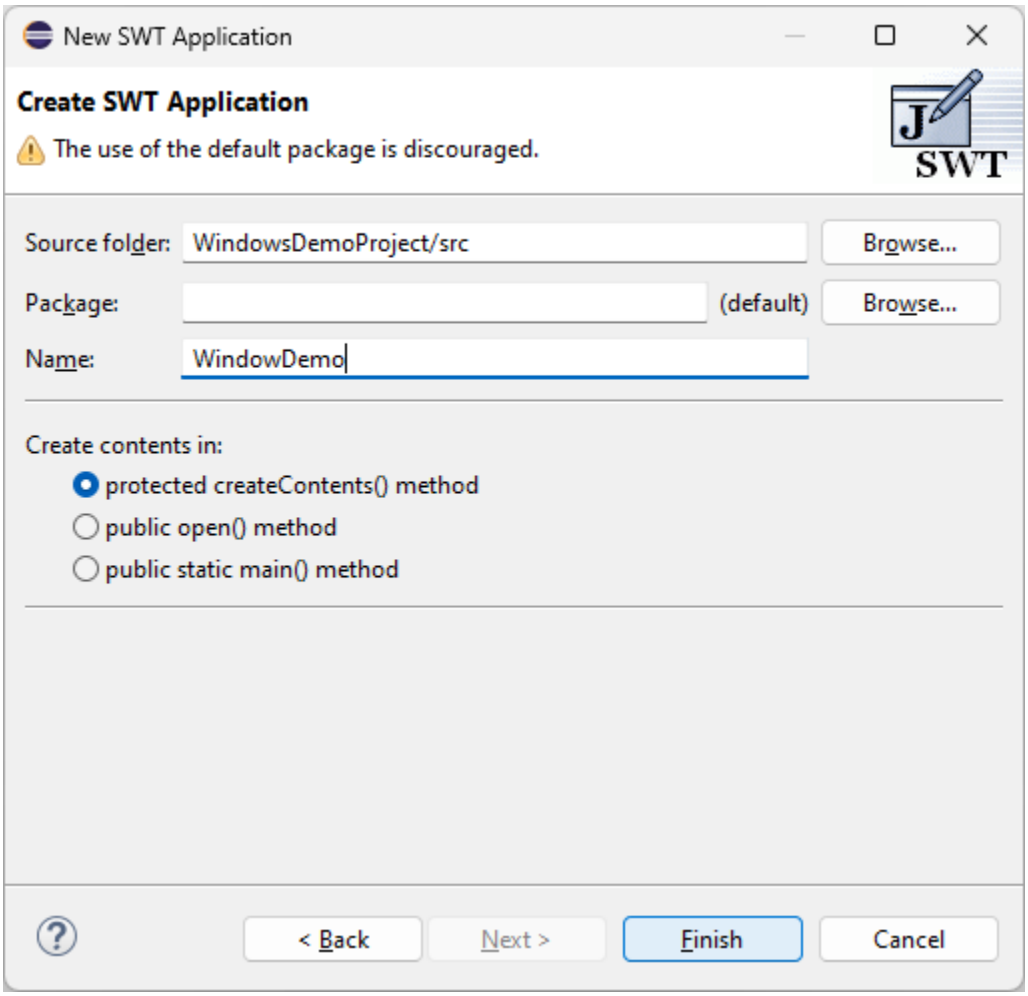
. Source Folder – leave alone

.. Package – leave alone

Note the ‘Source folder:’ is referring to the project/source that was originally selected with a right-click to initiate the entire SWT project and this application.

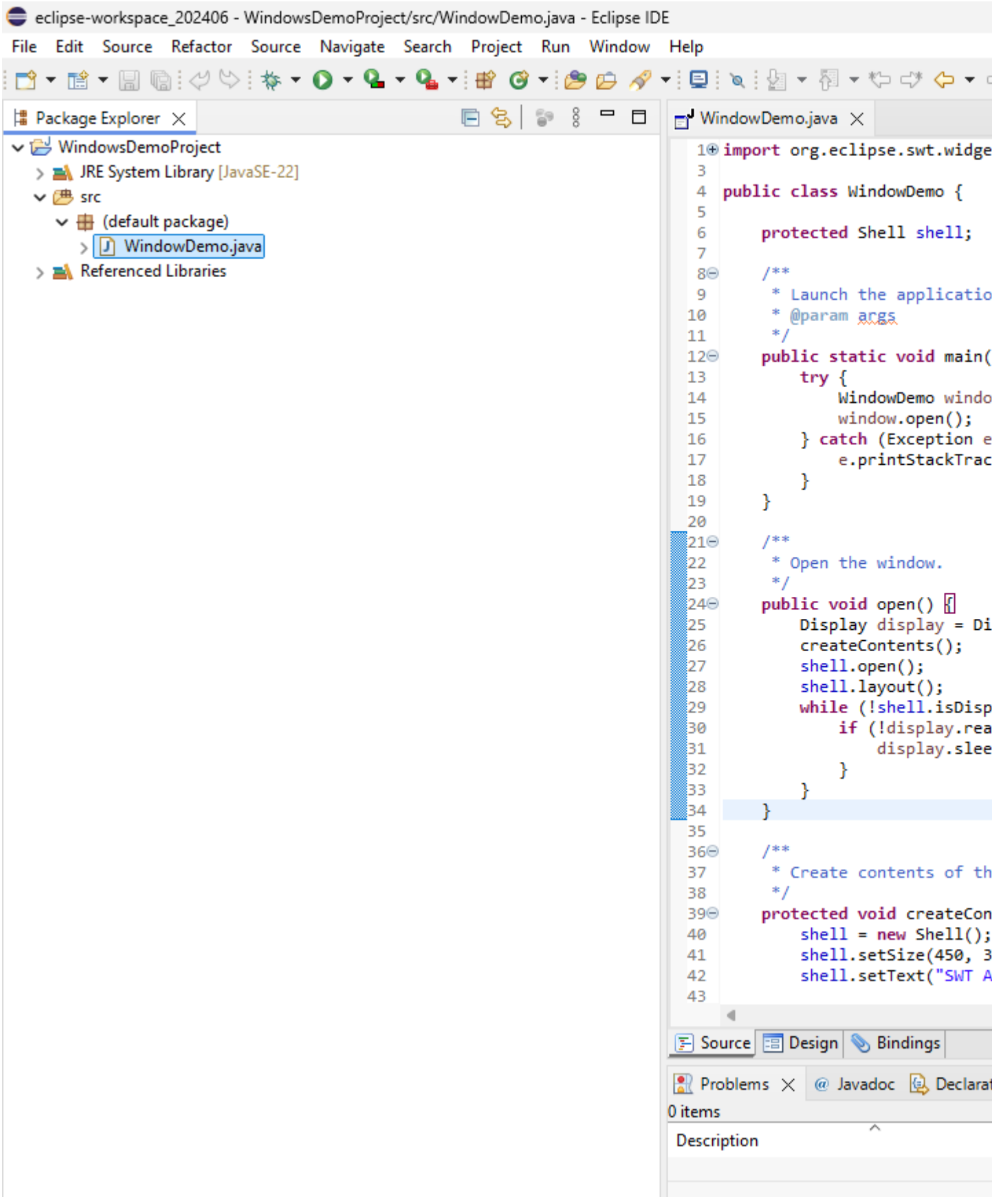
The ‘Name:’ text will be filled in this example with ‘WindowDemo’ (see below):

CREATE AN SWT WINDOW




Click the 'Finish' button to allow the shell to be created and tested.

The project environment should now appear as follows. Note that the Window can be Modified through the source or design aspects. If there are significant errors at this stage, The design aspect cannot be displayed.


eclipse-workspace_202406 - WindowsDemoProject/src/WindowDemo.java - Eclipse IDE
File Edit Source Refactor Source Navigate Search Project Run Window Help
Package Explorer
WindowsDemoProject
JRE System Library [JavaSE-22]
src
(default package)
WindowDemo.java
Referenced Libraries
WindowDemo.java
1 import org.eclipse.swt.widge
3
4 public class WindowDemo {
5
6 protected Shell shell;
7
8 /**
9 * Launch the applicatio
10 * @param args
11 */
12 public static void main(
13 try {
14 WindowDemo windo
15 window.open();
16 } catch (Exception e
17 e.printStackTrac
18 }
19 }
20
21 /**
22 * Open the window.
23 */
24 public void open() {
25 Display display = Di
26 createContents();
27 shell.open();
28 shell.layout();
29 while (!shell.isDisp
30 if (!display.rea
31 display.slee
32 }
33 }
34 }
35
36 /**
37 * Create contents of th
38 */
39 protected void createCon
40 shell = new Shell();
41 shell.setSize(450, 3
42 shell.setText("SWT A
43
Source Design Bindings
Problems Javadoc Declarat
0 items
Description

# The Generated (Initial) SWT Window Application

The following Window and code are the result of Eclipse generating the skeleton SWT Window in Java. The rest is up to you.

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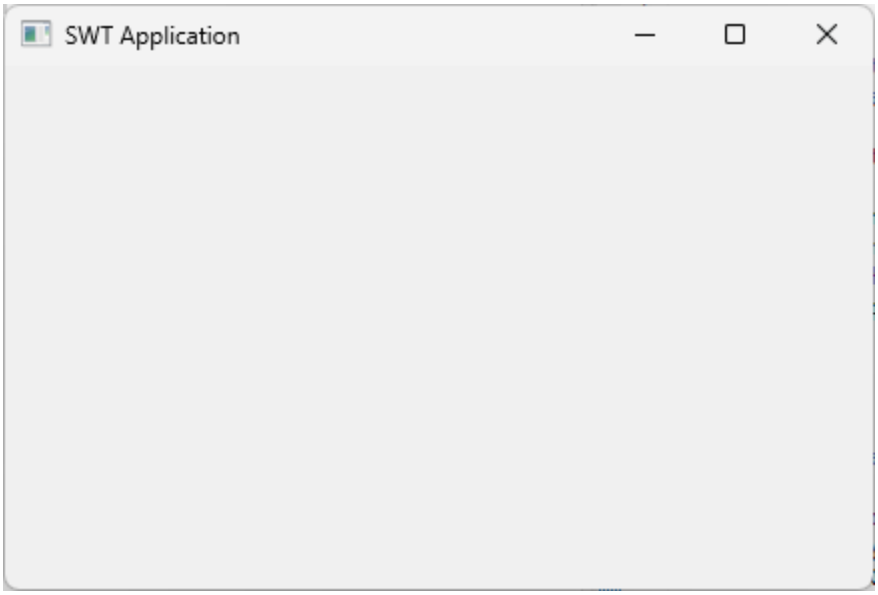
When the IDE runs the application, the Window appears as a blank item:




The Window's shell source code is as follows:

```
=======================================
import org.eclipse.swt.widgets.Display;
import org.eclipse.swt.widgets.Shell;

public class WindowDemo {

	protected Shell shell;

	/**
	 * Launch the application.
	 * @param args
	 */
	public static void main(String[] args) {
		try {
			WindowDemo window = new WindowDemo();
			window.open();
		} catch (Exception e) {
			e.printStackTrace();
		}
	}
```

```
	/**
	 * Open the window.
	 */
	public void open() {
		Display display = Display.getDefault();
		createContents();
		shell.open();
		shell.layout();
		while (!shell.isDisposed()) {
			if (!display.readAndDispatch()) {
				display.sleep();
			}
		}
	}

	/**
	 * Create contents of the window.
	 */
	protected void createContents() {
		shell = new Shell();
		shell.setSize(450, 300);
		shell.setText("SWT Application");

	}

}
```