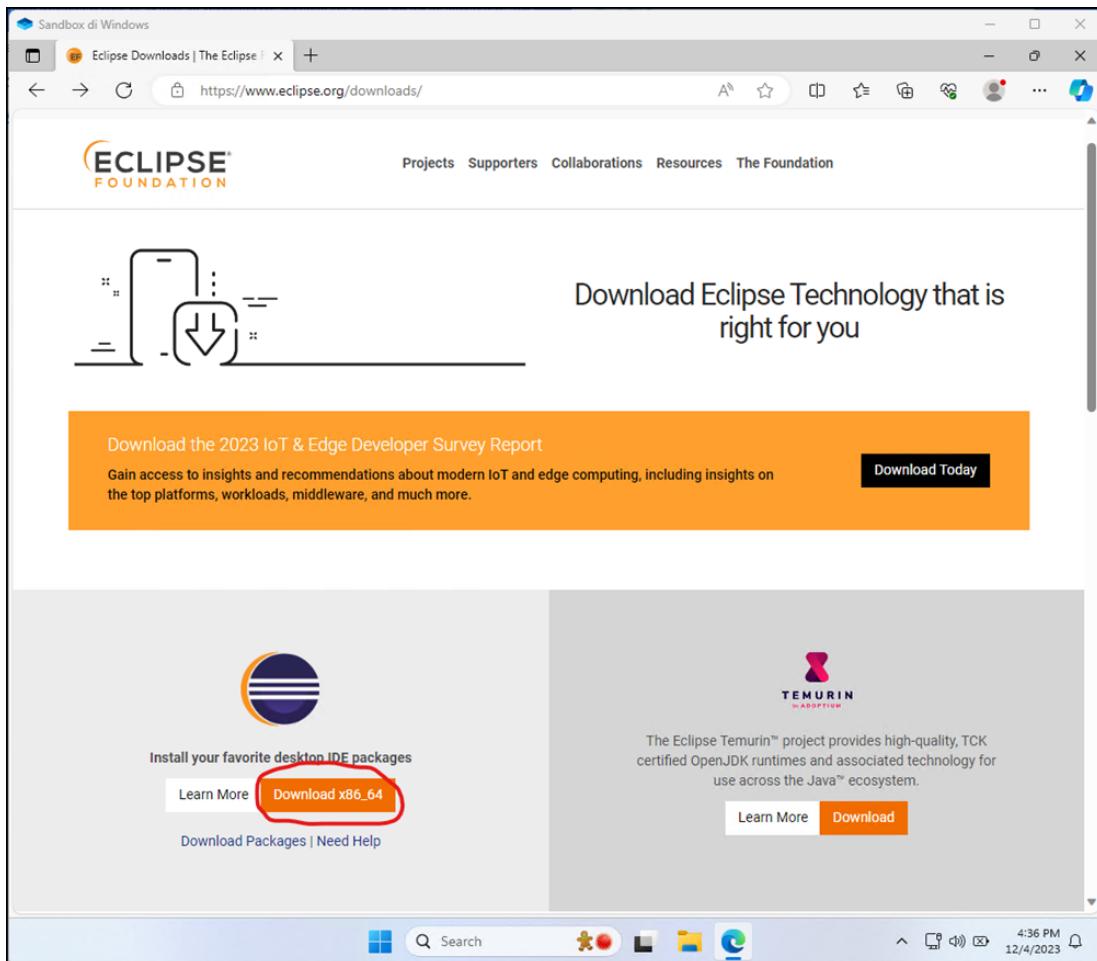
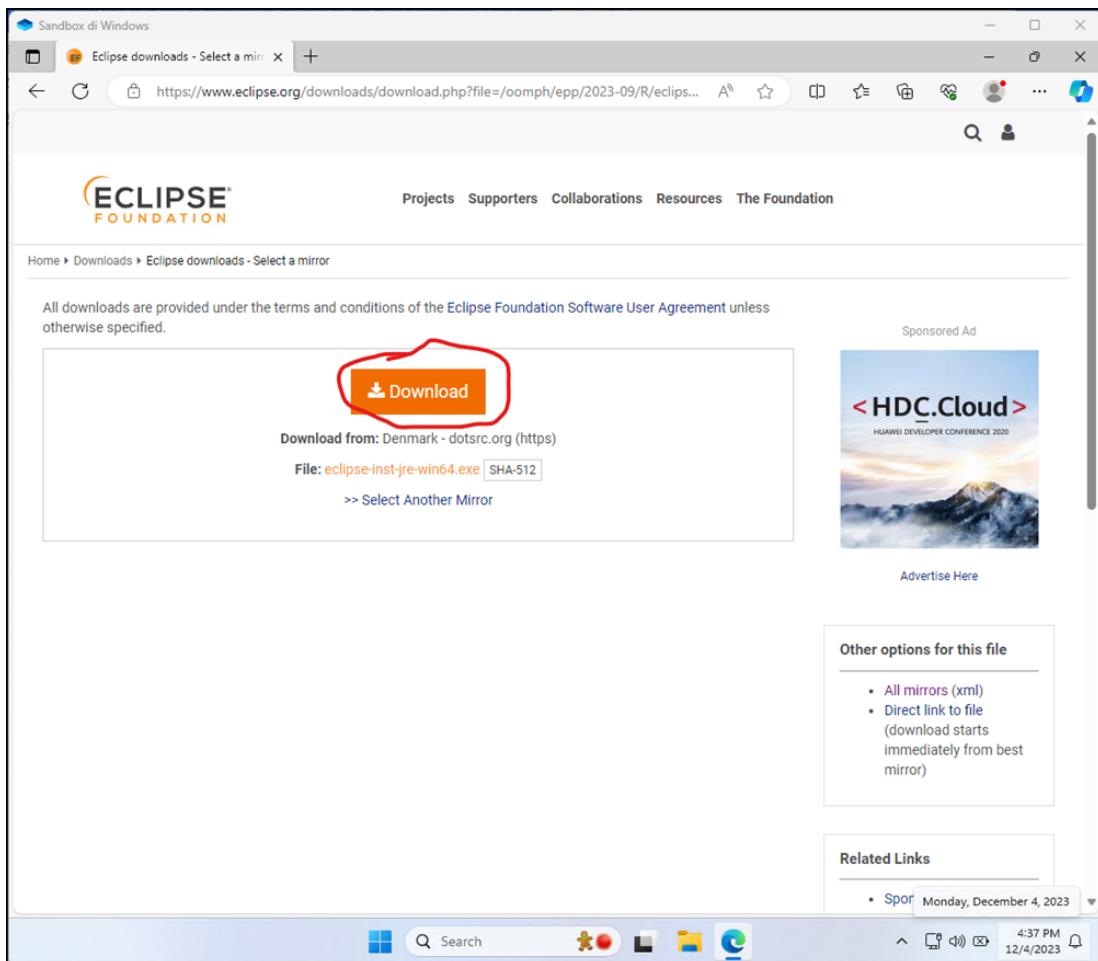
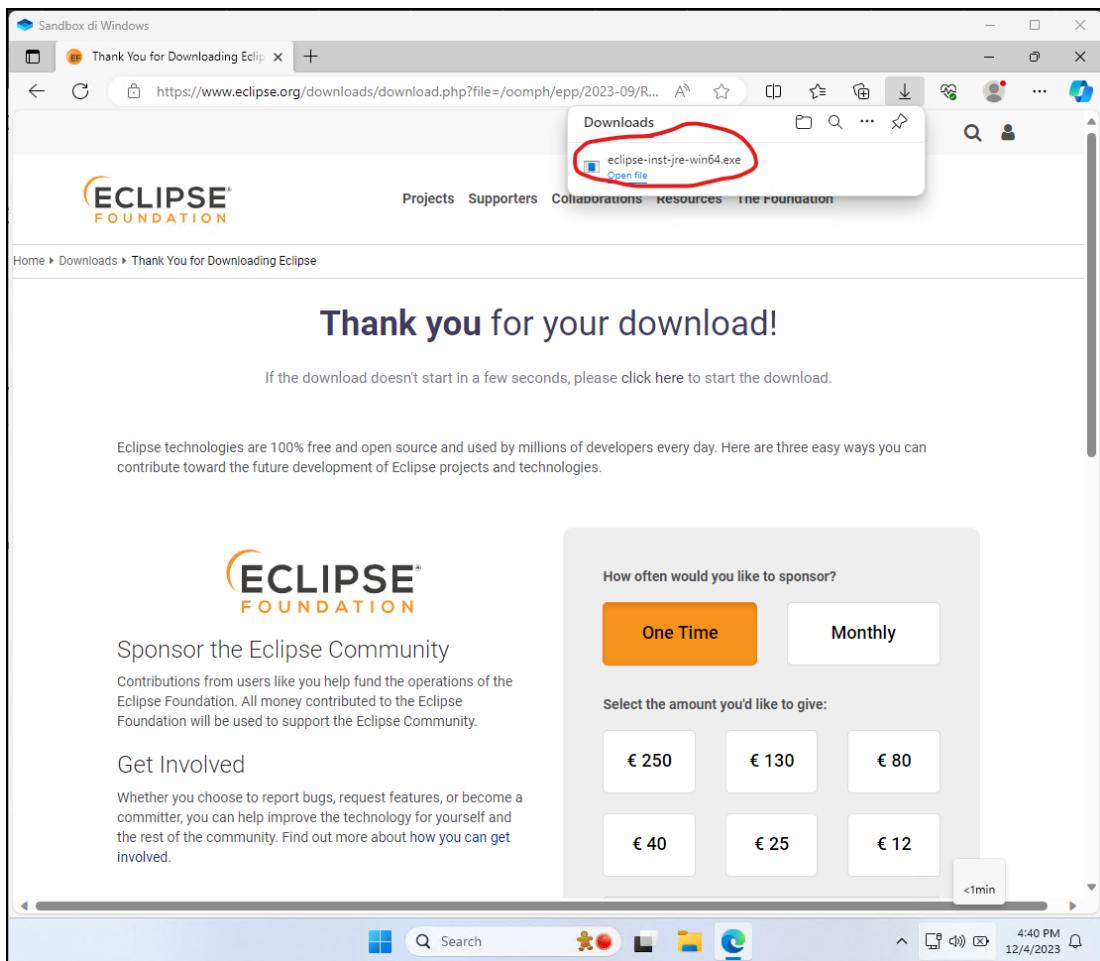
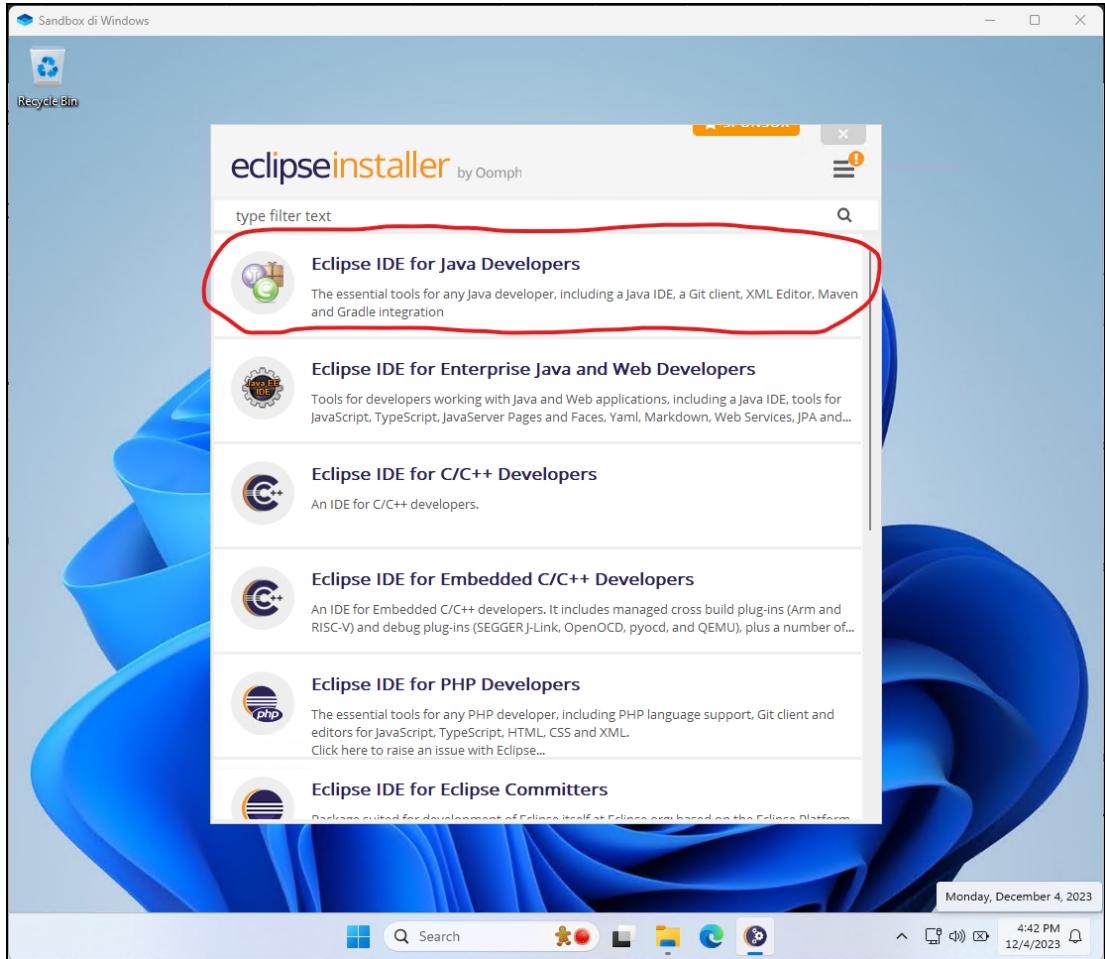


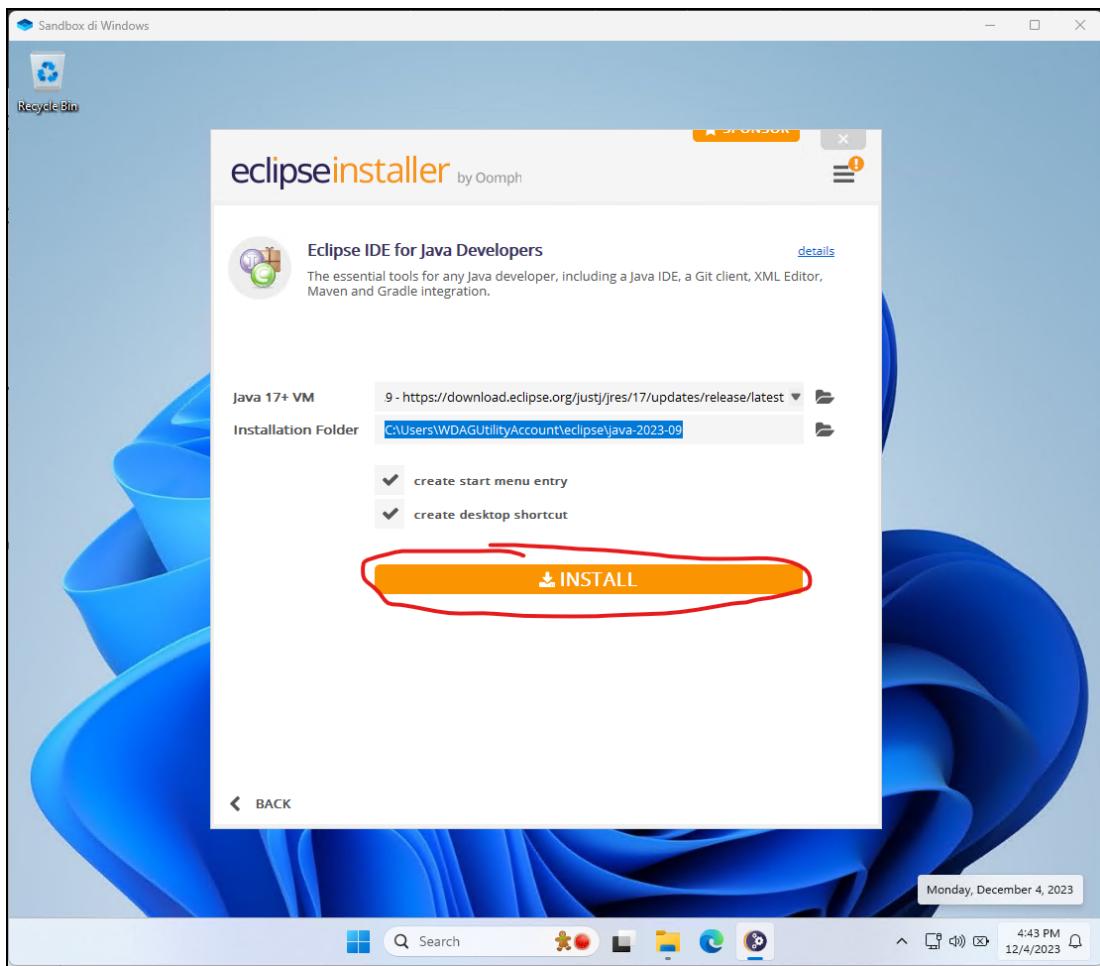
1. Download, install and run Eclipse [  
<https://www.eclipse.org/downloads/> ]

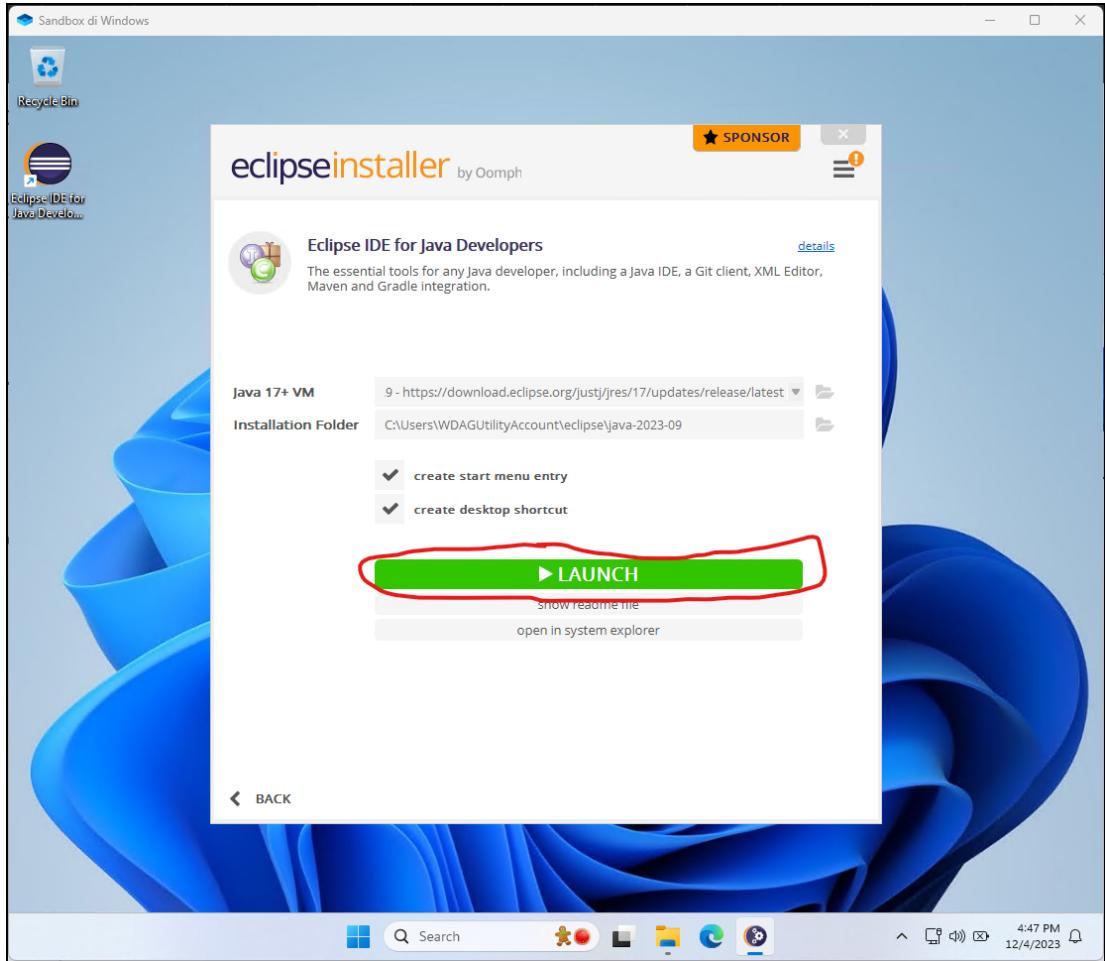




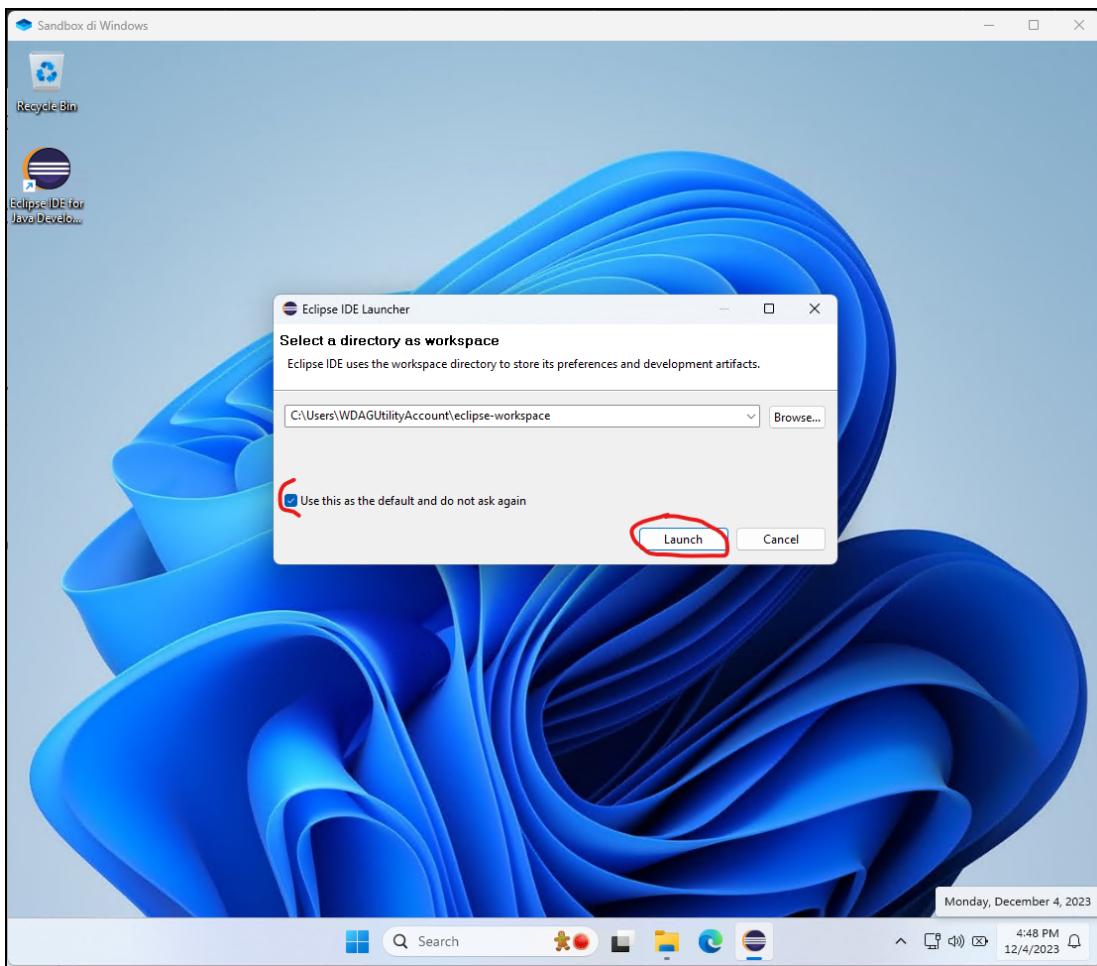






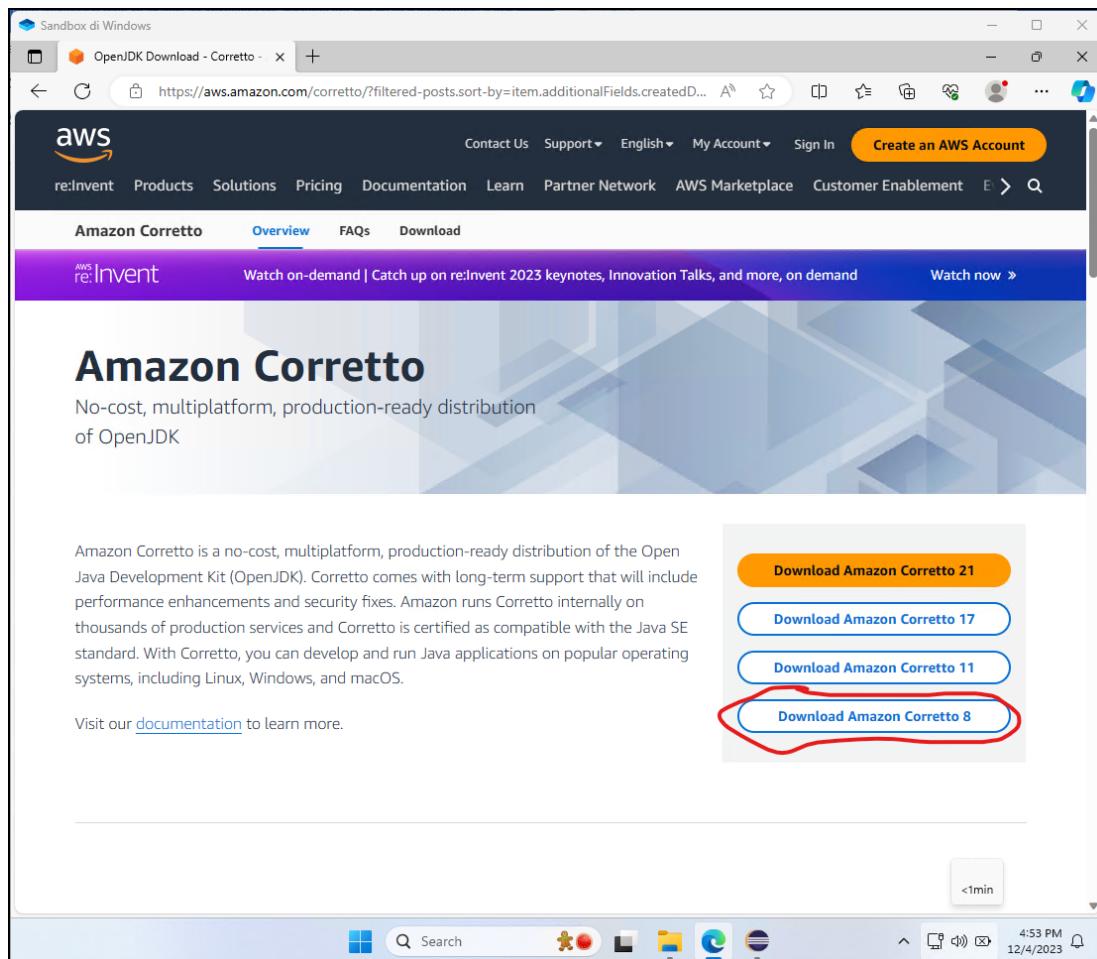


Select your preferred directory as workspace. This will be the directory containing the project so remember its name.



2. Create a **resources folder** to put all the important files in. I will call it "LEGv8 Simulator Resources"

3. Download a Java 8 JDK (not JRE!) of your choice. I recommend Amazon Corretto 8 for licensing and compatibility reasons [<https://aws.amazon.com/corretto> ]



The screenshot shows a web browser window with the AWS Corretto 8 User Guide. At the top, there's a search bar with the placeholder "Search in this guide". Below the search bar, the URL is https://docs.aws.amazon.com/corretto/latest/corretto-8-ug/downloads-list.html. The main content area displays a table of download links for Amazon Corretto 8. The table has columns for Platform, Type, Download Link, and Checksum (MD5). The "Download Link" column contains several URLs, with the one for the Windows x64 JRE version highlighted by a red circle. The table rows are as follows:

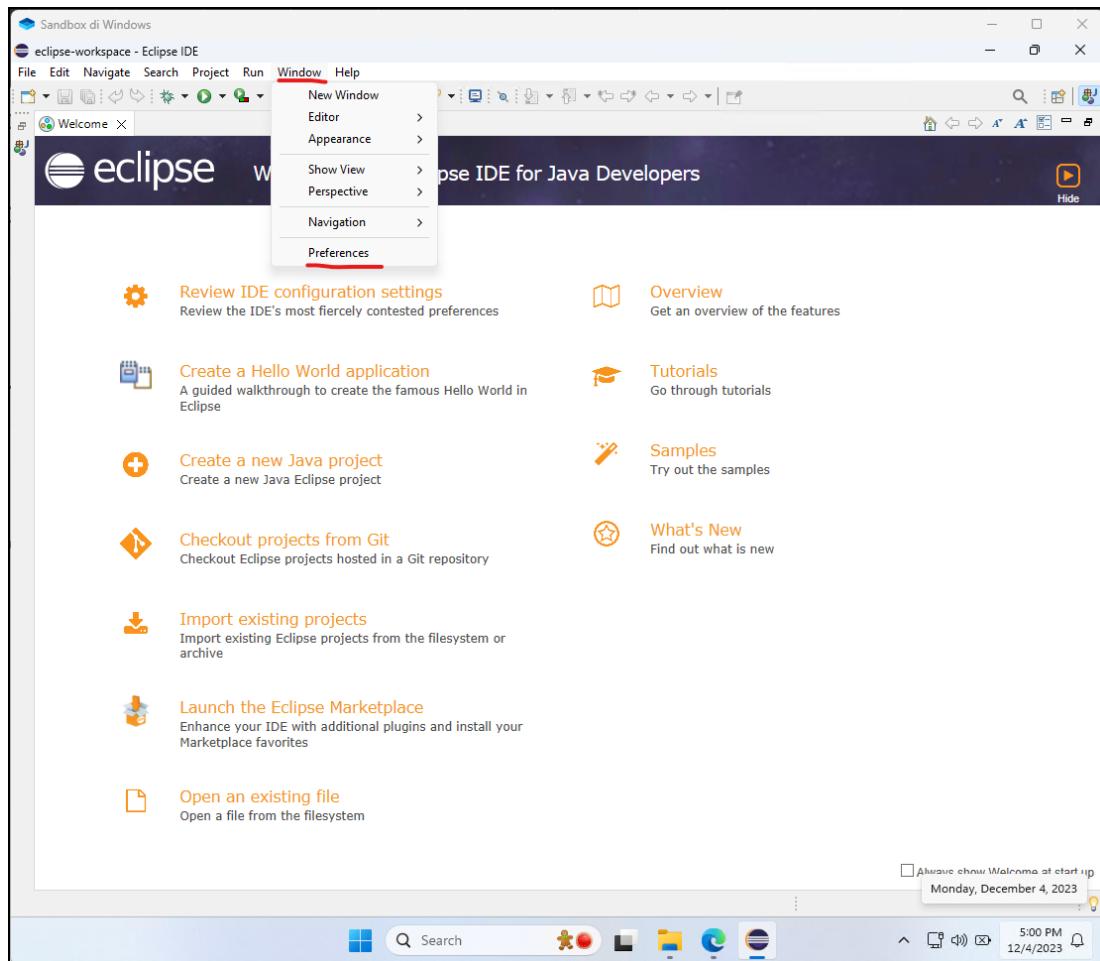
Platform	Type	Download Link	Checksum (MD5)
Windows x64	JDK	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-aarch64-linux-jdk.tar.gz">https://corretto.aws/downloads/latest/amazon-corretto-8-aarch64-linux-jdk.tar.gz</a>	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-aarch64-linux-jdk.md5">https://corretto.aws/downloads/latest/amazon-corretto-8-aarch64-linux-jdk.md5</a>
		<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jdk.zip">https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jdk.zip</a>	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jdk.md5">https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jdk.md5</a>
	JRE	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.msi">https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.msi</a>	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.md5">https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.md5</a>
		<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.zip">https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.zip</a>	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.md5">https://corretto.aws/downloads/latest/amazon-corretto-8-x64-windows-jre.md5</a>
Windows x86	JDK	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.msi">https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.msi</a>	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.md5">https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.md5</a>
		<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.zip">https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.zip</a>	<a href="https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.md5">https://corretto.aws/downloads/latest/amazon-corretto-8-x86-windows-jdk.md5</a>

**Note:** Notice that the above links follow this format:

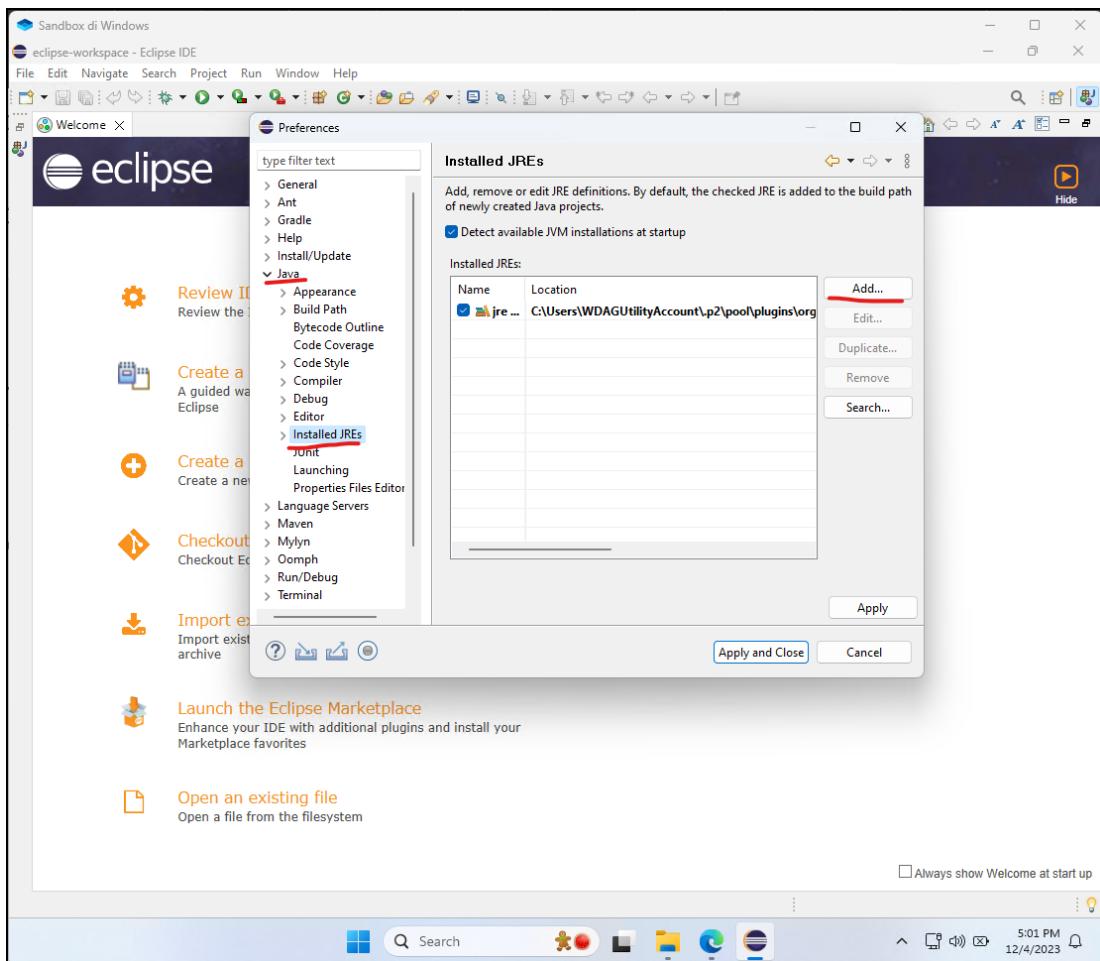
Monday, December 4, 2023 4:54 PM 12/4/2023

Extract the .zip file and move the extracted folder in the **resources** folder.

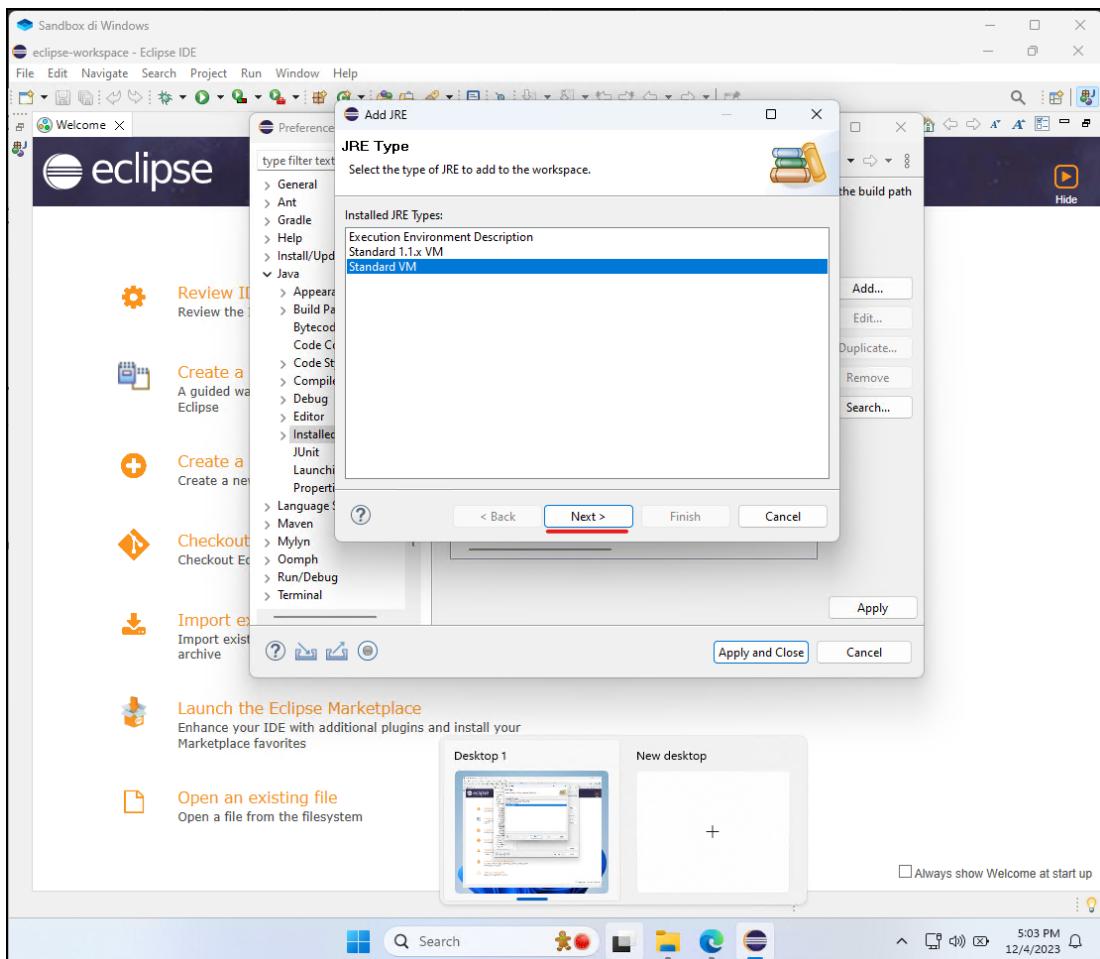
4. Tell Eclipse to use this JDK instead of the default one. Go to Window → Preferences



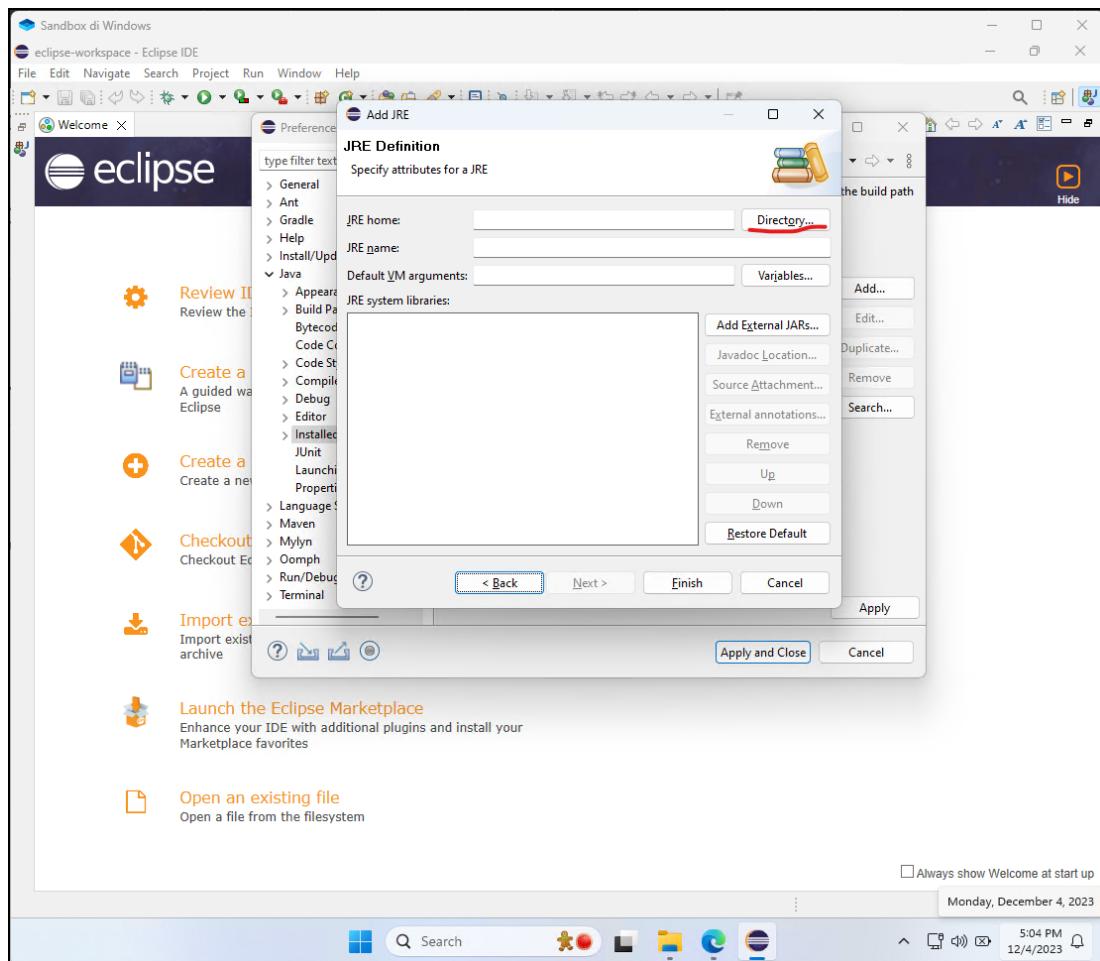
Java → Installed JREs → Add..

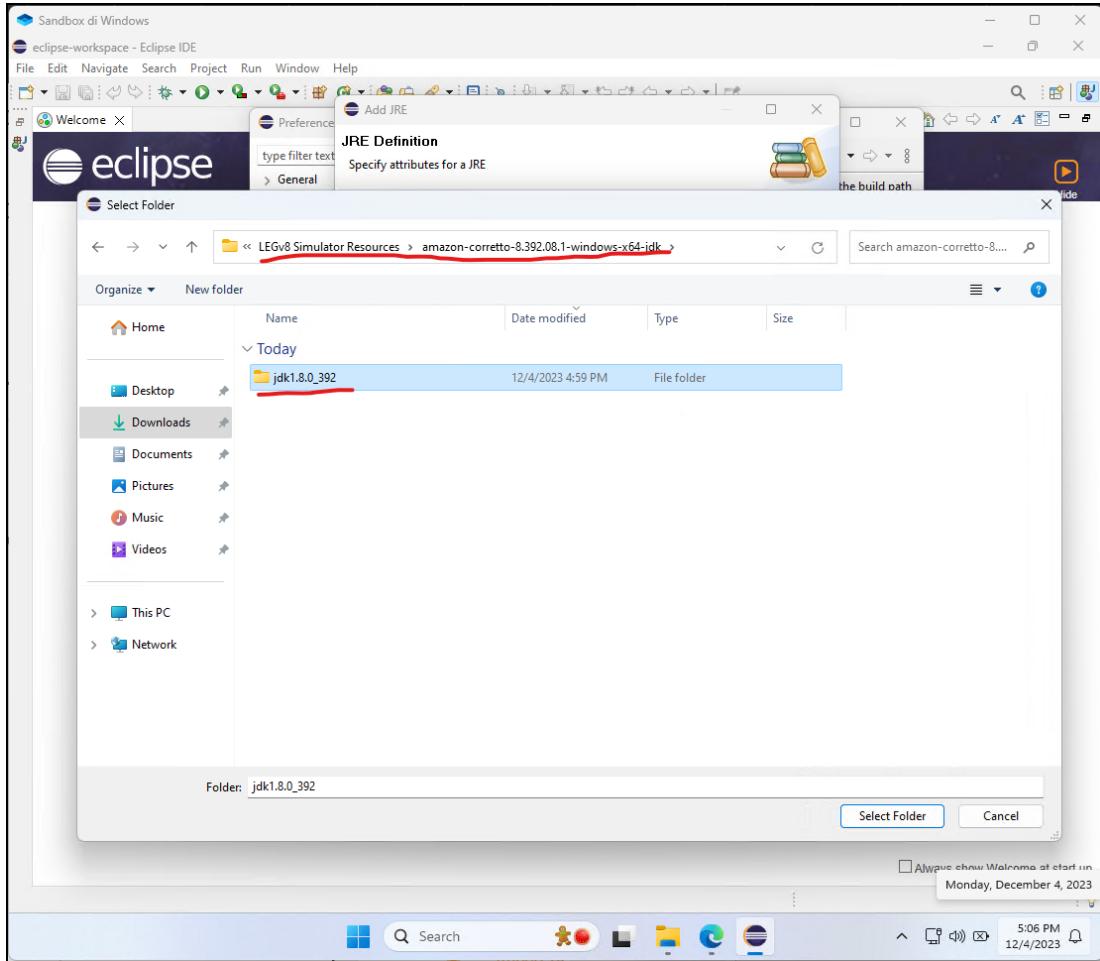


Press Next

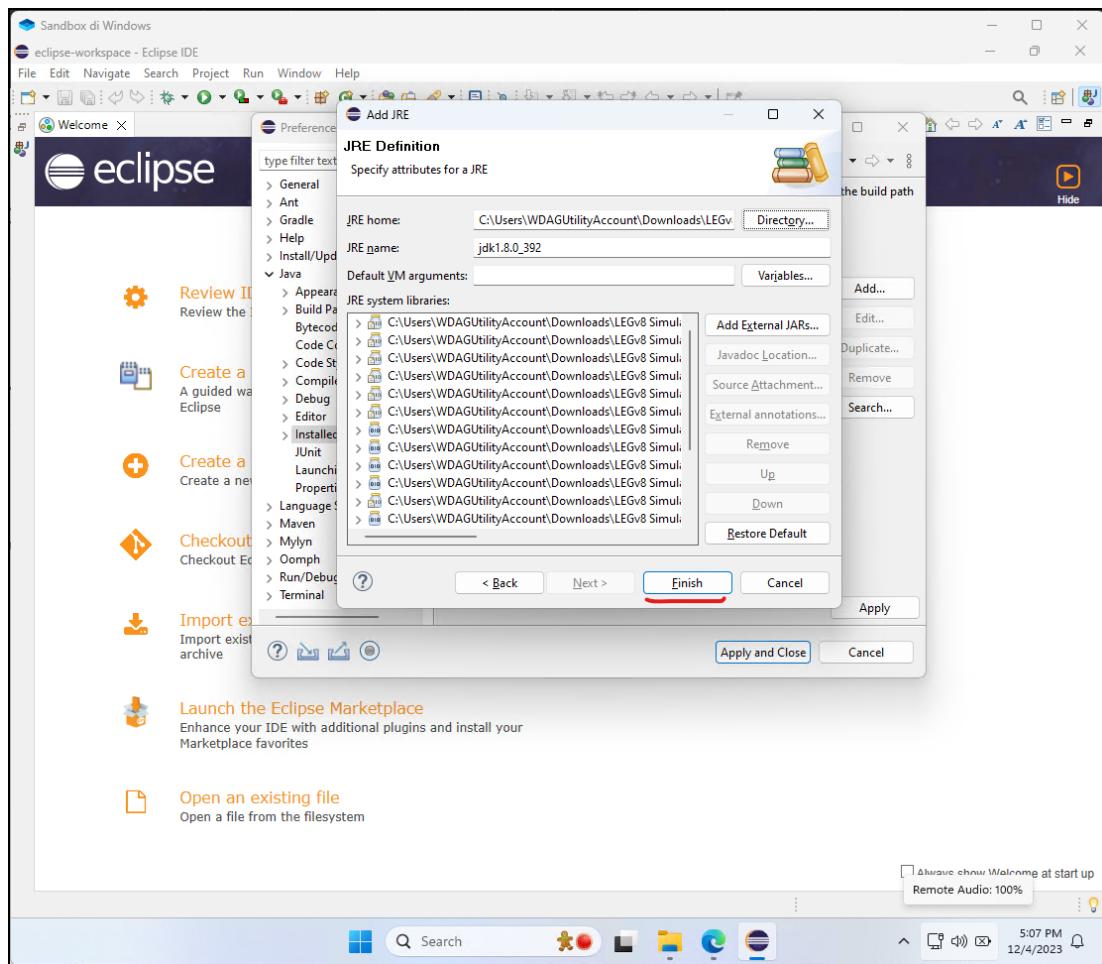


Click on Directory... and select the one containing your JDK, in this case the folder `amazon-corretto-8.392.08.1-windows-x64-jdk/jdk1.8.0_392` inside the resources folder

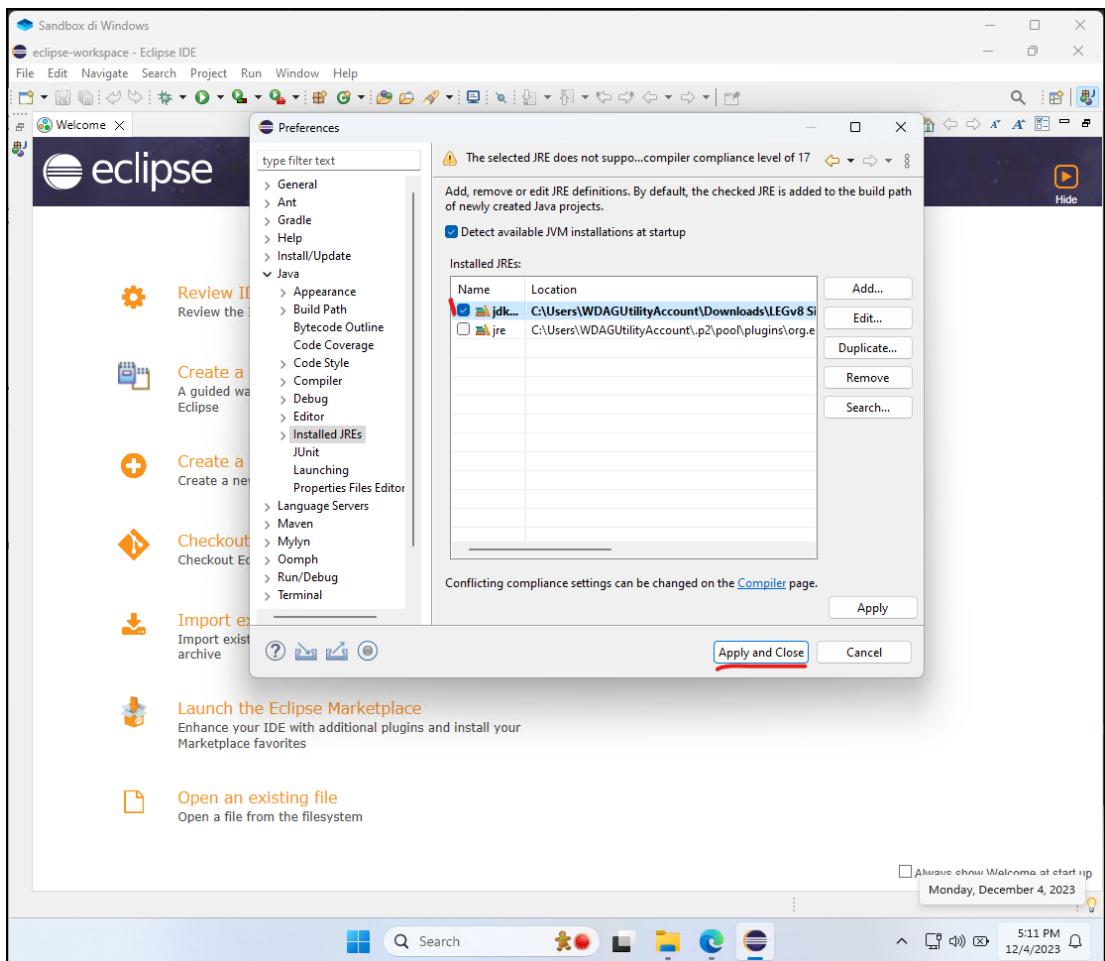




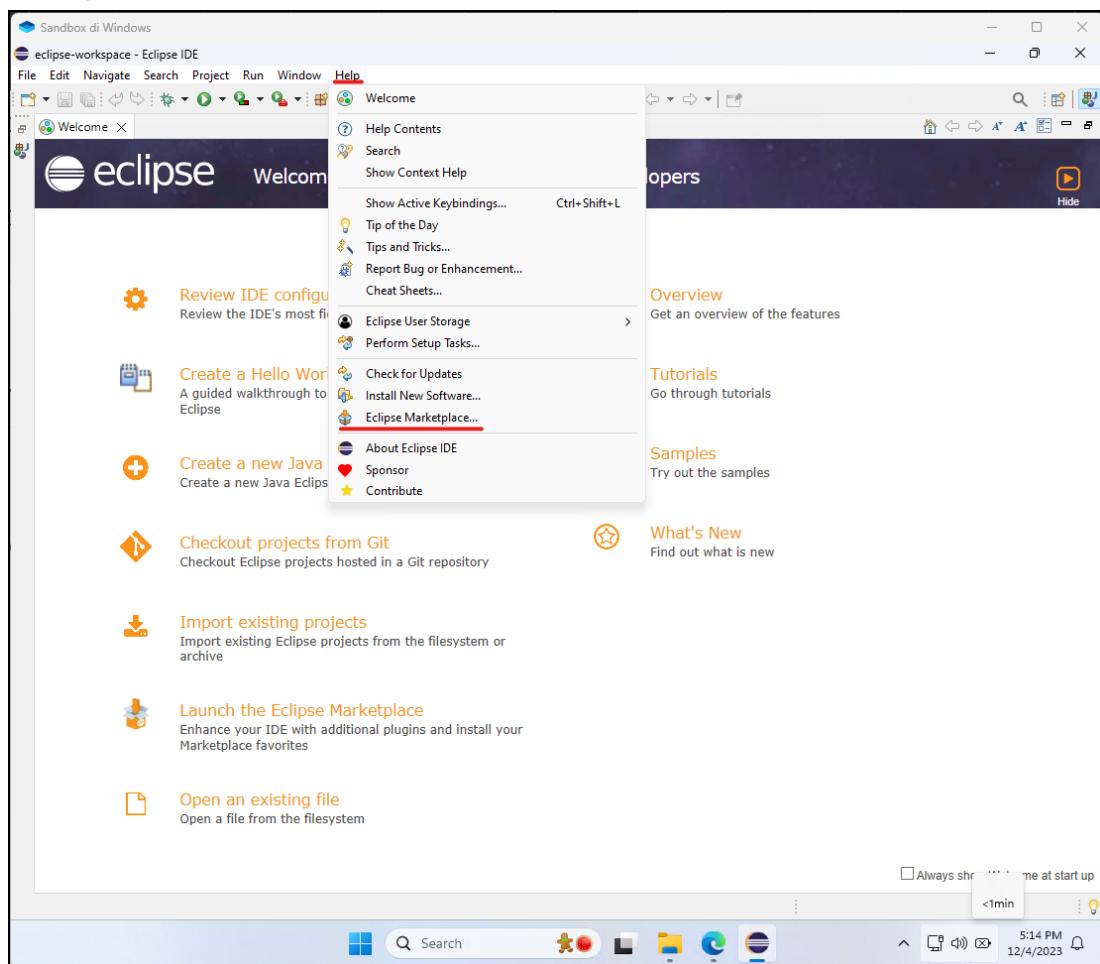
The libraries list will now be populated and you can press Finish



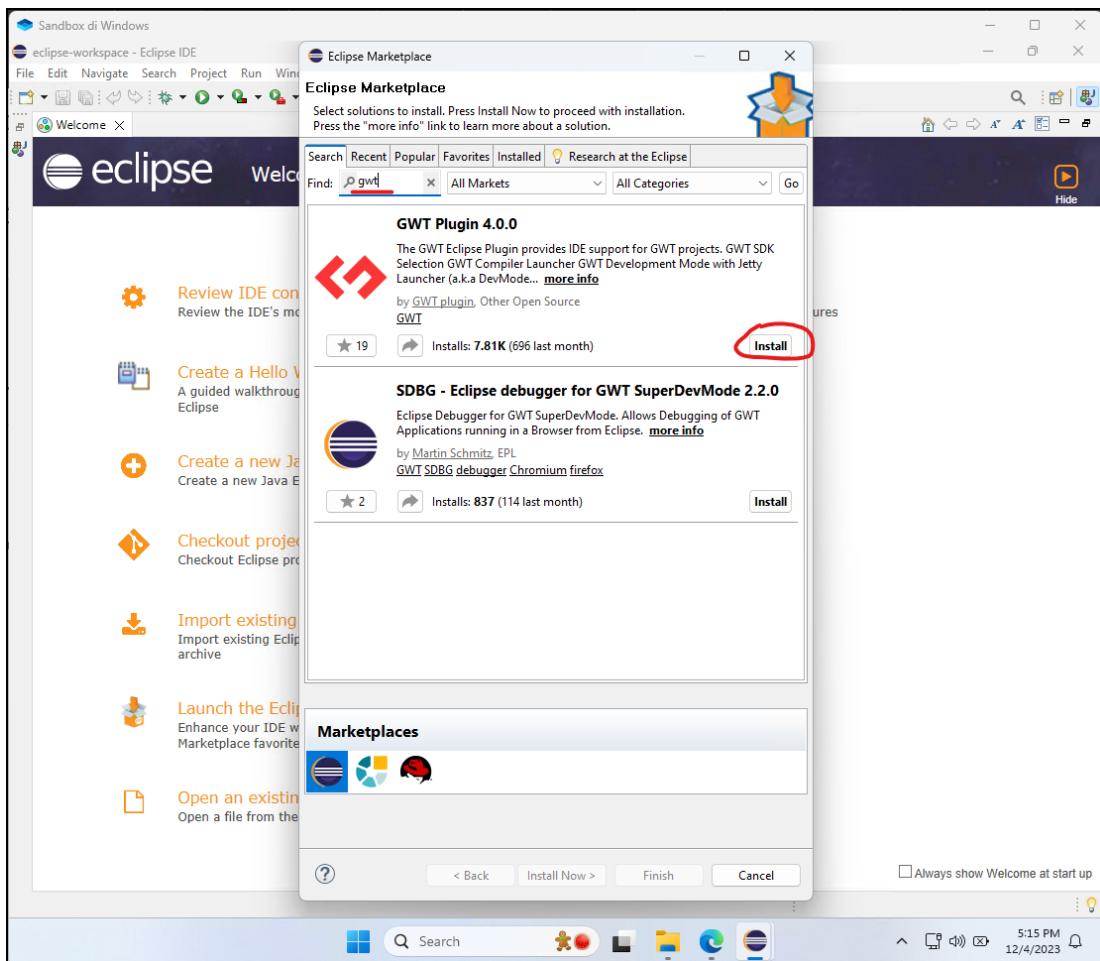
Select your JDK and press Apply and Close



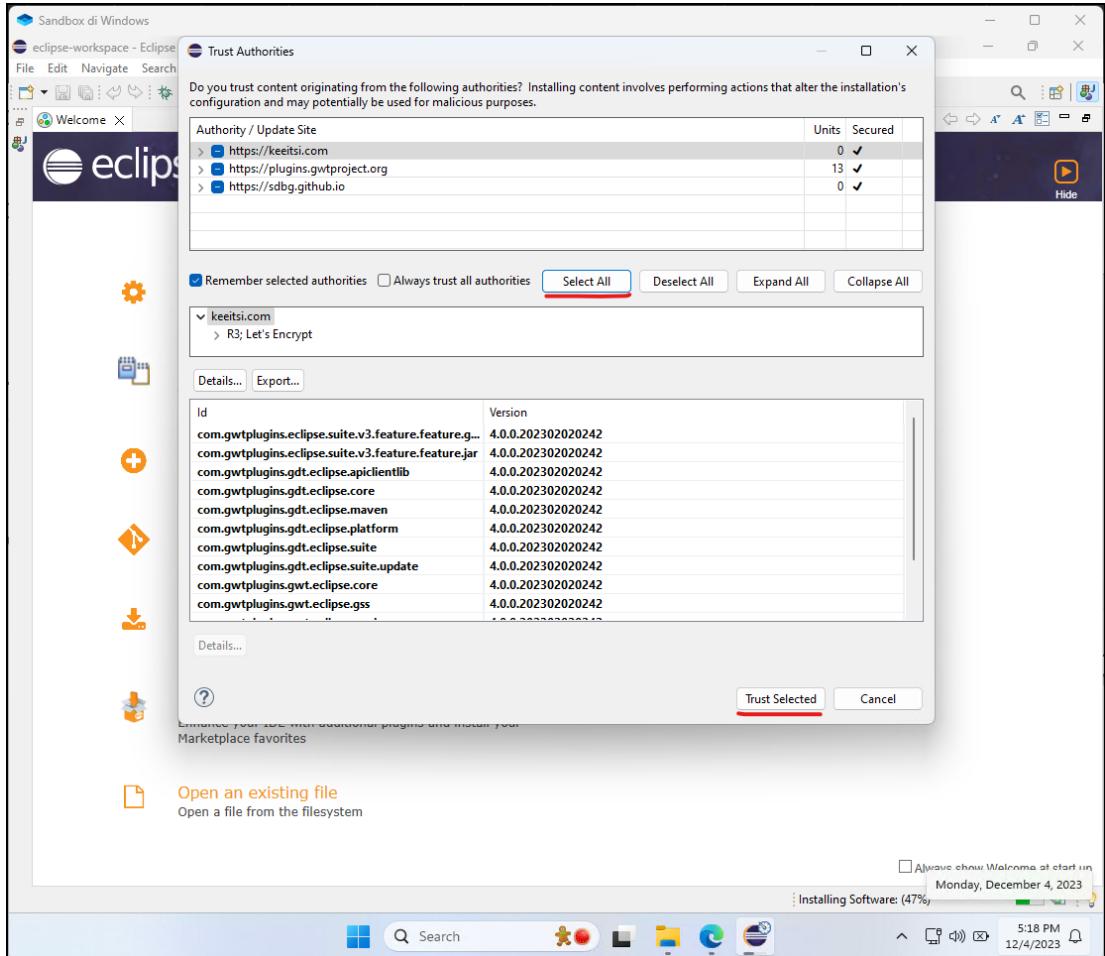
## 5. Navigate to Help → Eclipse Marketplace...



Search for “gwt” and press “Install” for the “GWT Plugin”



Accept the terms of the License Agreement and wait while Eclipse installs the plug-in ( you can see the progress on the bottom right progress bar ). Select all the authorities and press Trust Selected



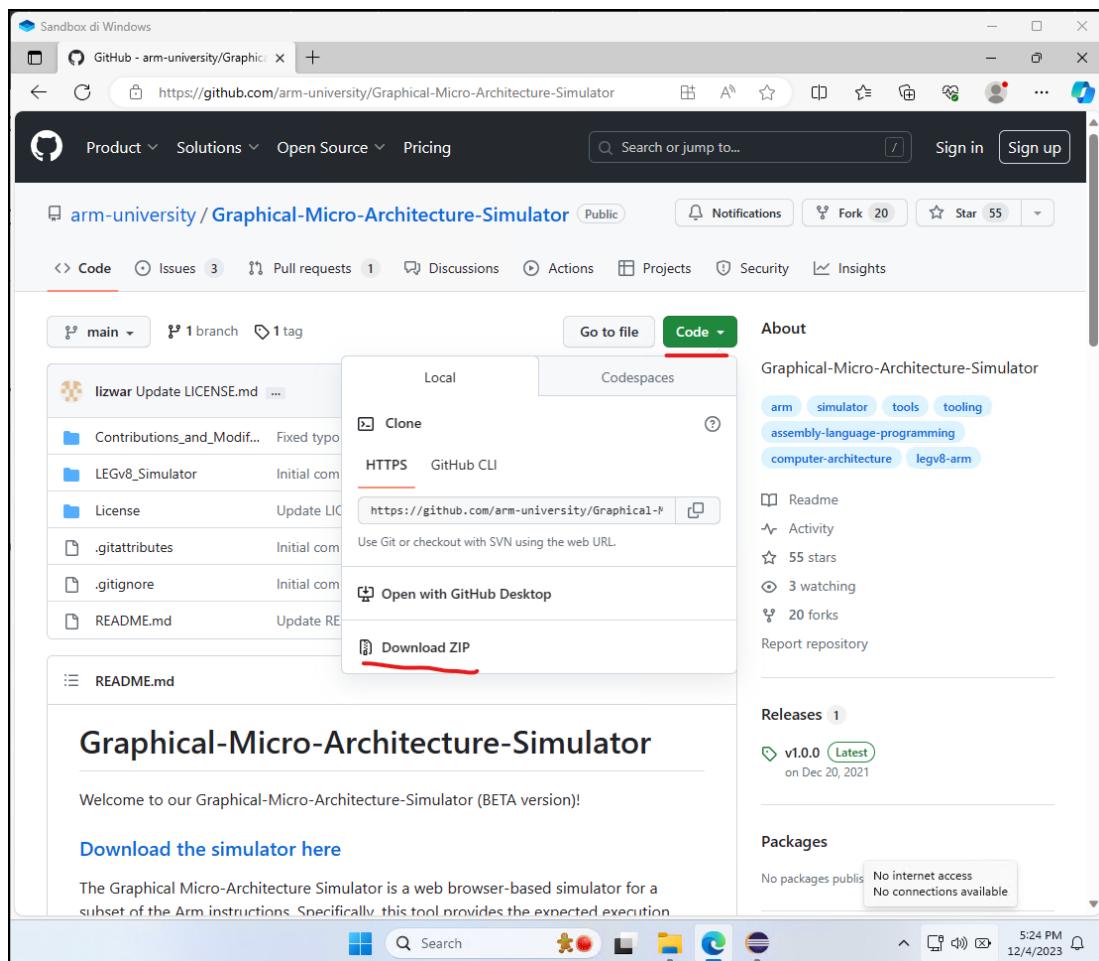
After this, keep waiting and then you will be asked to do the same thing one more time.

When the installation finishes press Restart Now.

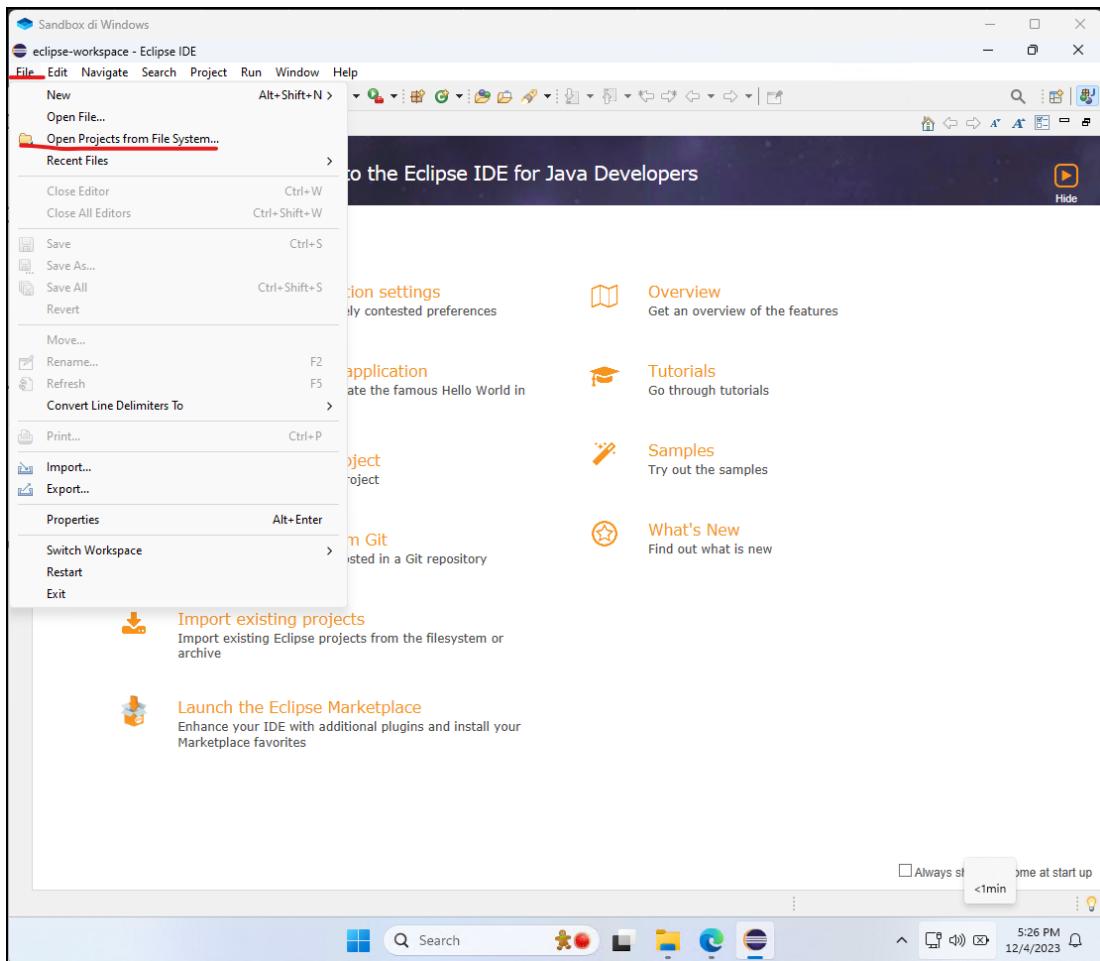
6. Clone the github project or download and extract the zip file in your resource folder.

[

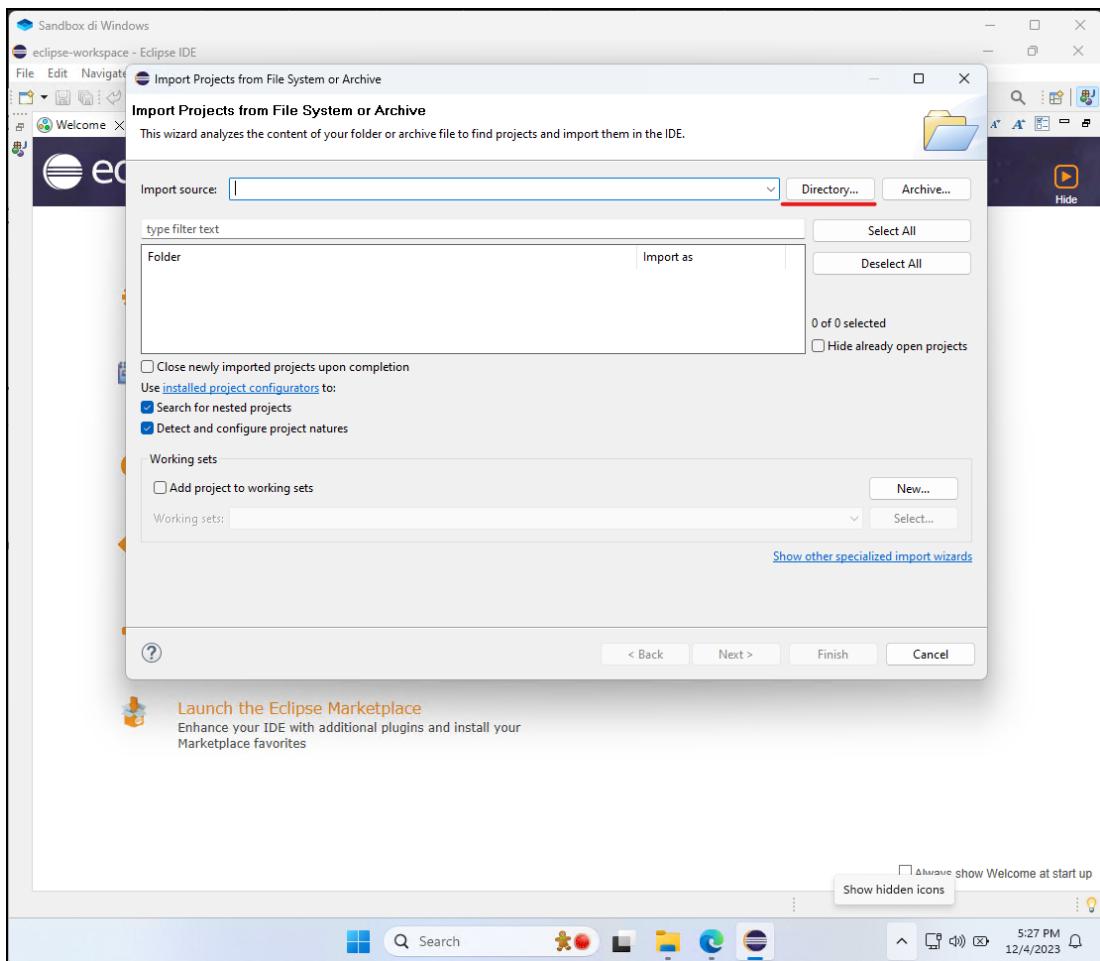
<https://github.com/arm-university/Graphical-Micro-Architecture-Simulator> ]



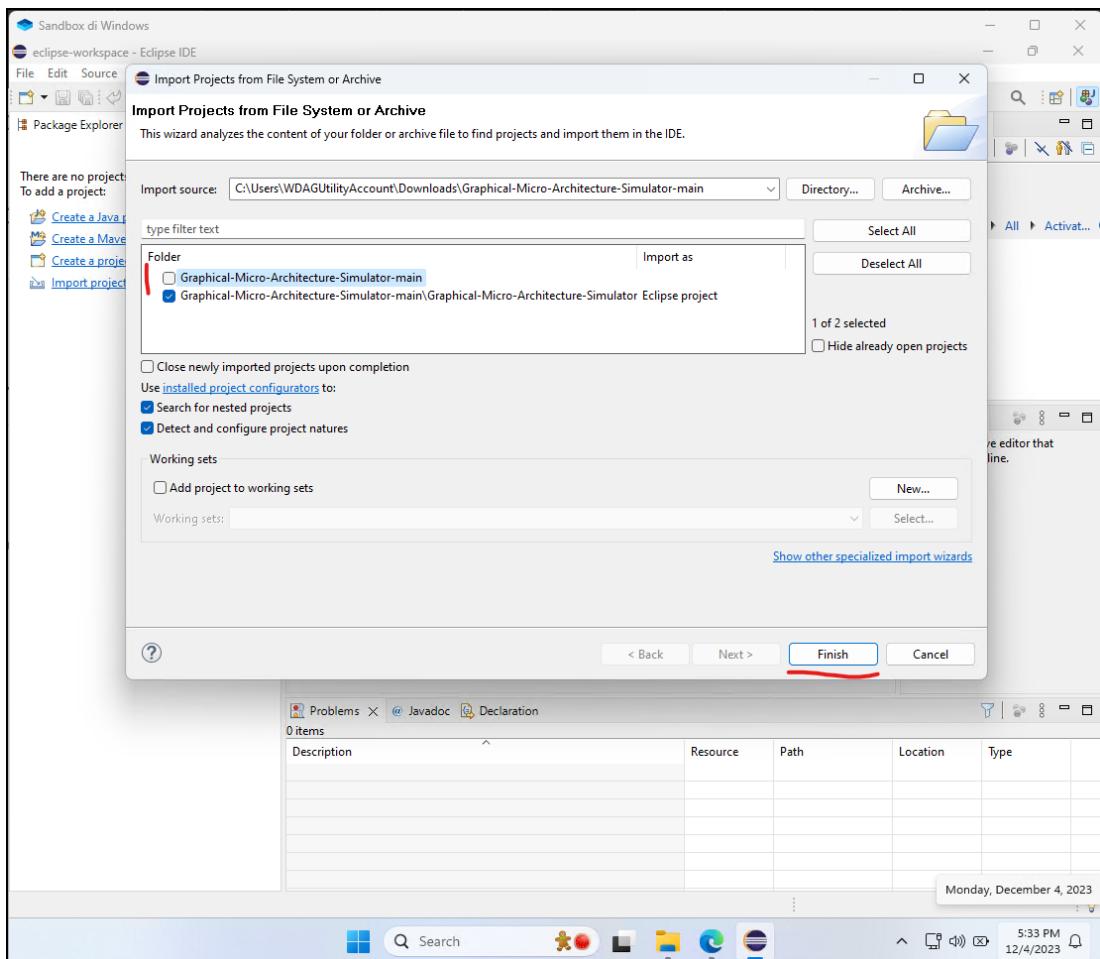
## 7. In Eclipse go to File → Open Projects from File System...



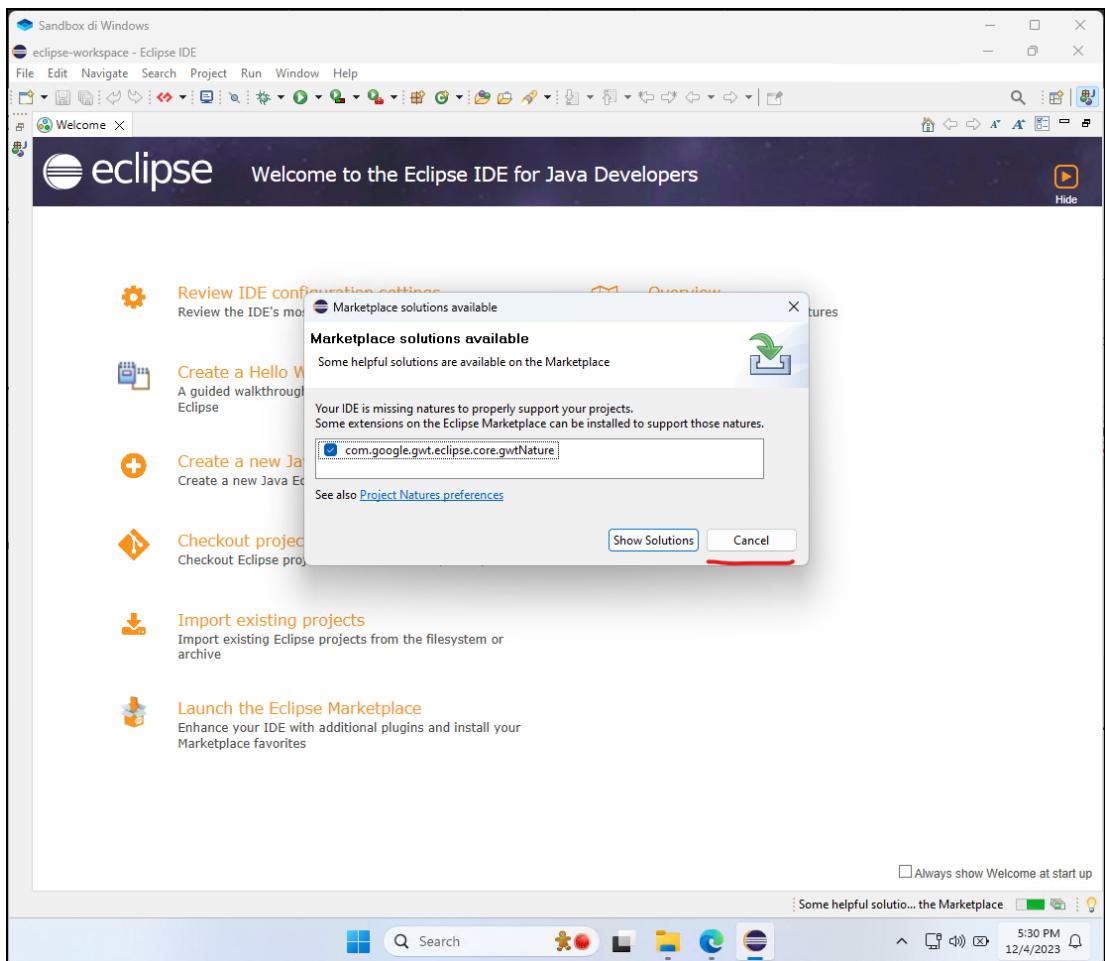
Click on Directory... and select the folder containing the project you downloaded from GitHub



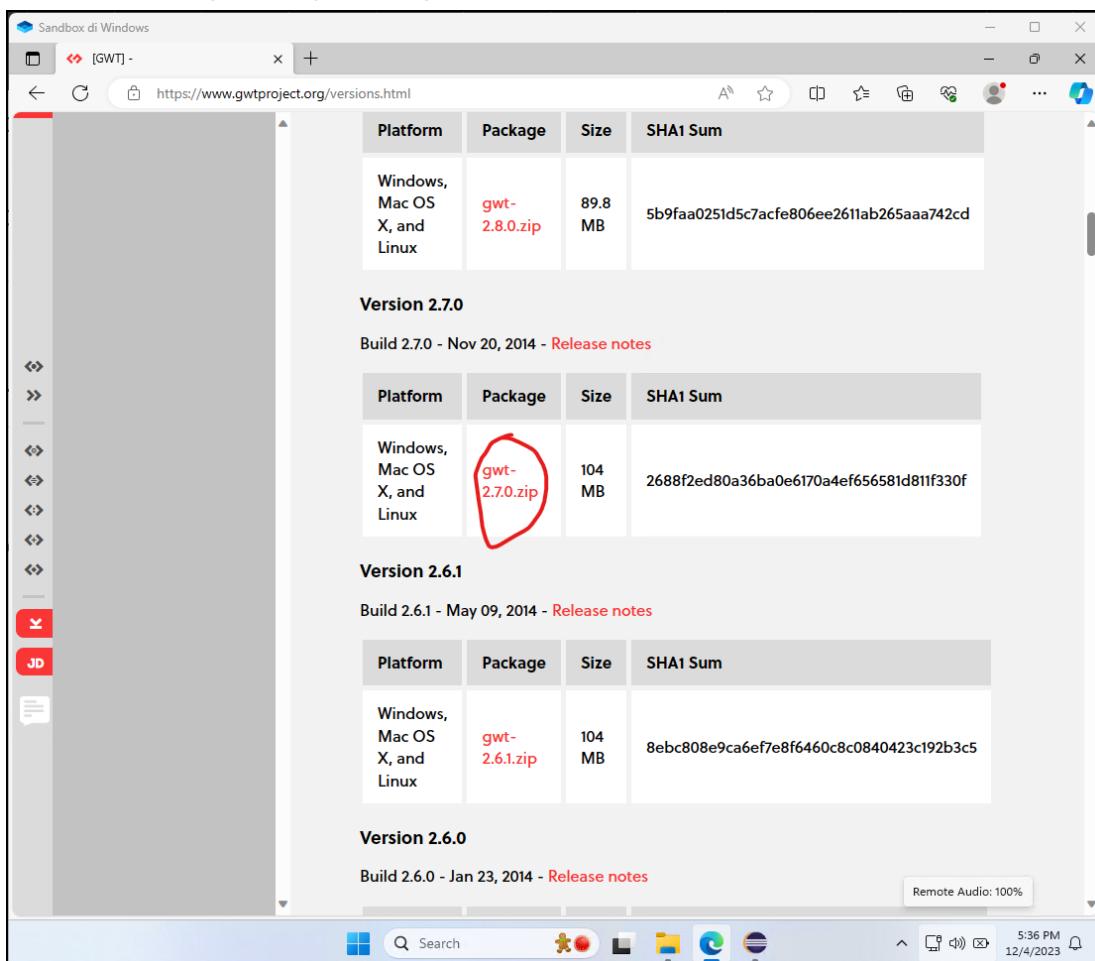
Unselect the first folder and press Finish



Eclipse will show you this dialog multiple times, ignore it every time or click the Project Natures preferences and disable the automatic warnings.



8. Download GWT SDK version 2.7 (this is what the project uses) and extract it in your resources folder [  
<https://www.gwtproject.org/versions.html> ]



The screenshot shows a web browser window displaying the GWT versions page at <https://www.gwtproject.org/versions.html>. The page lists GWT versions 2.7.0, 2.6.1, and 2.6.0, each with a download table. A red circle highlights the 'gwt-2.7.0.zip' link in the first table.

Platform	Package	Size	SHA1 Sum
Windows, Mac OS X, and Linux	<a href="#">gwt-2.7.0.zip</a>	89.8 MB	5b9faa0251d5c7acfe806ee2611ab265aaa742cd

**Version 2.7.0**  
Build 2.7.0 - Nov 20, 2014 - [Release notes](#)

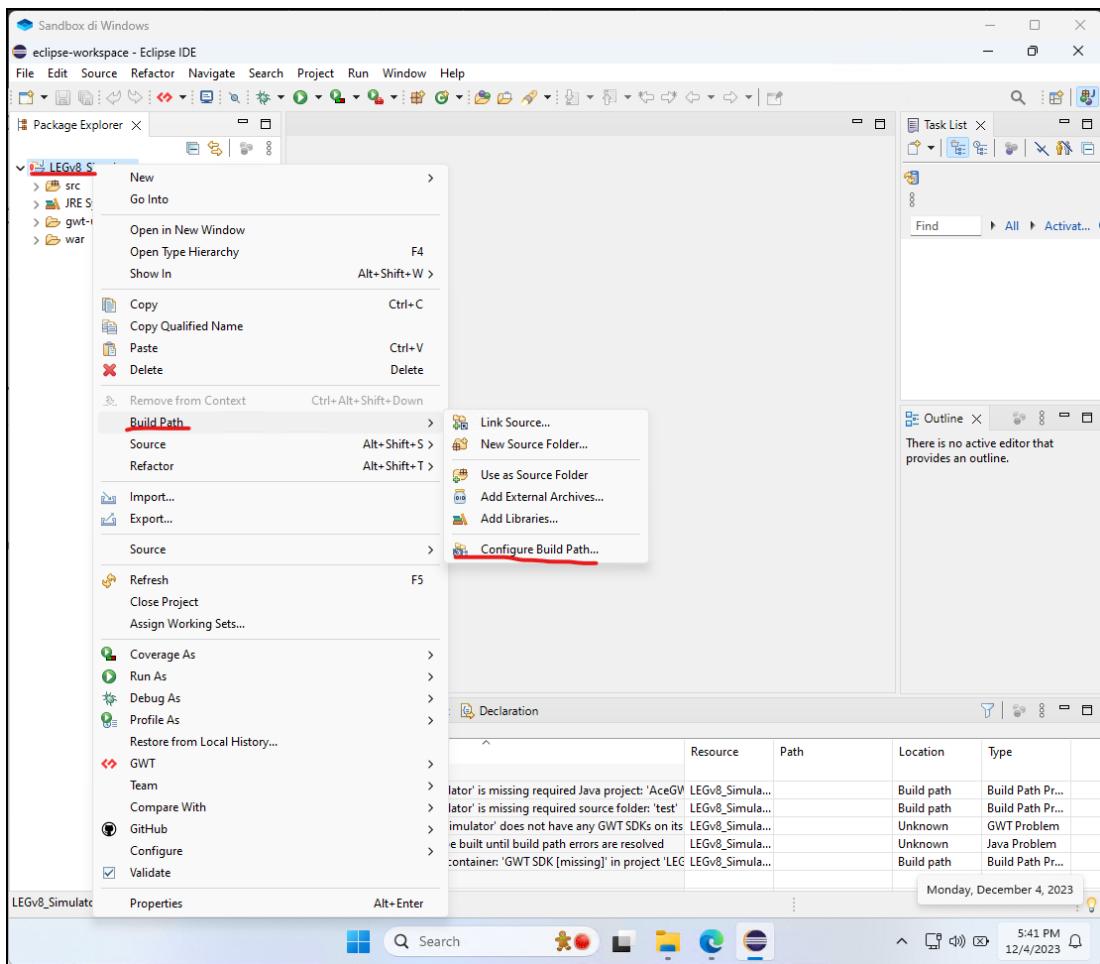
Platform	Package	Size	SHA1 Sum
Windows, Mac OS X, and Linux	<a href="#">gwt-2.7.0.zip</a>	104 MB	2688f2ed80a36ba0e6170a4ef656581d811f330f

**Version 2.6.1**  
Build 2.6.1 - May 09, 2014 - [Release notes](#)

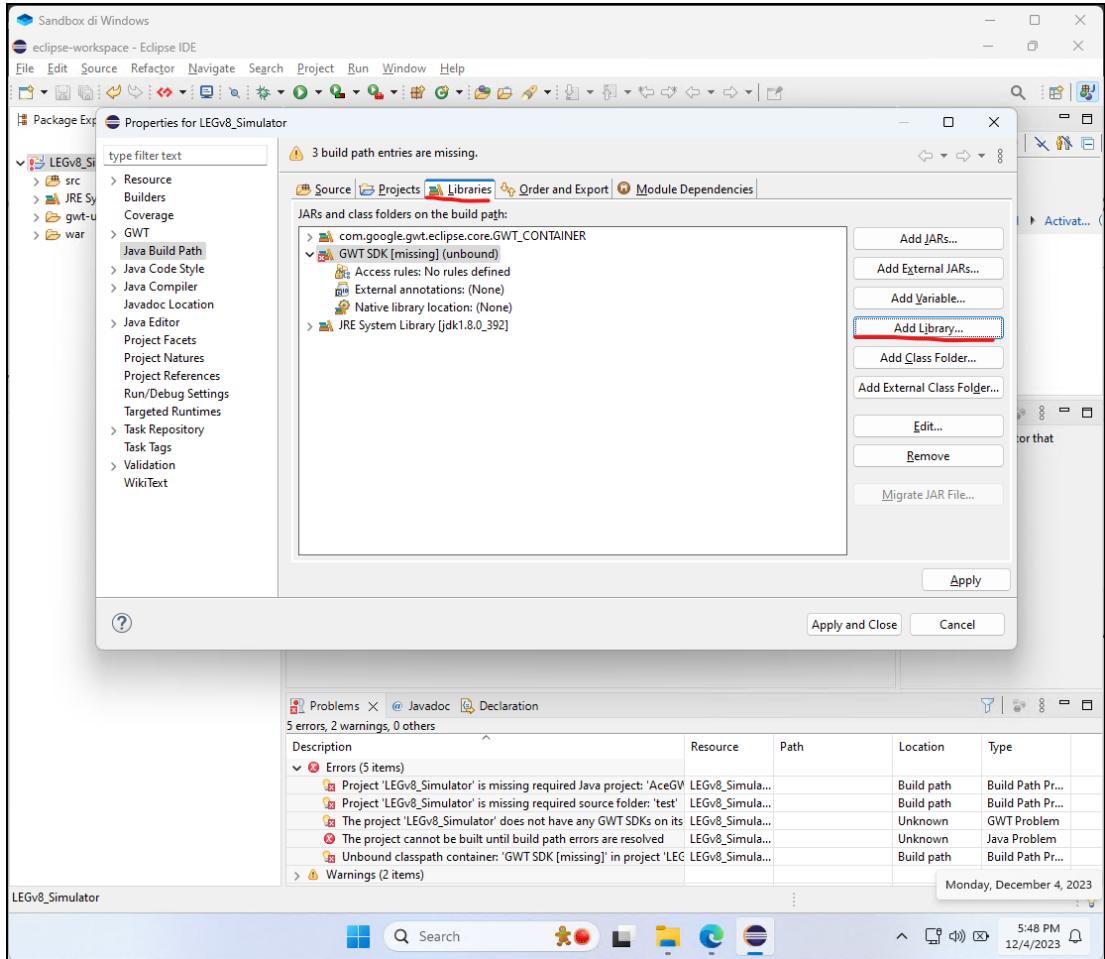
Platform	Package	Size	SHA1 Sum
Windows, Mac OS X, and Linux	<a href="#">gwt-2.6.1.zip</a>	104 MB	8ebc808e9ca6ef7e8f6460c8c0840423c192b3c5

**Version 2.6.0**  
Build 2.6.0 - Jan 23, 2014 - [Release notes](#)

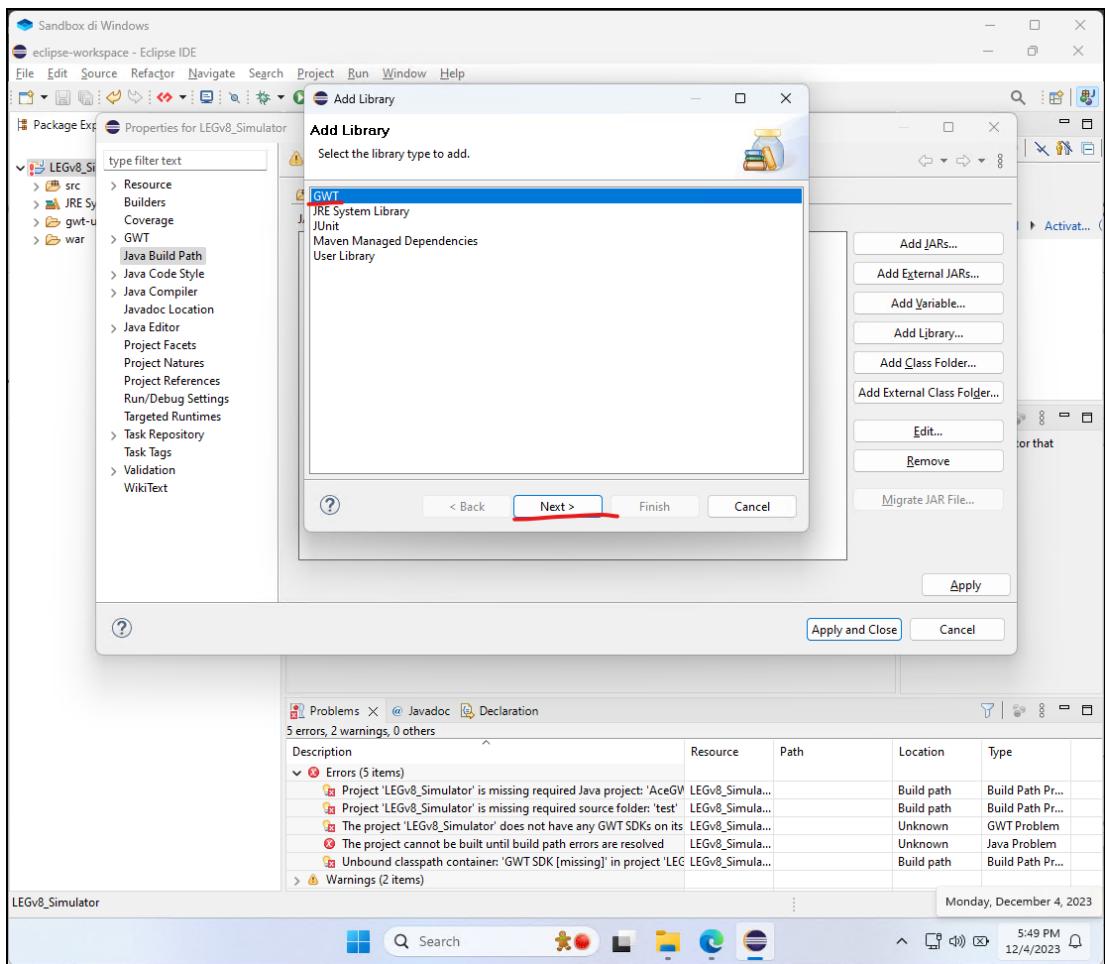
Right click on the project's folder inside Eclipse and navigate to Build Path → Configure Build Path



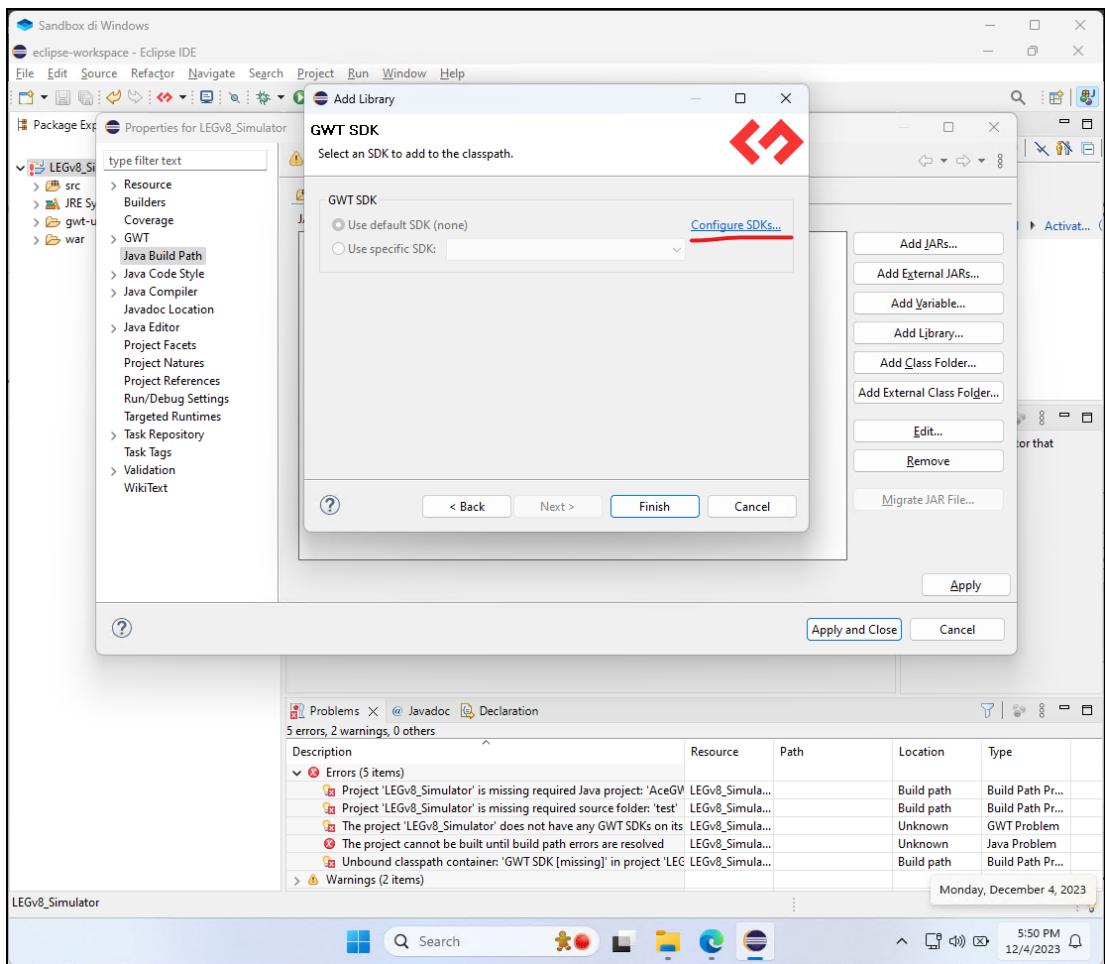
Go to the Libraries section and select Add Library



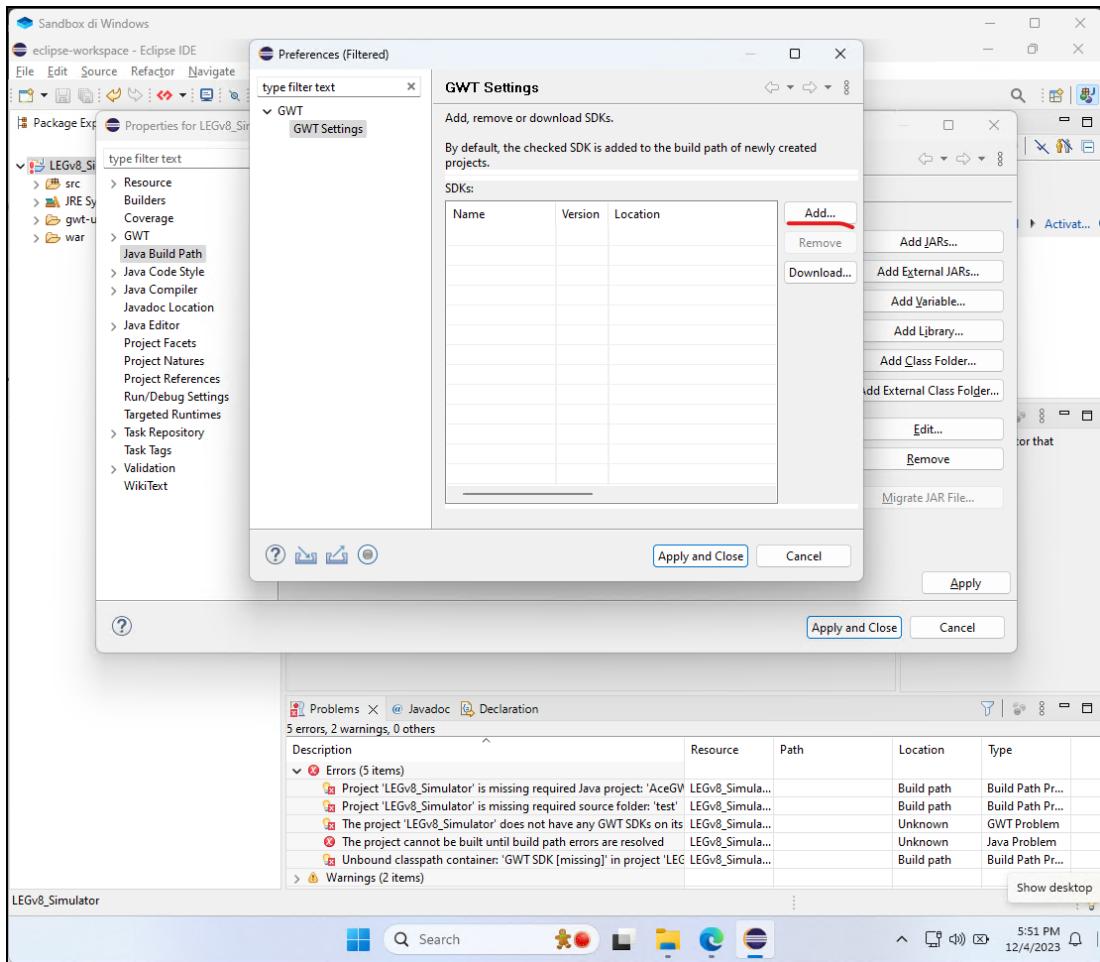
Select GWT and press Next



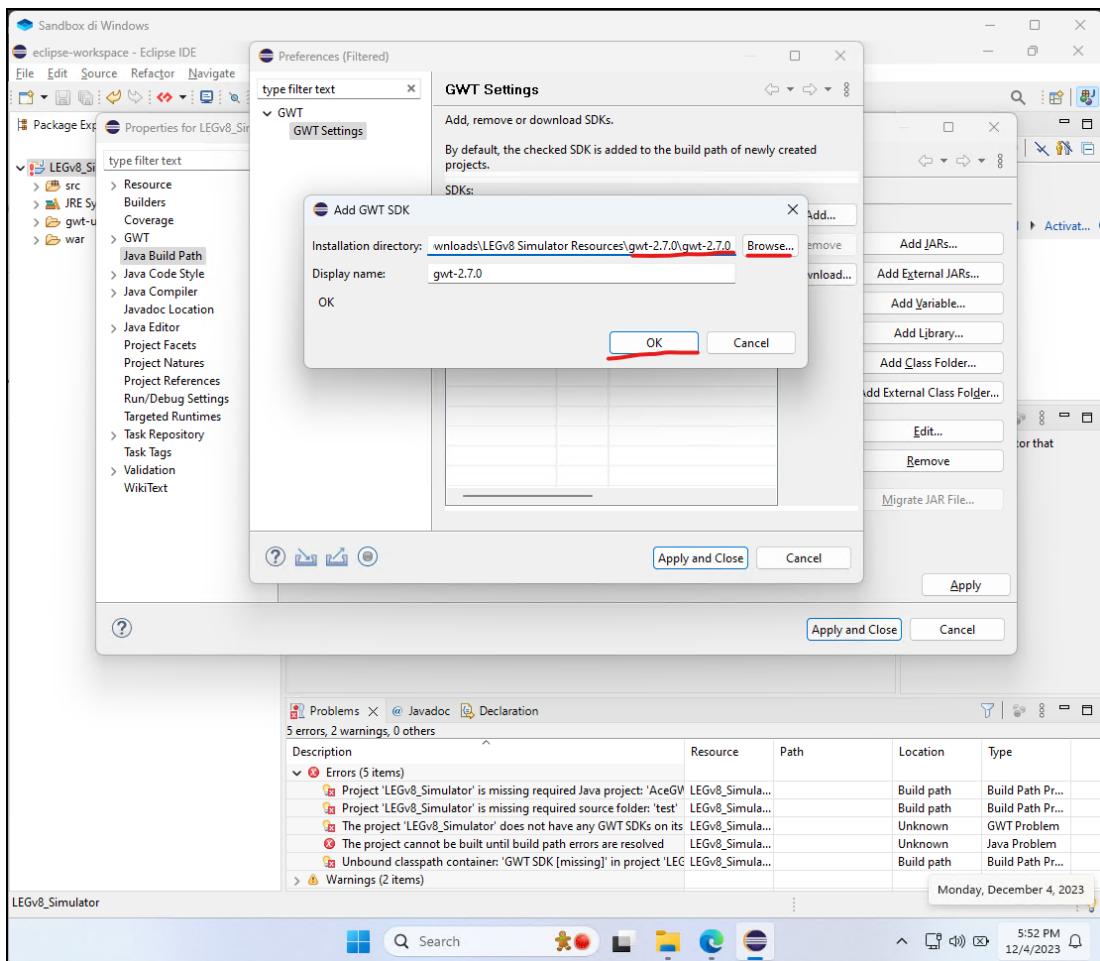
Click Configure SDK



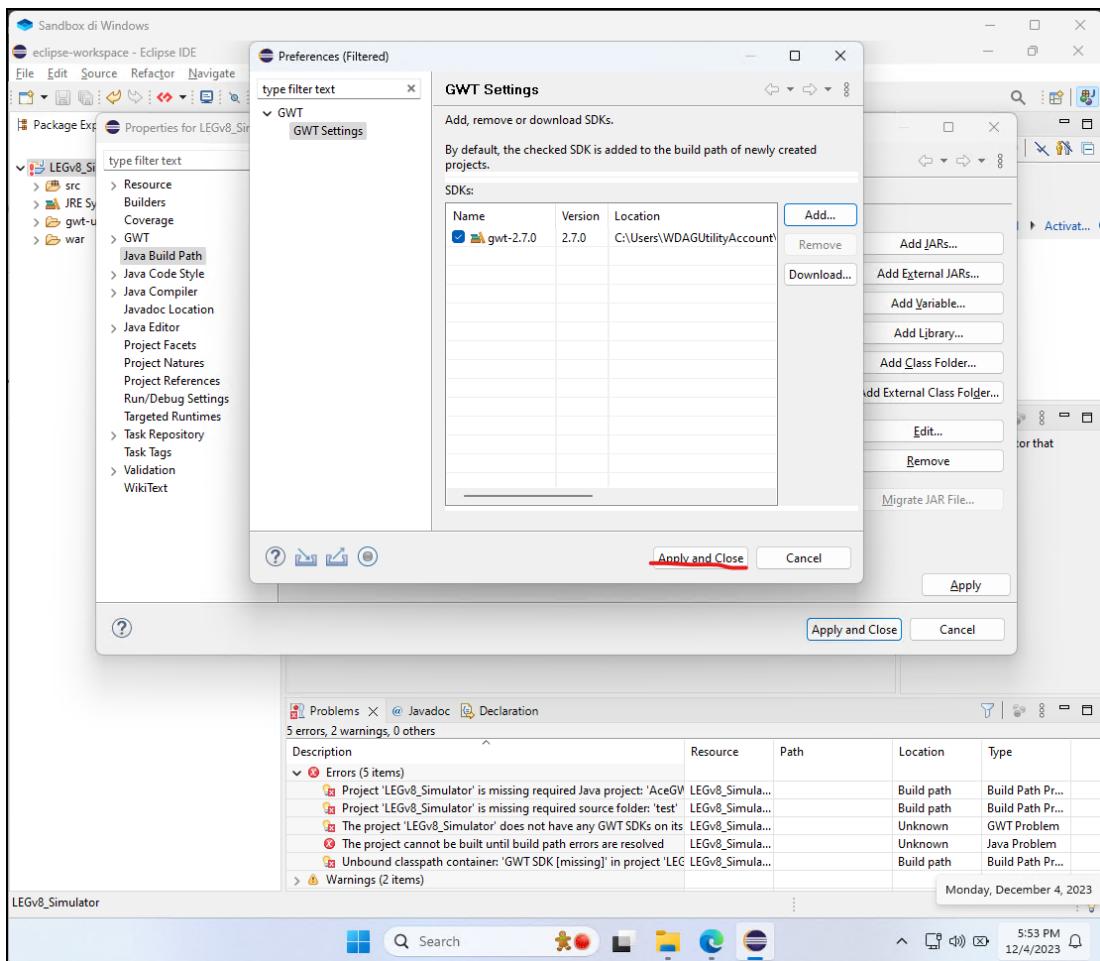
Press Add...



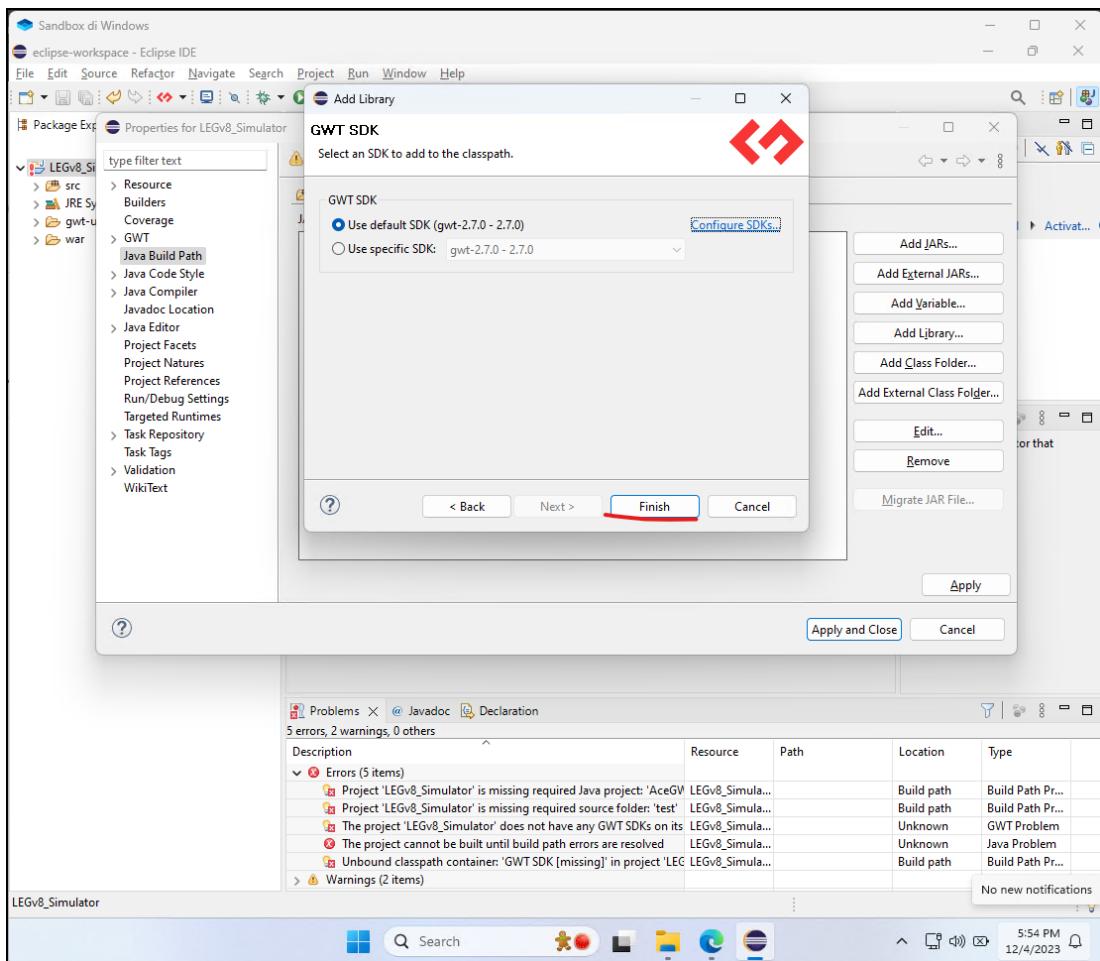
Click Browse... and select the folder gwt-2.7.0/gwt-2.7.0 and press Ok



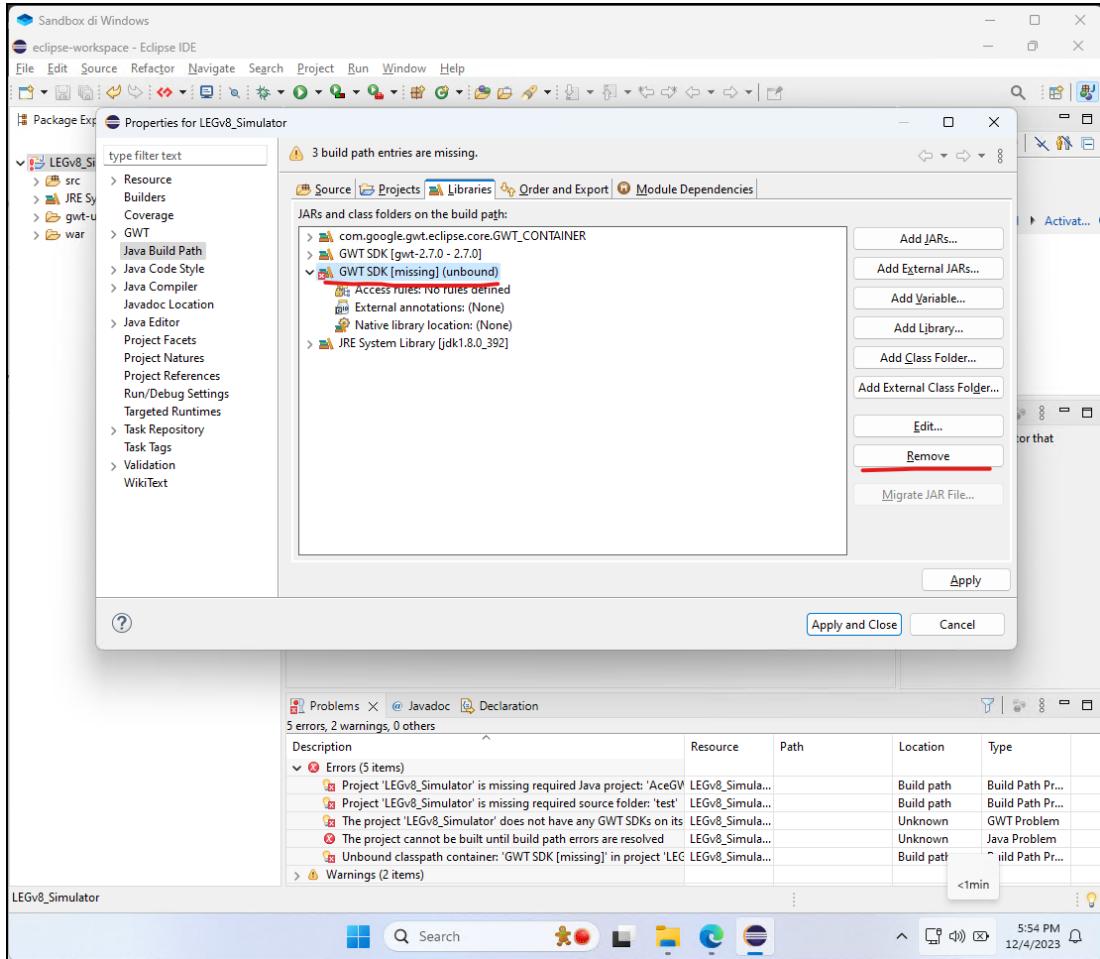
Press Apply and Close



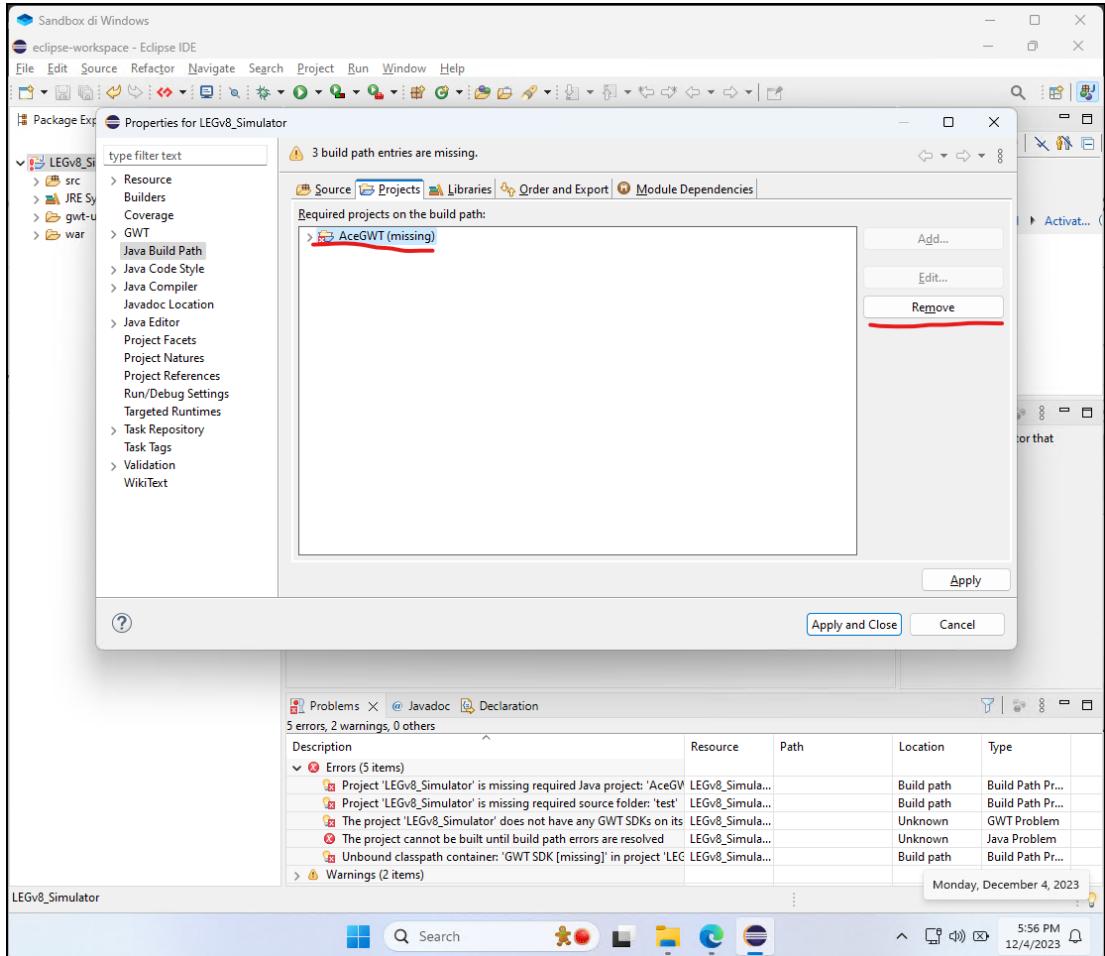
Press Finish



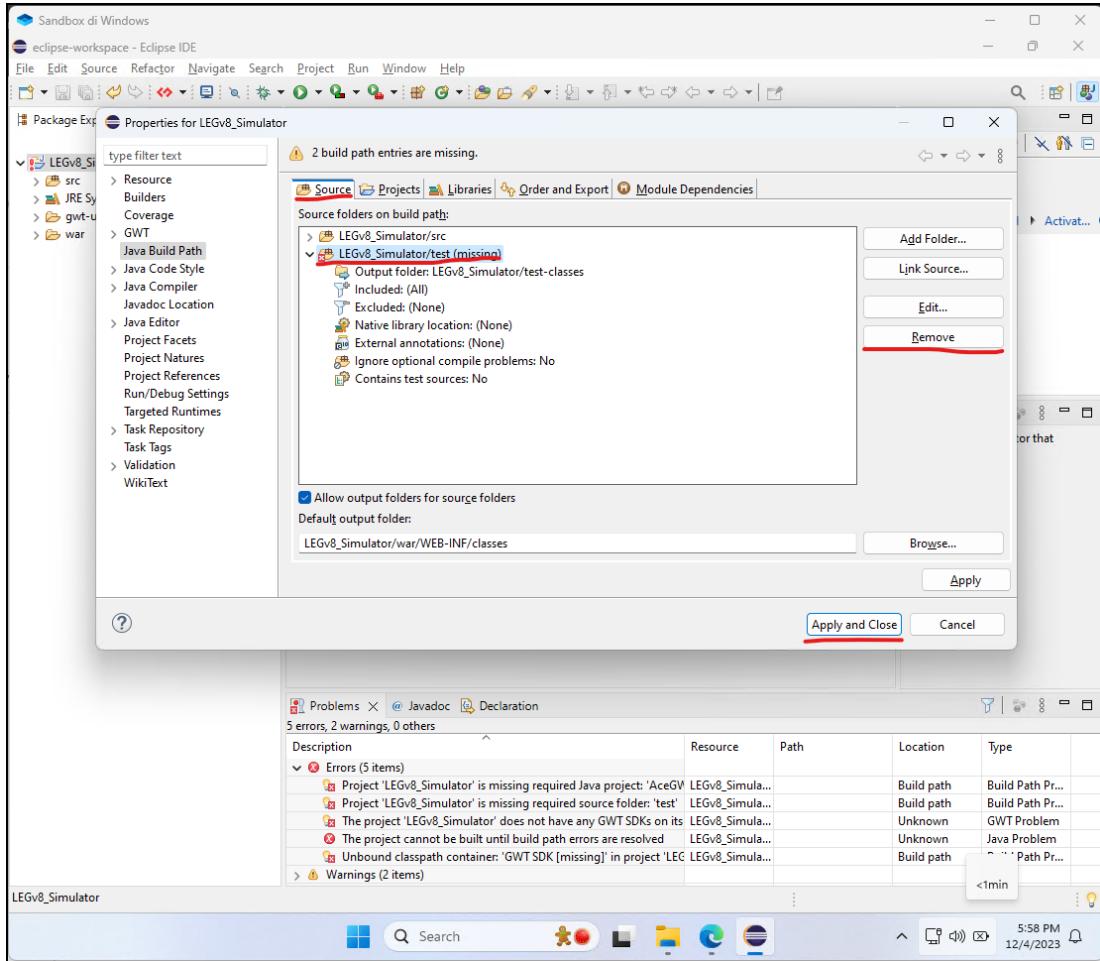
Select the missing GWT SDK and press Remove



Go to the Projects section, select AceGWT and Remove it



Go to the Source section, select the test source and Remove it.  
Then Apply and Close



9. Download the following two files and put them in the resources folder.

[ <http://gwtproject.org/doctype/2.7.0/gwt-module.dtd> ],

[ <http://gwtproject.org/doctype/2.8.2/gwt-module.dtd> ]

Name the first one ProjectDTD.dtd and the second one AceDTD.dtd

10. Eclipse by default doesn't allow importing files from the internet. If you can enable it then you can skip this point but I still suggest you use the offline files, especially as the project becomes older. Go to the file in the picture and substitute the URL of the Doctype with the absolute path of ProjectDTD.dtd and save the file

```

<!-- Google Inc.//DTD Google Web Toolkit 2.7.0//EN (doctype)
-->
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE module PUBLIC "-//Google Inc.//DTD Google Web Toolkit 2.7.0//EN"
  "http://gwtproject.org/doctype/2.7.0/gwt-module.dtd">
<!-- Inherit the core Web Toolkit stuff.
<!-- Inherit the default GWT style sheet. You can change
<!-- the theme of your GWT application by uncommenting
<!-- any one of the following lines.
<!-- <inherits name='com.google.gwt.user.theme.clean.Clean' />
<!-- <inherits name='com.google.gwt.user.theme.standard.Standard' /> -->
<!-- <inherits name='com.google.gwt.user.theme.chrome.Chrome' /> -->
<!-- <inherits name='com.google.gwt.user.theme.dark.Dark' /> -->
<!-- Other module inherits
<!-- Specify the app entry point class.
<entry-point class='com.arm.legv8simulator.client.WebApp'/>
<!-- Specify the paths for translatable code
<source path='client'/>
<source path='shared'/>

```

Problems X @ Javadoc Declaration  
95 errors, 47 warnings, 0 others

Description	Resource	Path	Location	Type
Errors (95 items)				
AceAnnotationType cannot be resolved to a variable	WebApp.java	/LEGv8_Simulator/s... line 813		Java Problem
AceCommandDescription cannot be resolved to a type	WebApp.java	/LEGv8_Simulator/s... line 152		Java Problem
AceCommandDescription cannot be resolved to a type	WebApp.java	/LEGv8_Simulator/s... line 153		Java Problem
AceCommandDescription cannot be resolved to a type	WebApp.java	/LEGv8_Simulator/s... line 161		Java Problem
AceCommandDescription cannot be resolved to a type	WebApp.java	/LEGv8_Simulator/s... line 162		Java Problem
AceCommandDescription cannot be resolved to a type	WebApp.java	/LEGv8_Simulator/s... line 17		Java Problem

The screenshot shows the Eclipse IDE interface with the following details:

- Project Structure:** The Package Explorer view shows a project named "LEGv8\_Simulator" with a "src" folder containing "com.arm.legv8simulator" and its sub-packages.
- GWT XML Editor:** The main editor area displays the "LEGv8\_Simulator.gwt.xml" file. The XML code includes various GWT annotations and configurations.
- Problems View:** The bottom-left pane shows a list of 86 errors, all of which are Java Problems related to AceAnnotationType and AceCommandDescription being unresolved.

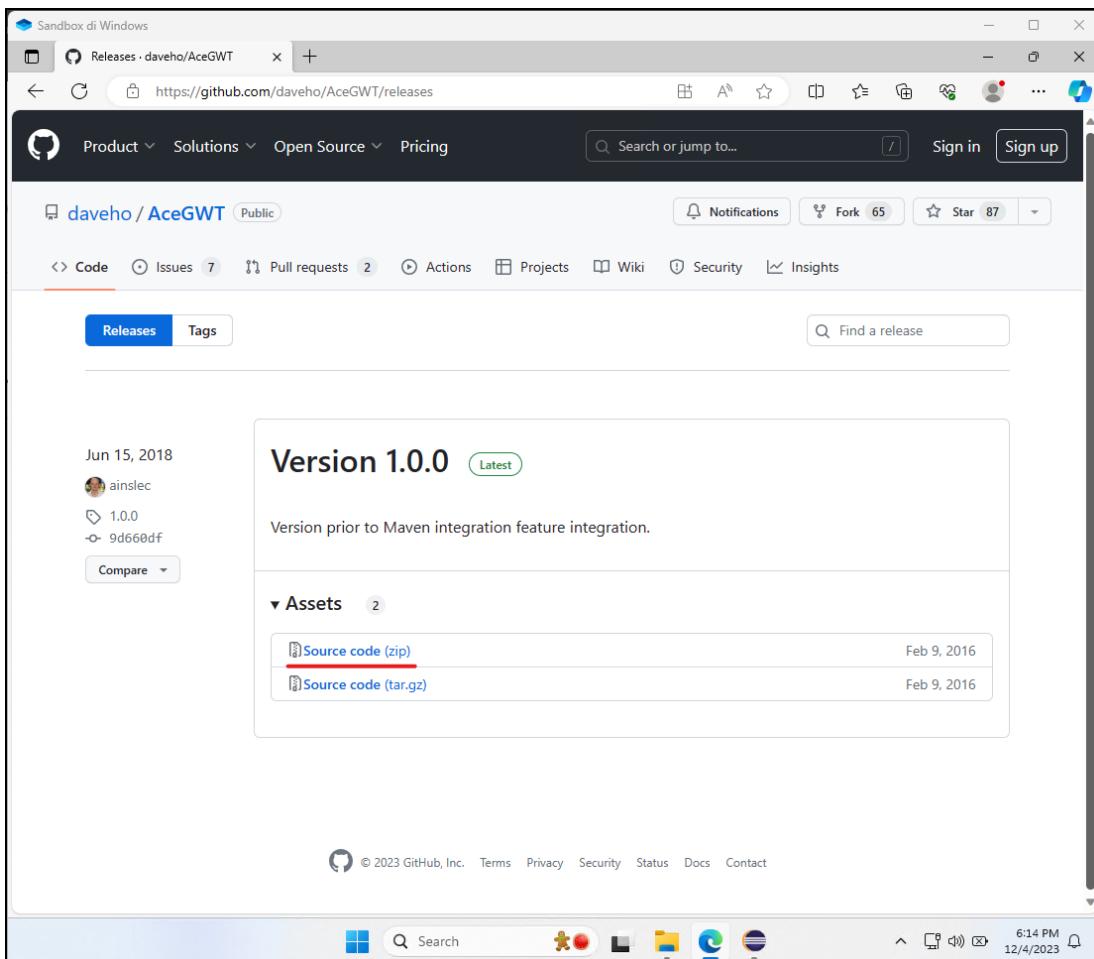
```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE module PUBLIC "-//Google Inc./DTD Google Web Toolkit 2.7.0//EN"
 "C:/Users/WDAGUtilityAccount/Downloads/LEGv8 Simulator Resources/ProjectDTD.dtd">
<module rename-to="LEGv8_Simulator">
  <!-- Inherit the core Web Toolkit stuff. -->
  <inherits name="com.google.gwt.user.User"/>
  <!-- Inherit the default GWT style sheet. You can change -->
  <!-- the theme of your GWT application by uncommenting -->
  <!-- any one of the following lines. -->
  <inherits name="com.google.gwt.user.theme.clean.Clean"/>
  <!-->
  <inherits name="com.google.gwt.user.theme.standard.Standard"/> -->
  <!-->
  <inherits name="com.google.gwt.user.theme.chrome.Chrome"/> -->
  <!-->
  <inherits name="com.google.gwt.user.theme.dark.Dark"/> -->
  <!-- Other module inherits -->
  <inherits name='edu.ycp.cs.dh.acegwt.AceGWT'/>
  <!-- Specify the app entry point class. -->
  <entry-point class="com.arm.legv8simulator.client.WebApp"/>
  <!-- Specify the paths for translatable code -->
  <source path='client'/>
  <!-->
  <source path='shared'/>
  <!-- allow Super Dev Mode -->

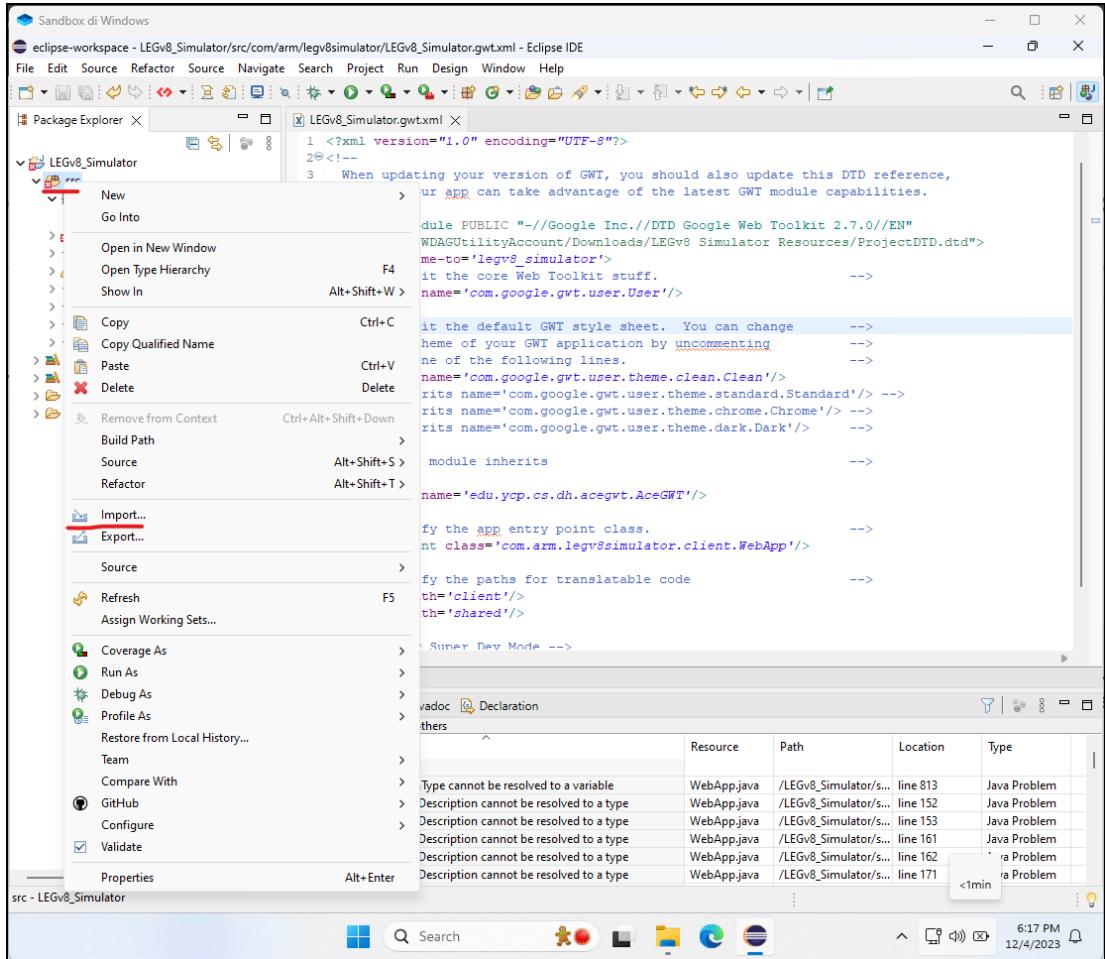
```

Save the file.

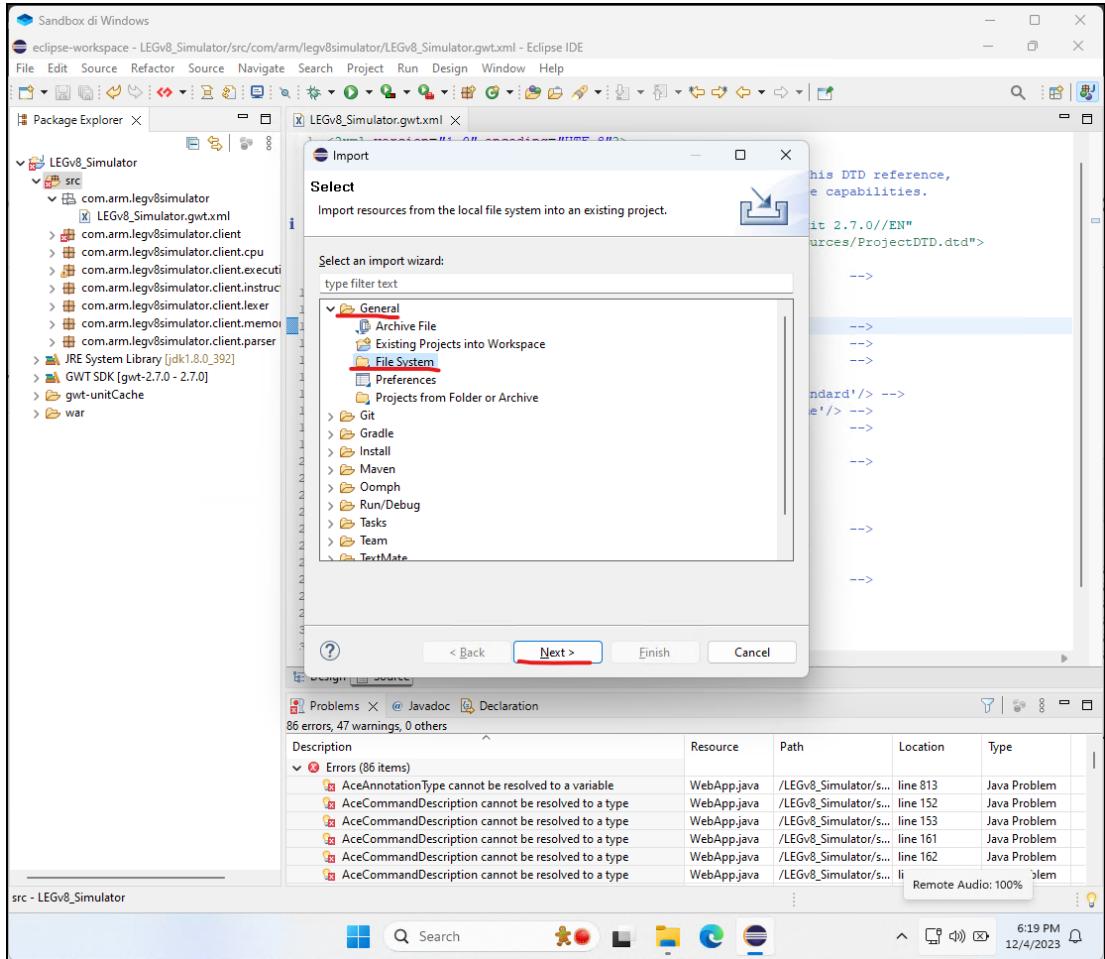
11. Download and extract the release of AceGWT version 1.0.0 and put it into your resources folder  
[ <https://github.com/daveho/AceGWT/releases> ]



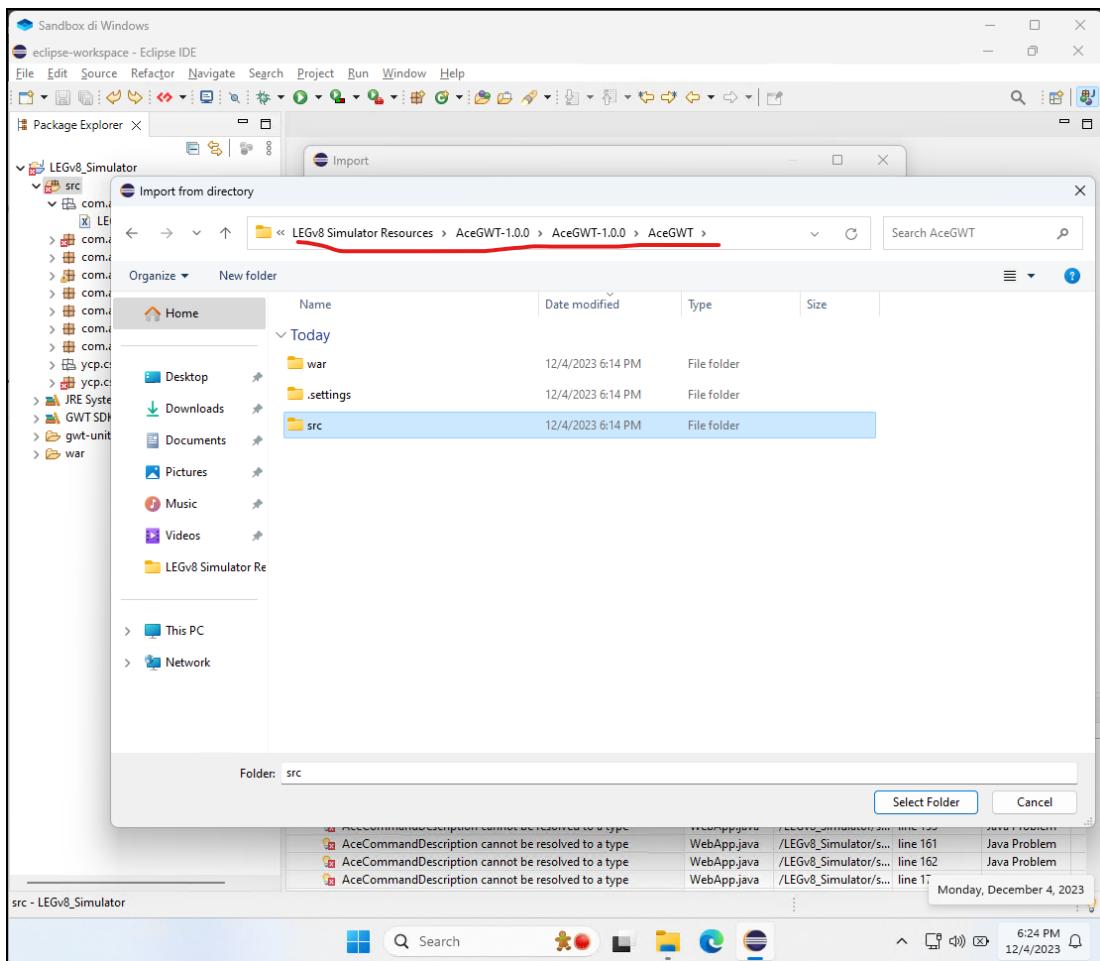
Right click on the src package of your project's folder inside Eclipse and select Import...



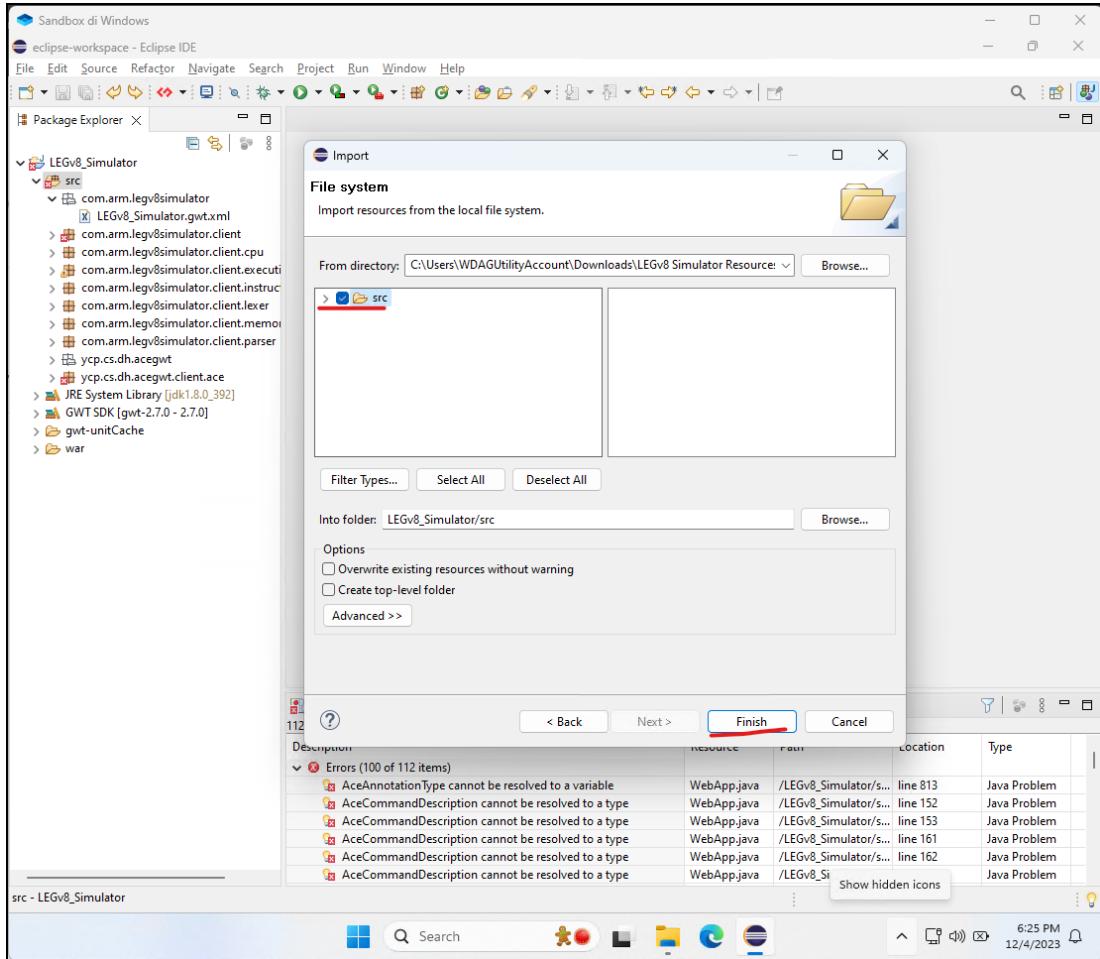
Select General → File System and press Next



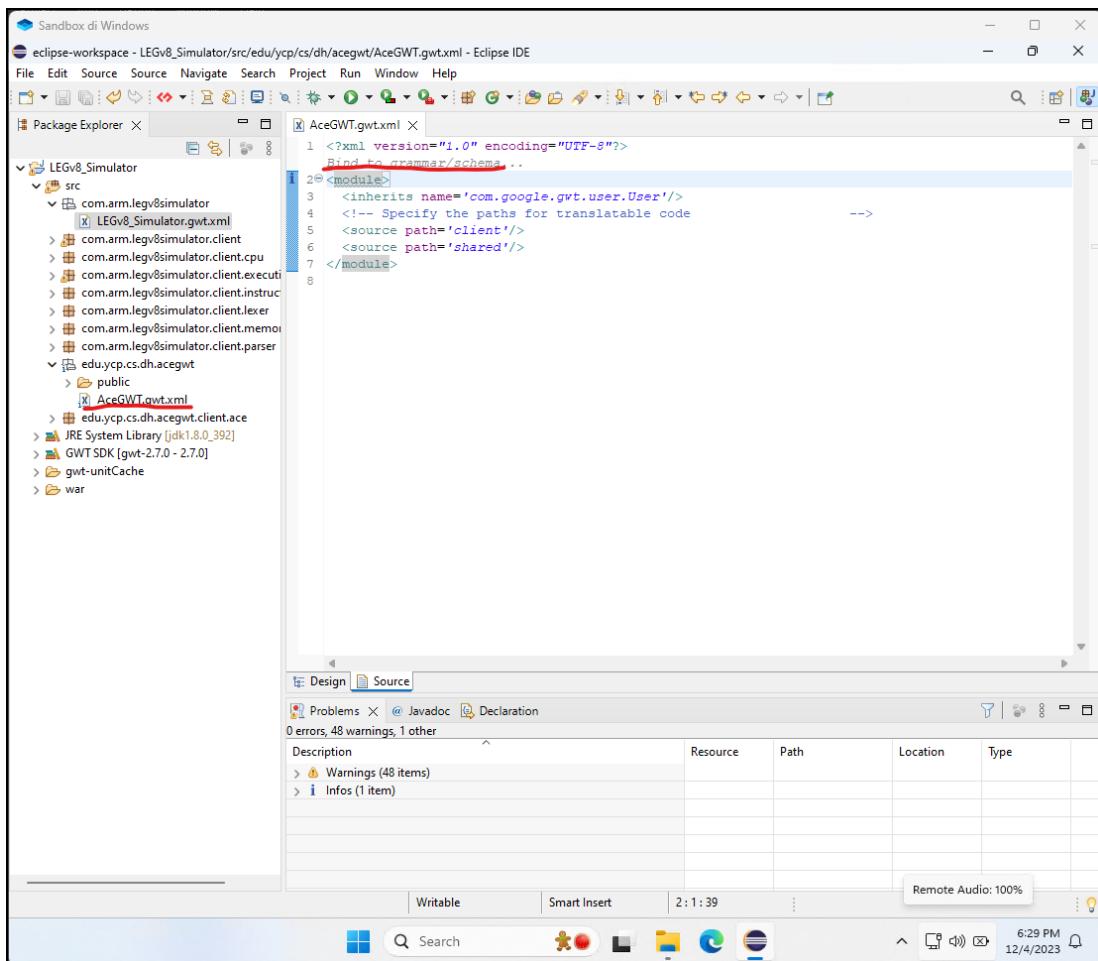
Press Browse... and select the folder src/ from AceGWT



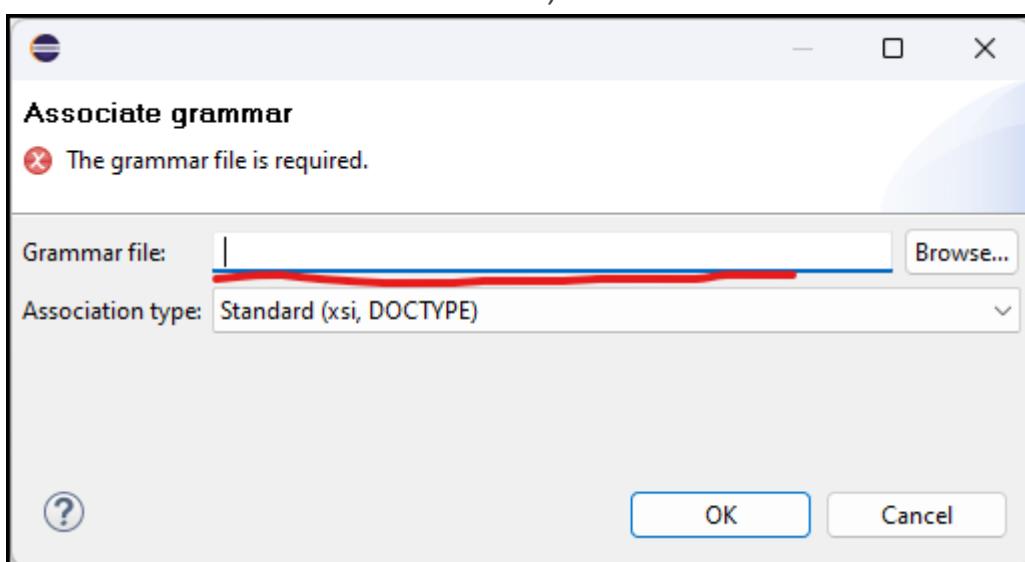
Check the src/ folder and Finish



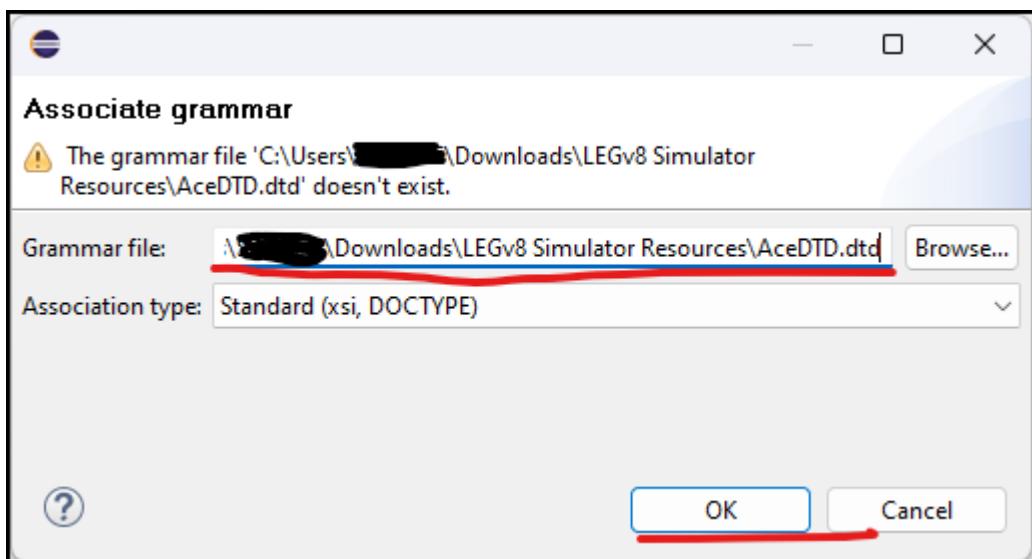
Navigate to AceGWT.gwt.xml and click on the “Bind to grammar/schema ...” text



Paste the path of the AceDTD.dtd file into the textbox (if you click "Browse..." it will only let you choose files from the project's folder. If you put the AceDTD.dtd file in an external folder like we did you won't be able to add it from there)

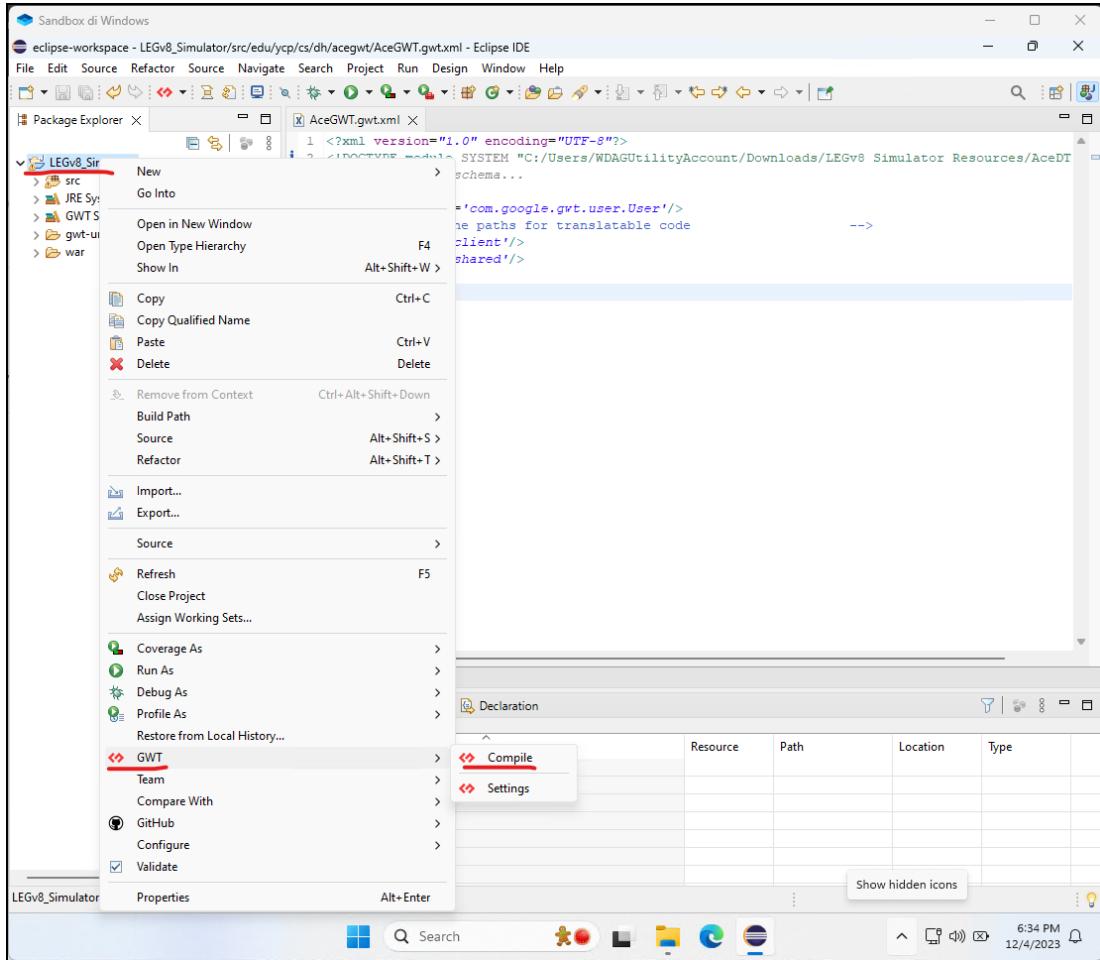


Do not worry if it says it doesn't exist, once you press Ok it will automatically add it

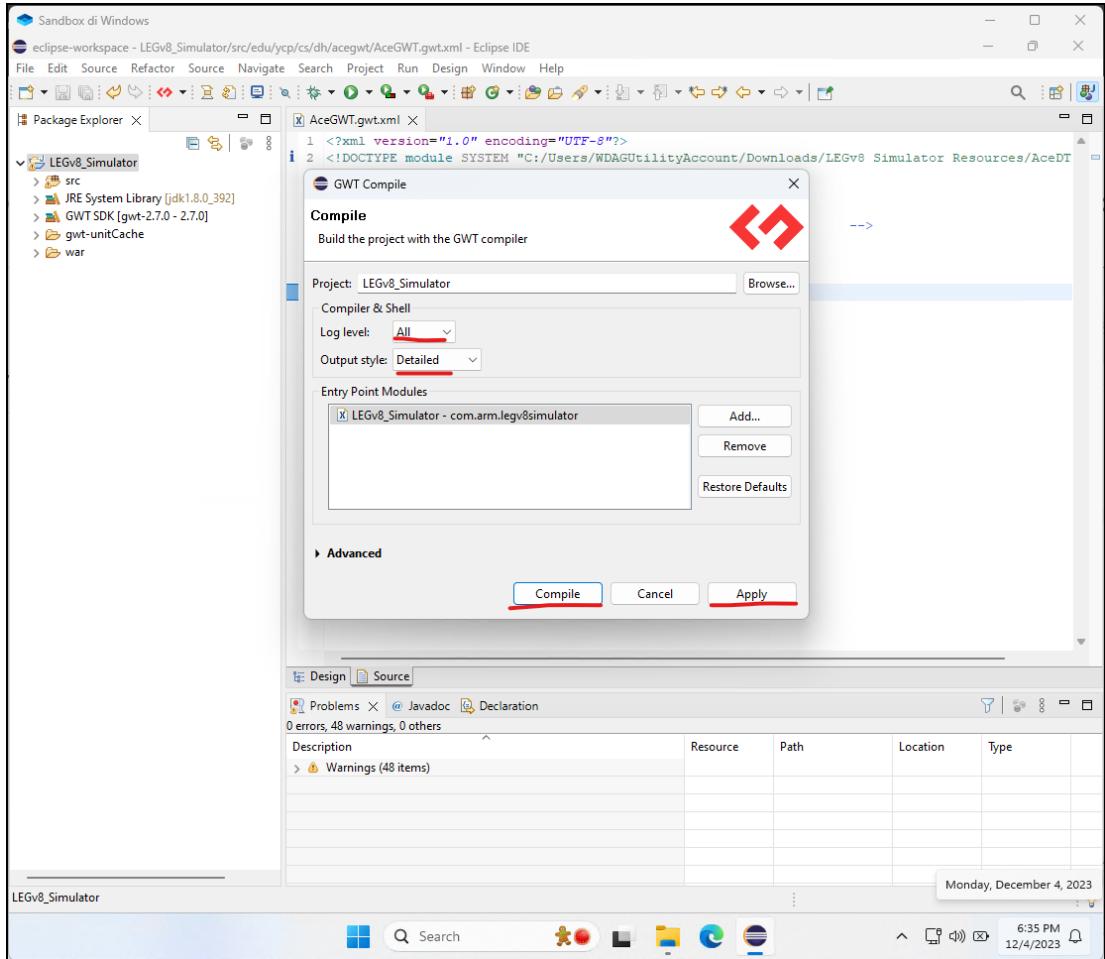


Save the file.

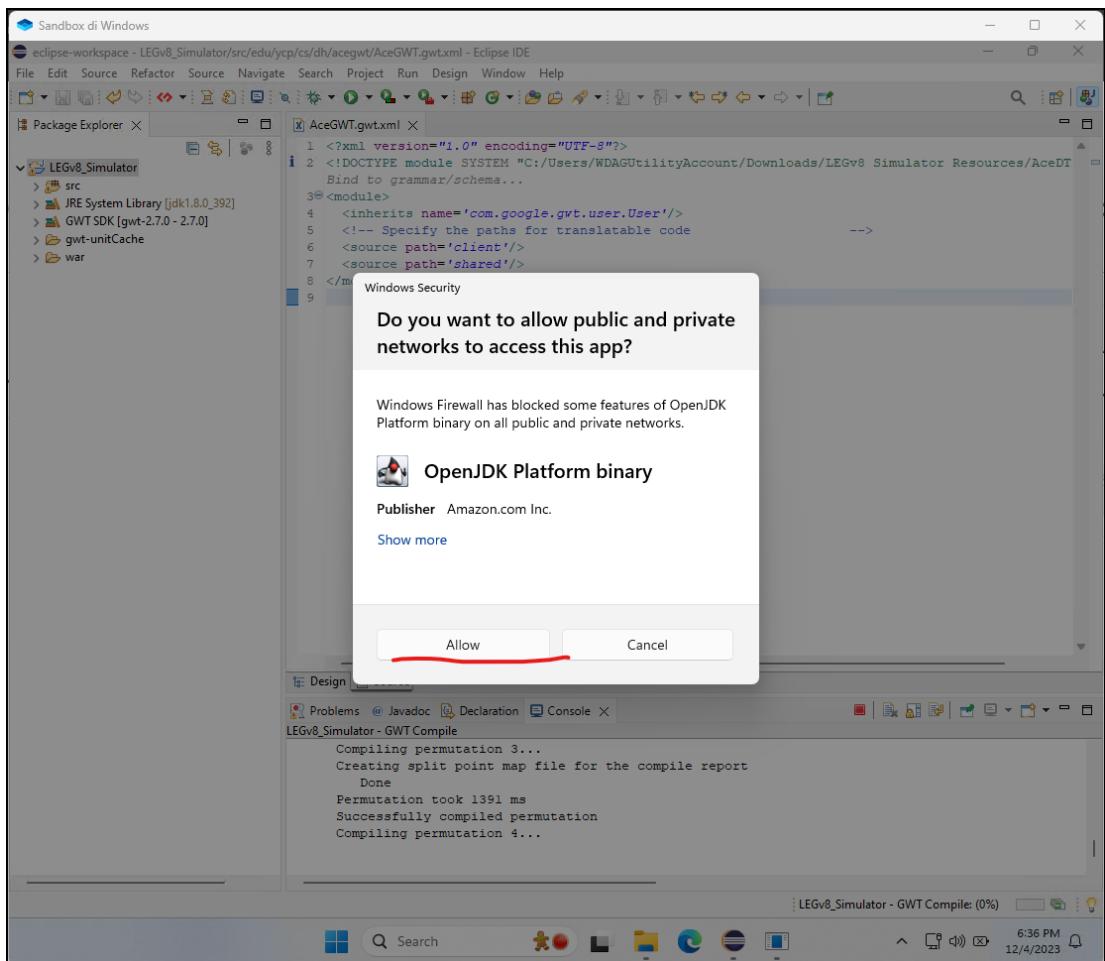
12. Now to compile the project we just need to right click on the project → GWT → Compile



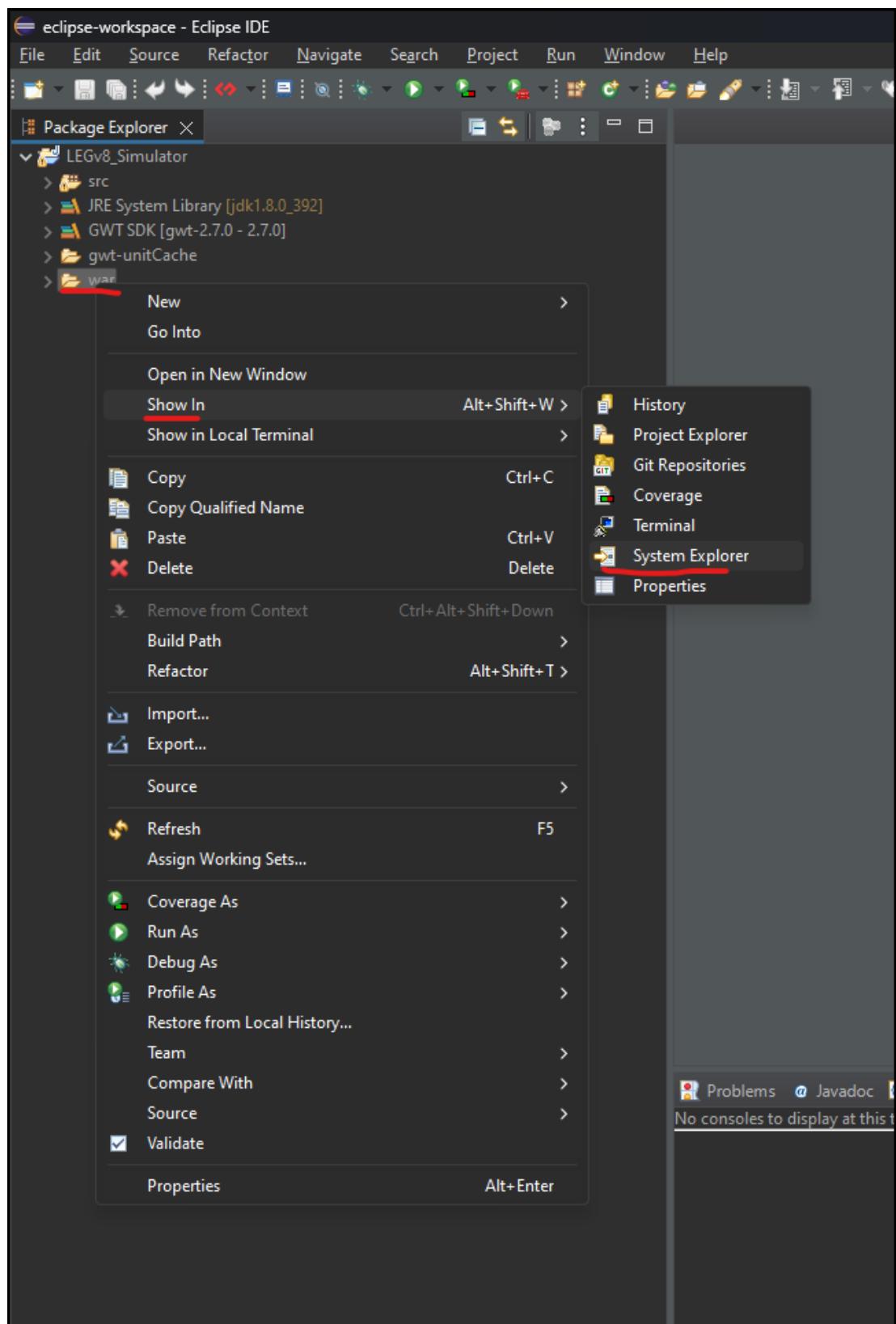
For ease of debugging we use Log Level: All, Output style: Detailed . Click Apply and then Compile



We also have to let the program use the network since it uses a web interface



13. The LEGv8 Simulator is a self-contained ( portable ) application.  
In order to test/run the simulator you just need to go to the war/ folder and open the LEGv8\_Simulator.html file. If you want to distribute it to other people or put it somewhere else on your computer you just need to copy the war/ folder wherever you want ( and maybe rename it with a name of your choosing ).



## POSSIBLE IMPROVEMENTS:

- Add a script to the repository that automatically downloads all the resources from the internet, moves them to the correct places and edits the files without needing to use Eclipse's custom features to do it.
- Make the project less Eclipse-dependent. Ideally the project should be compilable, modifiable and runnable without Eclipse and by using the official libraries and command-line utilities ( such as Google's GWT ) , preferably all automatically through a script without the user needing to follow this tutorial.