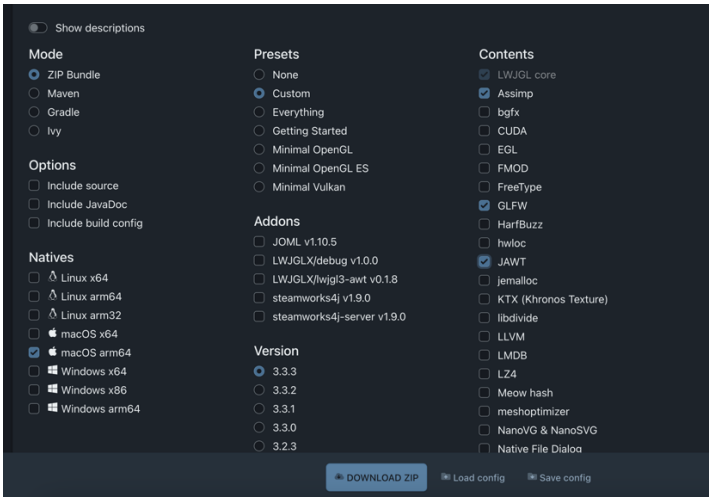
Setting Up LWJGL in Eclipse

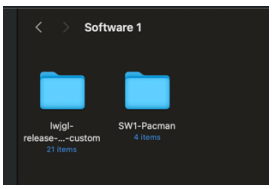
In this short tutorial we will setup the Light-weight Java Game Library (LWJGL) in the Eclipse IDE. We will add the relevant JAR files as a user library, which can be added to any LWJGL project.
Mac users: note that there are fixes to common problems! Please read those.

Step I: Adding LWJGL as a User Library

1. In the site https://www.lwjgl.org/customize , choose the following build, and press "Download ZIP":
    a. ZIP Bundle
    b. Without source, JavaDoc and build config
    c. Choose your OS (usually – x64)
    d. Custom present, including: Assimp, GLFW, JAWT, OpenAL, OpenGL, stb
    e. No Addons
    f. Version 3.3.3 (newest, as of December 2023)

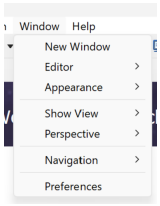


2. Extract the ZIP contents of LWJGL into your Java workspace (or any other location which you are sure will not get deleted).

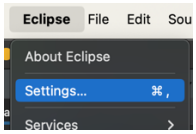


3. Enter the Eclipse global settings:

a. On Windows & Linux: Window → Preferences

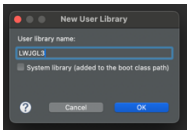


b. On macOS: Eclipse → Preferences

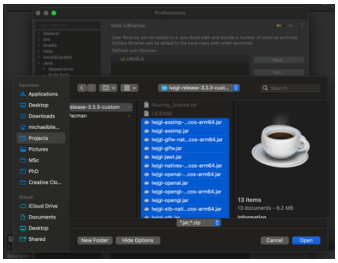


4. In preferences, go to: Java → Build Path → User Libraries

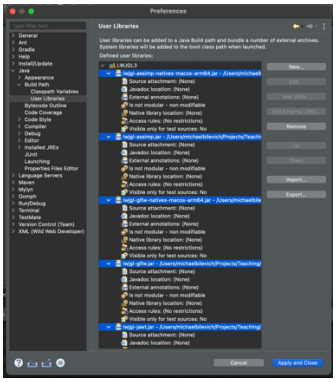
5. Press on “New…” and call the new library “LWJGL3”:



6. Choose “Add External JARs…” and load all *.jar files from the extracted zip.

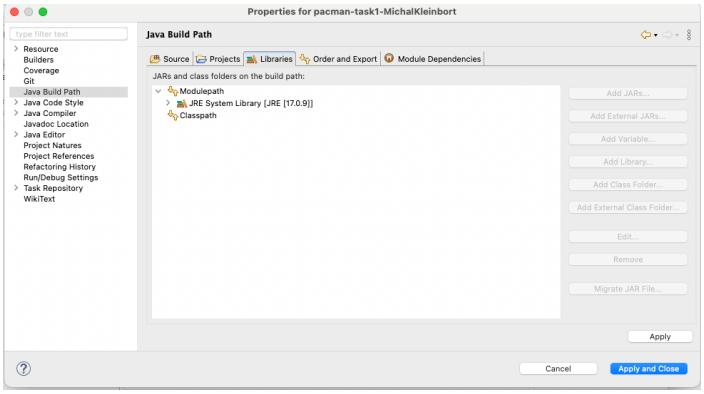


7. Now the JARs are added. You may press on “Apply and Close”:

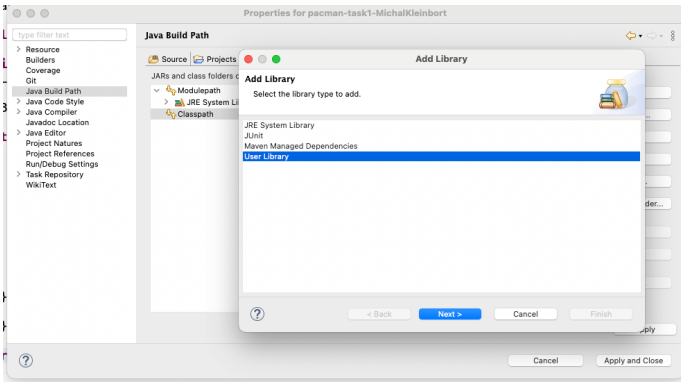


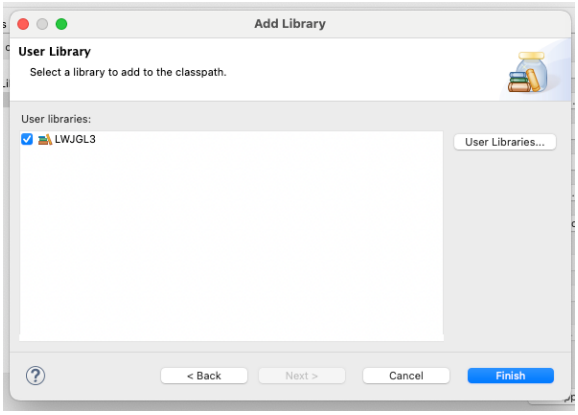
Step II: Importing a project that uses LWJGL3

1. Clone the project into your Java workspace.
2. Open the project as usual (File → Open Projects from File System…)
3. Add LWJGL3 to the build path:
    a. Open the Project's Properties (Right click on project -> Properties)
    b. Under Java Build Path, select the "Libraries" tab

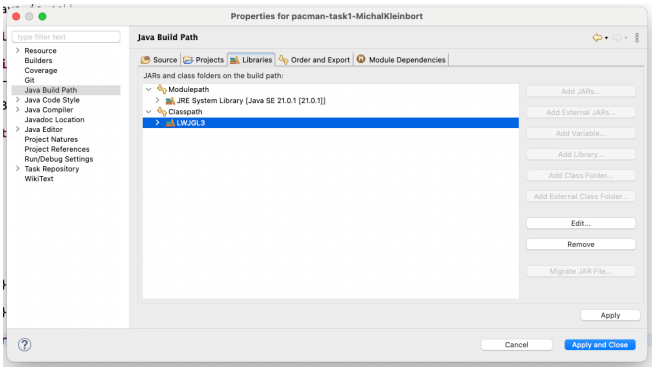


    c. Select "Classpath" and click the "Add Library" button.
    Add LWJGL3 (under "User Library"):





d. Finally, press “Apply and Close”



Common Issue: Wrong Binary on Apple Silicon

Usually, software on Apple Silicon is compiled as arm64 (and not x64). But depending on the binary of the JDK you downloaded, you may need to acquire the x64 build of LWJGL, if you see the error bellow:

```
[LWJGL] Platform/architecture mismatch detected for module: org.lwjgl
        JVM platform:           macOS x86_64 17.0.8.1
                OpenJDK 64-Bit Server VM v17.0.8.1+1 by Eclipse Adoptium
        Platform available on classpath:
                macos/arm64
[LWJGL] Failed to load a library. Possible solutions:
        a) Add the directory that contains the shared library to -Djava.lib
```

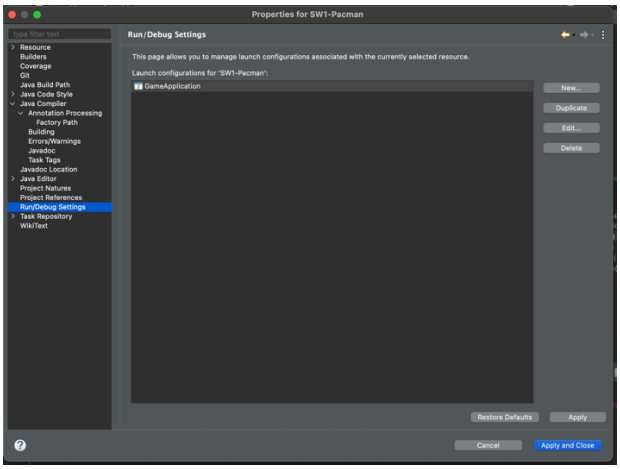
Common Issue: -XstartOnFirstThread

You may see the following error (regarding -XstartOnFirstThread).

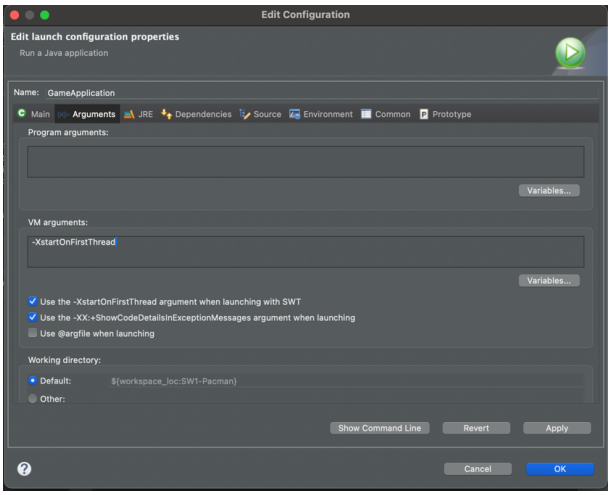
In such case, you need to indeed add that argument, as follows:

1. Right click the project, and choose “Properties”

2. In Run/Debug Settings, double click the main executable (the *.java file containing *public static void main(…)*)



3. In the “Arguments” tab, add “-XstartOnFirstThread” in “VM arguments”:



Note: if your project has more than one main executable, you will need to do this for each one.