Creating an installer for LUCENZjava using Install4j

This is a text reference given in addition to the install4j file itself. These are not complete instructions; I have left gaps where I deem install4j itself is self-explanatory. If you have more trouble, check out this video which I found incredibly helpful: https://www.youtube.com/watch?v=CsACTkyQygc

Getting install4j up and running

1. Go to https://www.ej-technologies.com/download/install4j/files
2. Download the installer for your operating system
3. Run through the installer. This will possibly ask for an email to send a trial license key to
4. Sidenote: use the trial version unless you are made of money, or have a website to publish LUCENZ to and wish to acquire an open source license: https://www.ej-technologies.com/buy/install4j/openSource. The trial version gives 90 days of install4j, that only affects the visuals of anything created
5. Install4j should be good to go

File structure

Here's how I structured my files, please note that all names and structure must be kept the same if you use my attached install4j file:

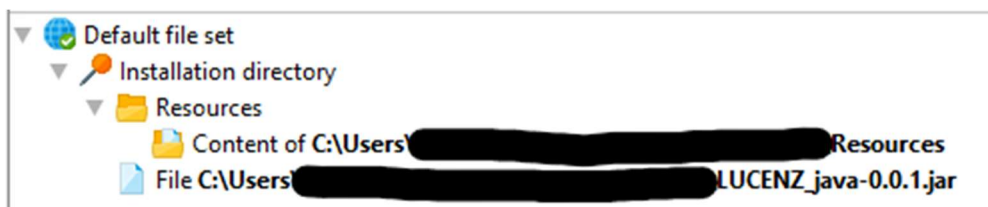|	
inputs outputs LUCENZ.install4j	Main folder. Inputs are all resources to be packaged into LUCENZ. Outputs are where the generated installers will be put
Resources LUCENZ_java-0.0.1.jar	Inside the inputs folder. Contains the LUCENZ JAR file. the JAR must be an executable JAR. Making one of these can be done through Maven
BIOL209W.pdf BIOL309W.pdf	Inside the Resources folder. Contains the two PDF's that are needed by LUCENZ
LCNZ_macos_1_0_0.dmg LCNZ_windows-x64_1_0_0.exe md5sums output.txt sha256sums updates.xml	Inside the outputs folder. These are what install4j will make. The md5sums and sha256 sums can be handy to keep for data integrity purposes.

Install4j

This is summaries of what to fill out fields with. If you wish to see what I used check the .install4j file.
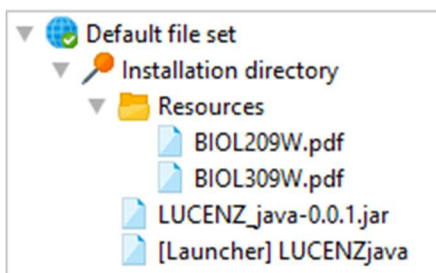
Install4j general settings

- **Application info**
1. Full name, short name and version can be filled as you choose. Publisher info is not required
- **JRE bundles**
1. Use a version above 11 for the JDK release, Adoptium will work fine, Amazon Coretto is also good
2. Search sequence is optional, if you wish to fill it out make sure the minimum version is 11 or above
- **Media file options**
1. Set the media file output directory is what my output folder is. Click the triple dots button not the arrow button

install 4j Files

- **Define distribution tree**
1. This is where you will put the .JAR and the pdfs. The plus button on the right side is where you start this process. You will need to upload the .JAR, make a folder called "Resources" and then upload the two PDFs into that folder. The final thing should look like this:

1. **View results**
1. Should look like this now:

Install4j launchers.

The launchers tab is where you tell your JAR how to behave nicely

1. Double click new launcher

2. Select generated launcher
3. In the executable info tab change the Executable name field to whatever you wish the final installer to be called. Do not add .exe or .dmg to this
4. If you have a nice icon you wish to use add this in the icon tab. This is nice but is not necessary. (I did not use one)
5. In the Java invocation tab click the plus button to open the class path screen, make sure the entry type is archive then click the triple dots button to find the JAR file you added. Then click ok.
6. Now click the triple dots button for the Main class from 'Class path' to add your main executable class to the launcher. Unless you've significantly changed the code this will be 'domain.Main'
7. Ignore everything else

Install4j Installer.

This is where you handle what screens are shown when the user runs the installer.

1. This can be left untouched. If you want to give users an option to add a desktop shortcut, click on the finish screen, then click on the plus icon. Click 'Add action', dropdown the 'Desktop integration' folder and double click 'Add a desktop link'
2. In the top menu there is a test installer button which you can use to preview the installer. If you have selected a screen, you can also click 'Preview form' to see it

Install4j Media.

This is where you add in your runtime environment and separate things into a Mac and Windows version

- **Windows Media**
1. Double click new media file.
2. Select windows for the installer type
3. In the Bundled JRE tab make sure Generate a JRE bundle is selected. This means that Install4j will automatically make a JRE bundle for your JAR. This is the easiest option and means the final file will likely be smaller.
- **Mac Media**
1. Double click new media file.
2. Select macOS folder for the installer type
3. Same as windows from here

Install4j Build

This is where you click the button to generate the installers. Selecting Build all will build both the mac and windows installers, or you can individually select one or the other. Simply click start build. If the build has errors, they will be printed in the build output. If these errors don't help check the 'enable extra verbose output' checkbox and click build again.

Your .exe and .dmg to publish online should now be in the outputs folder along with the checksums.