The CLARION Java Package

Nicholas Wilson, Sebastien Helie, Ron Sun
Cognitive Science, Rensselaer Polytechnic Institute

Outline

1. Downloading Source Code
2. Opening in Java Software Development Kit
3. Compiling CLARION
4. Using CLARION
5. Creating a Simulation with CLARION

Downloading Source Code

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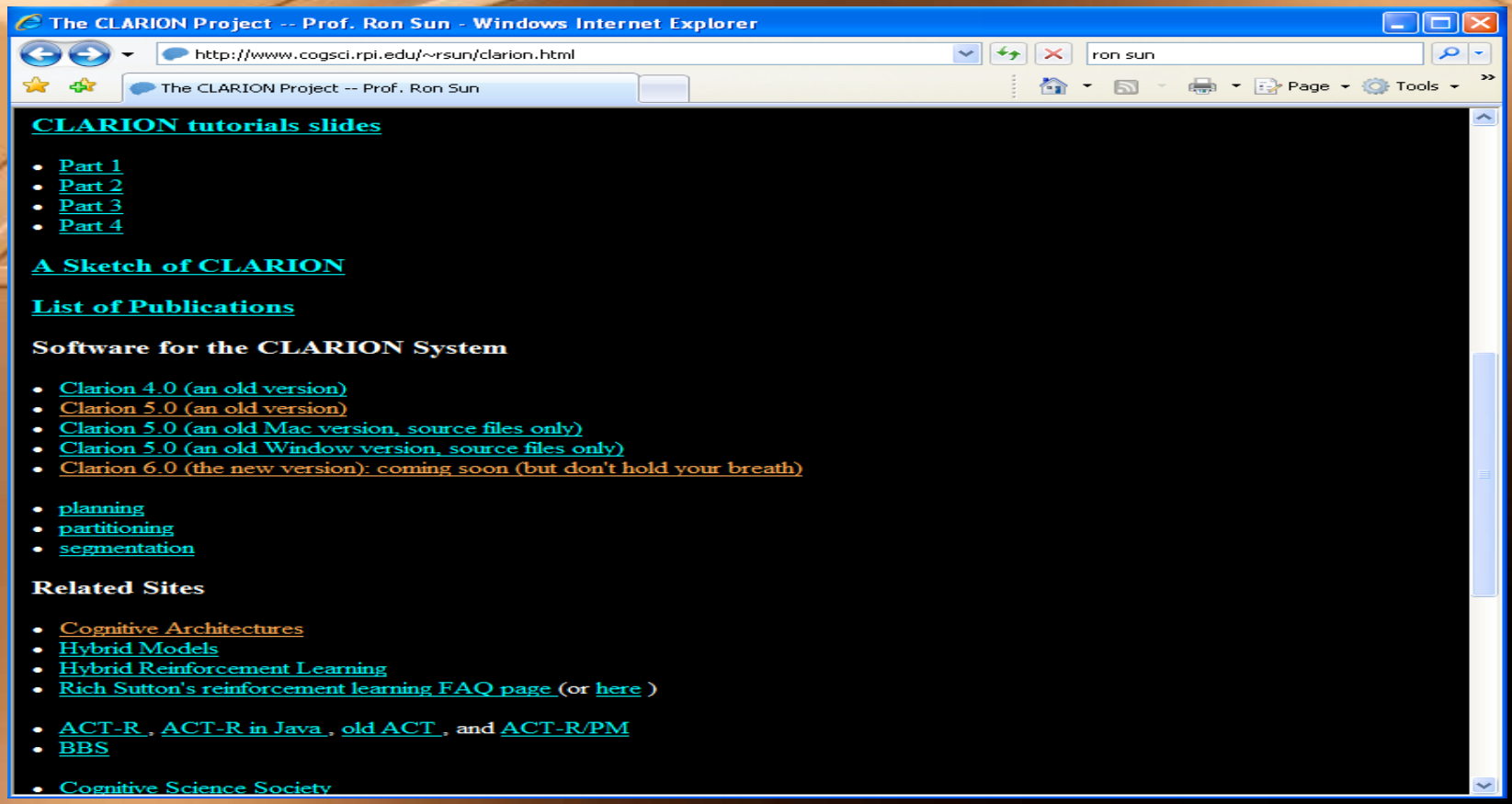
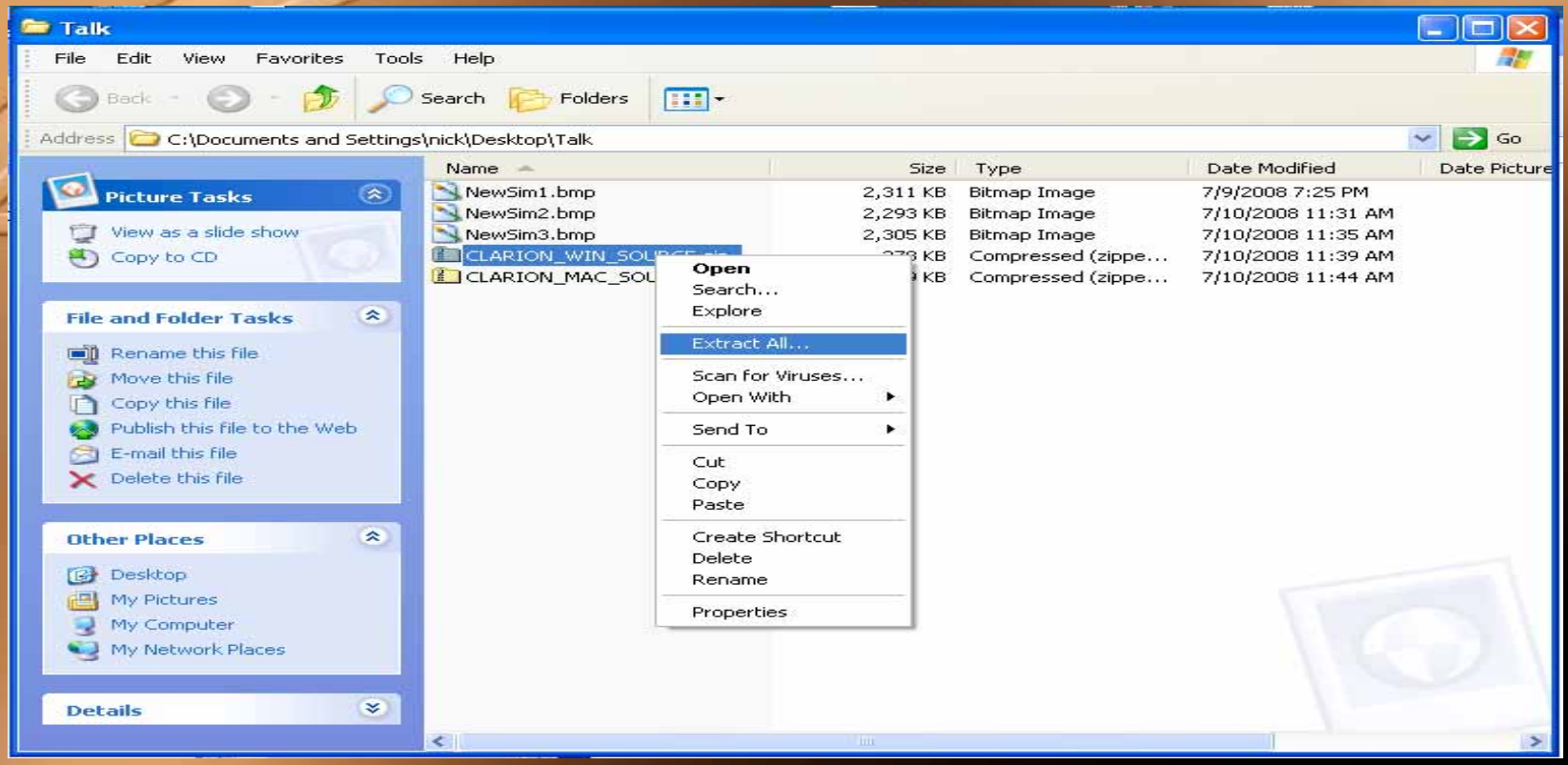
Downloading Source Code



- Go to http://www.cogsci.rpi.edu/~rsun/clarion.html
- Click on the link below to download the zip file containing the source code
  - "Clarion 5.0 (an old *** version, source files only)"

Downloading Source Code



- Extract the zip file

Opening in Java SDK

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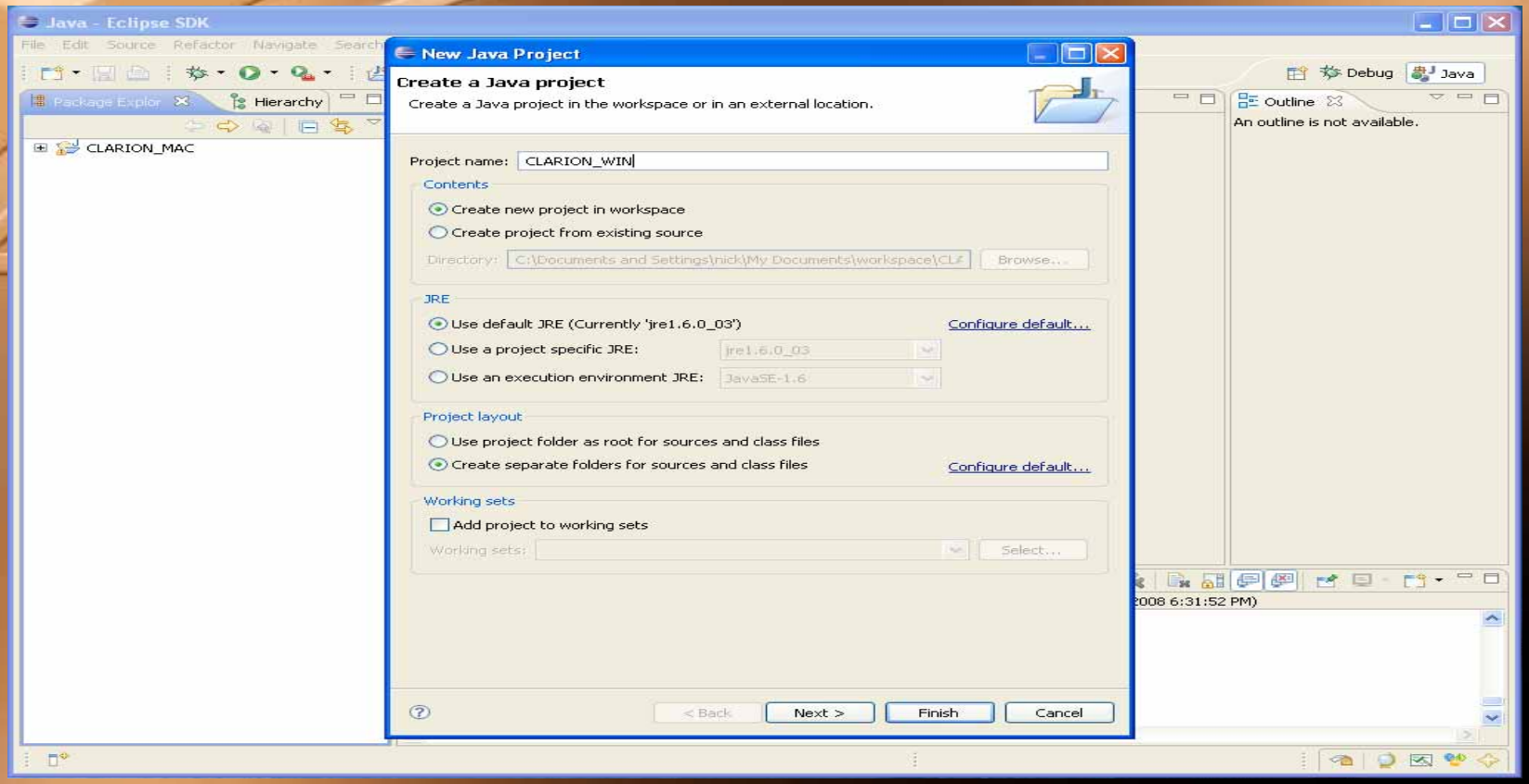
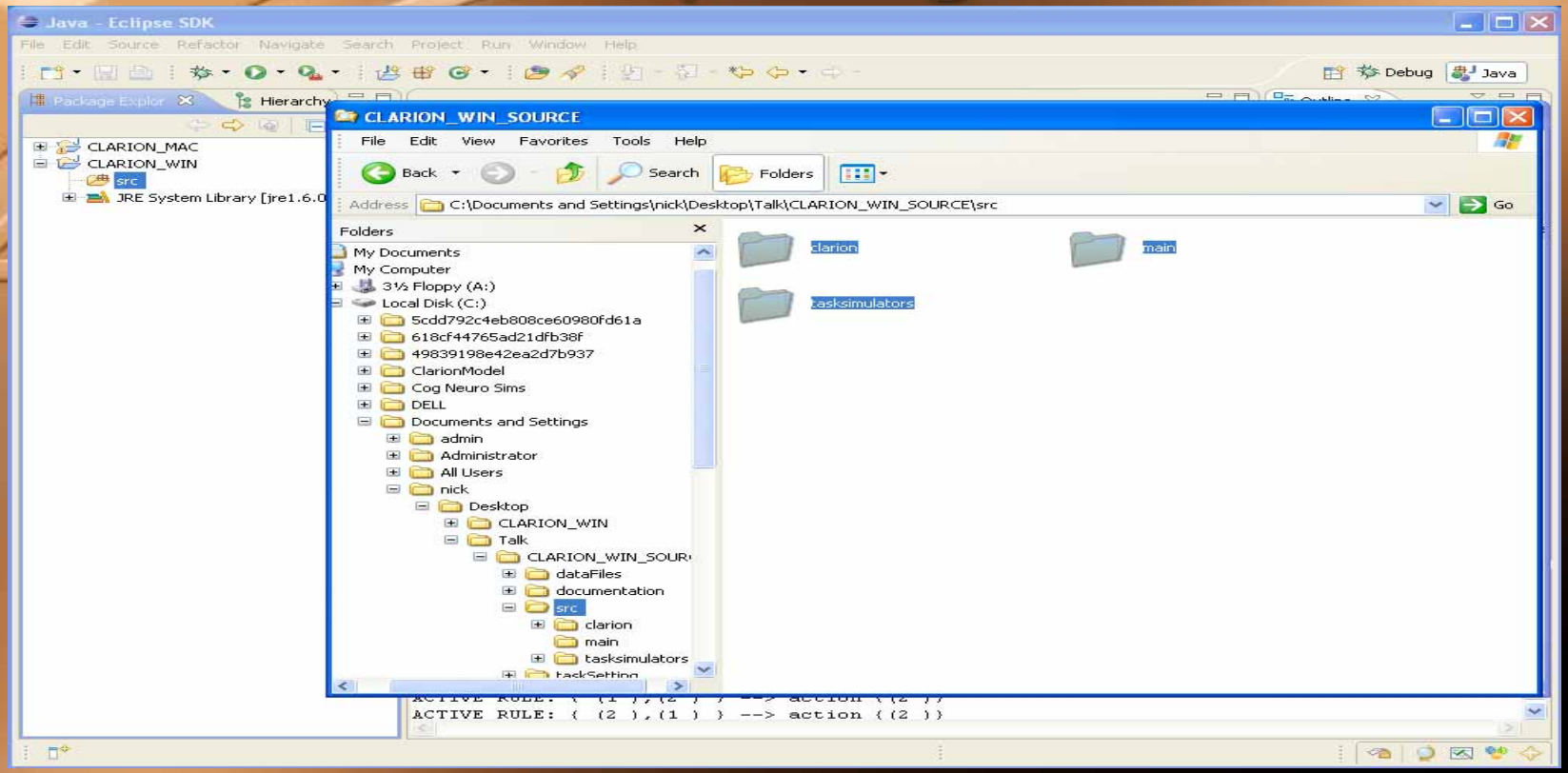
Opening in Java SDK



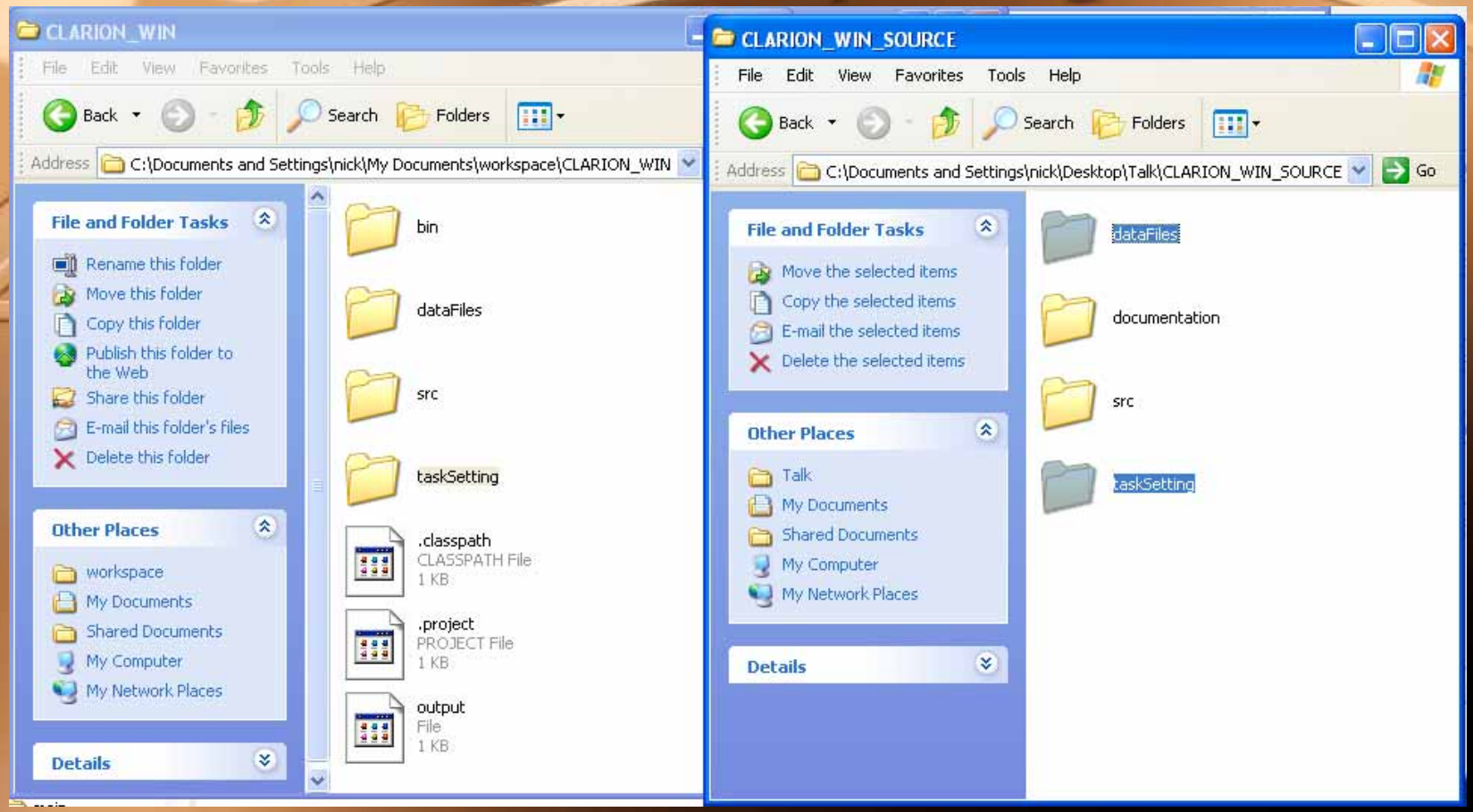
- Open the Java Development Kit (e.g. Eclipse)
- Create a new Java Project (CLARION_WIN)

Opening in Java SDK



- Open the unzipped folder labeled “src”
- Highlight the folders in the “src” folder and drag them into the SDK under the newly created project in a subfolder labeled “src”

Opening in SDK



- Open the project folder (CLARION_WIN) located in the workspace folder (most likely in “My Documents”)
- Copy the unzipped folders “dataFiles” and “taskSetting” to the project folder

Compiling CLARION

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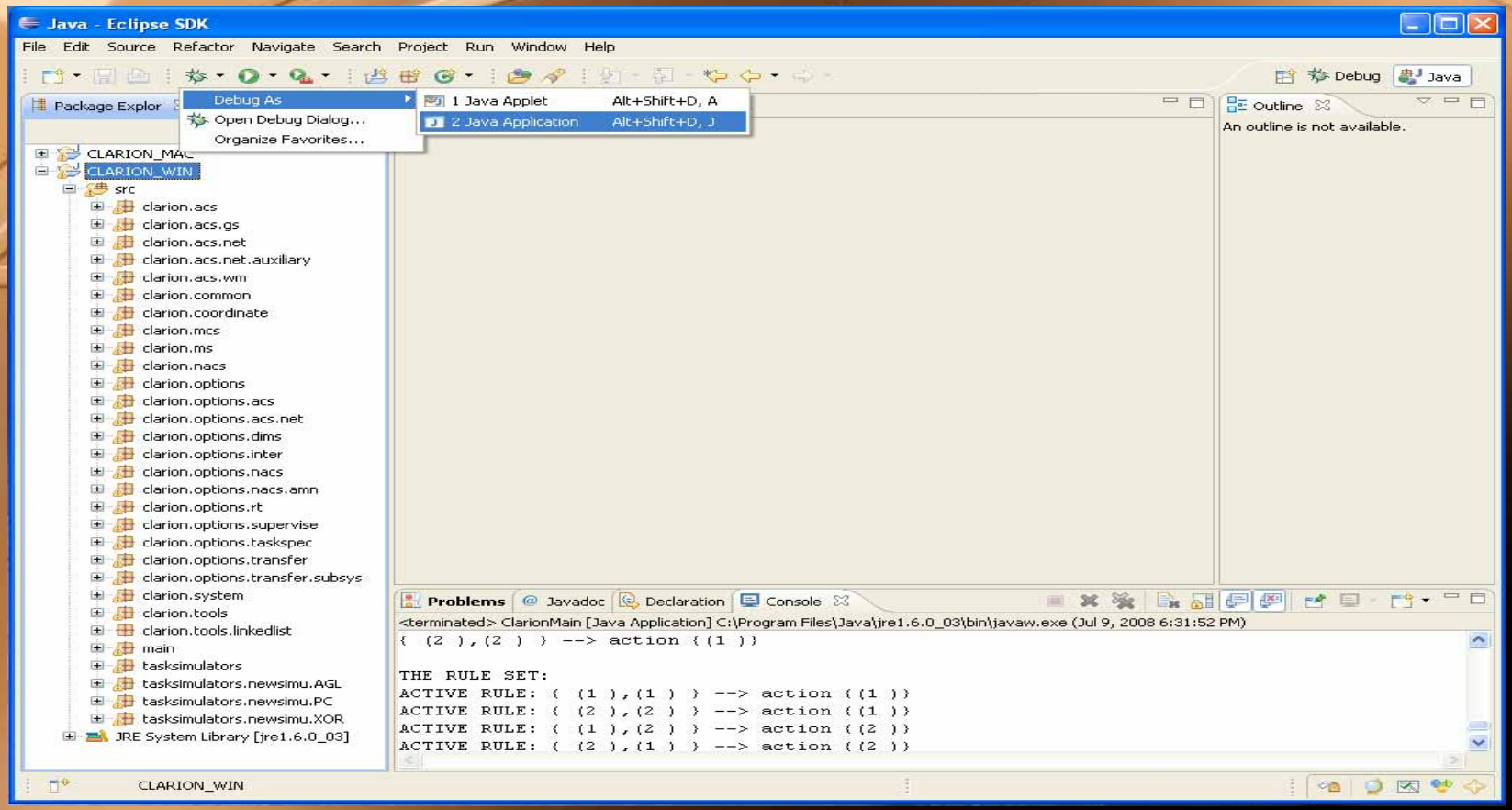
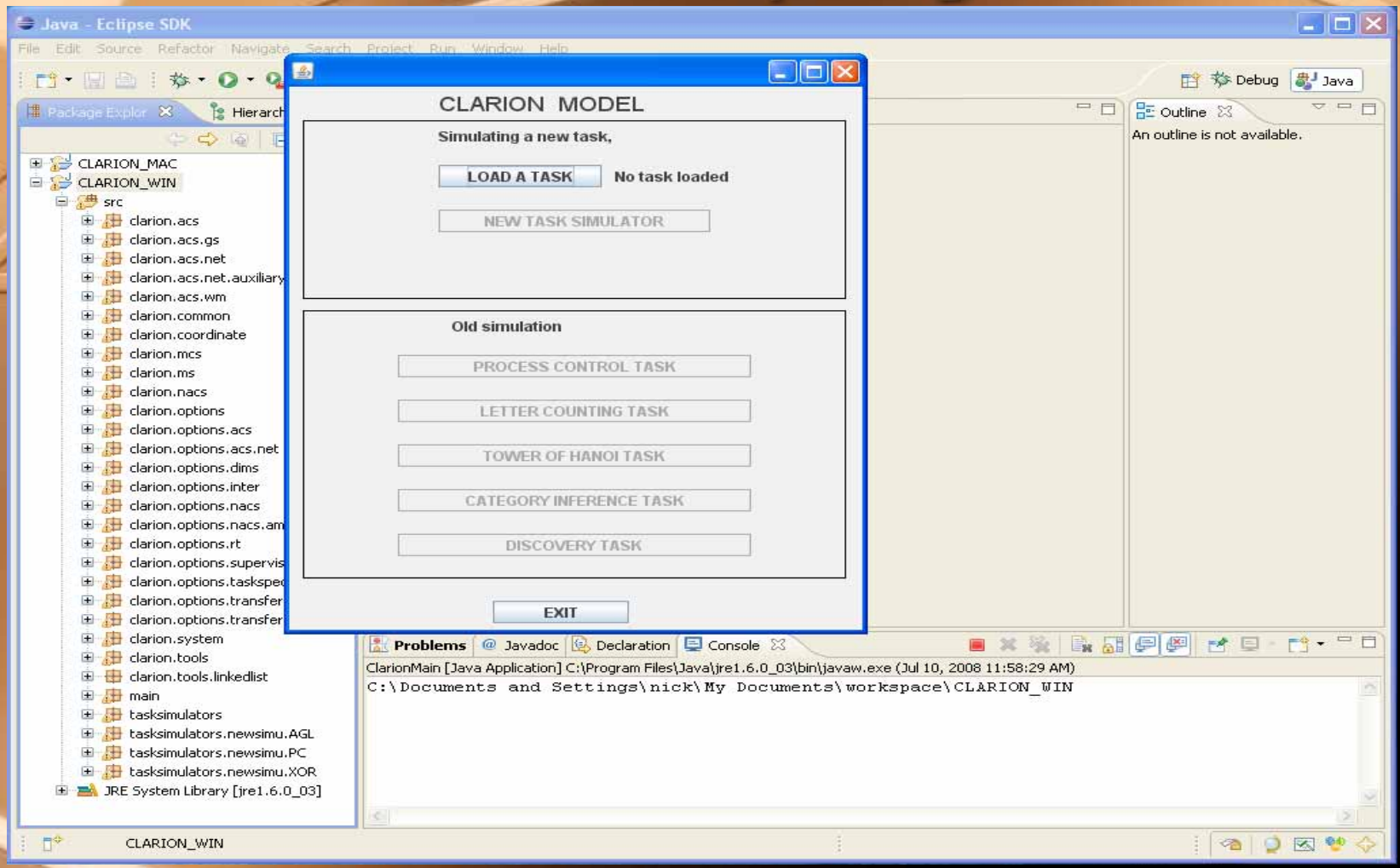
Compiling CLARION



- Click the arrow next to the debug button
- Choose “Debug As”
- Select “Java Application”

Compiling CLARION



- The CLARION Model window will appear when the project has compiled

Using CLARION

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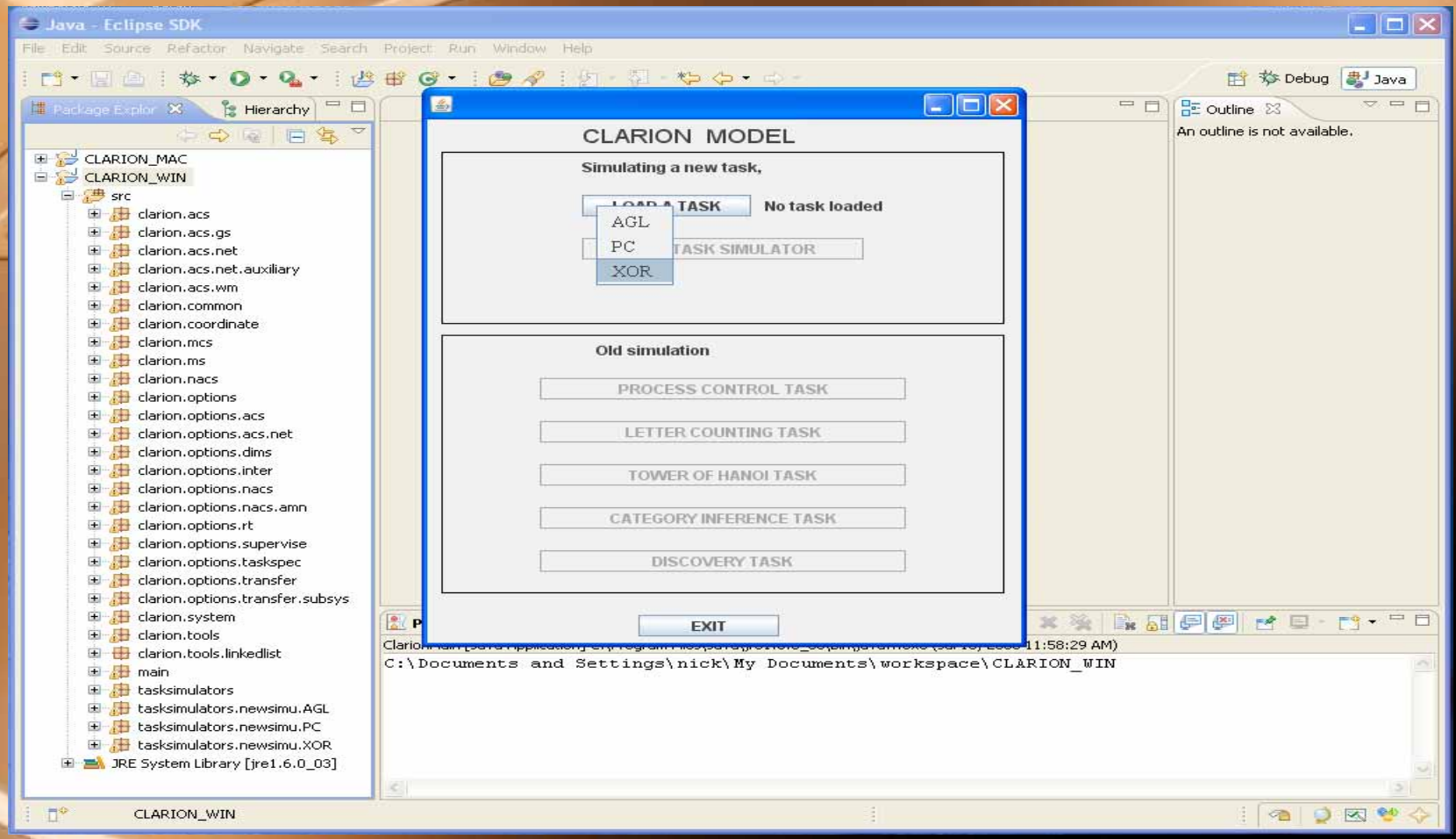
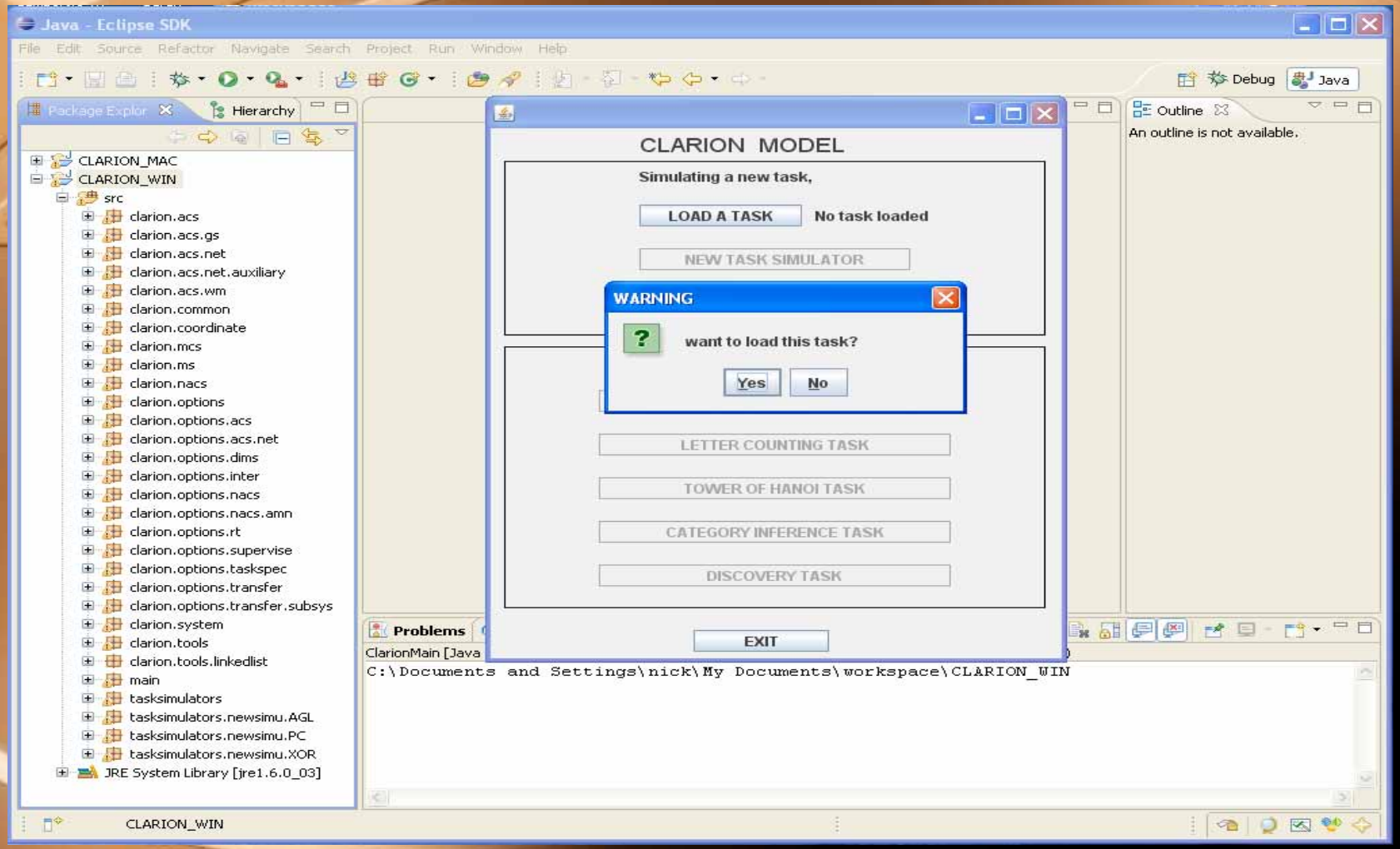
Using CLARION



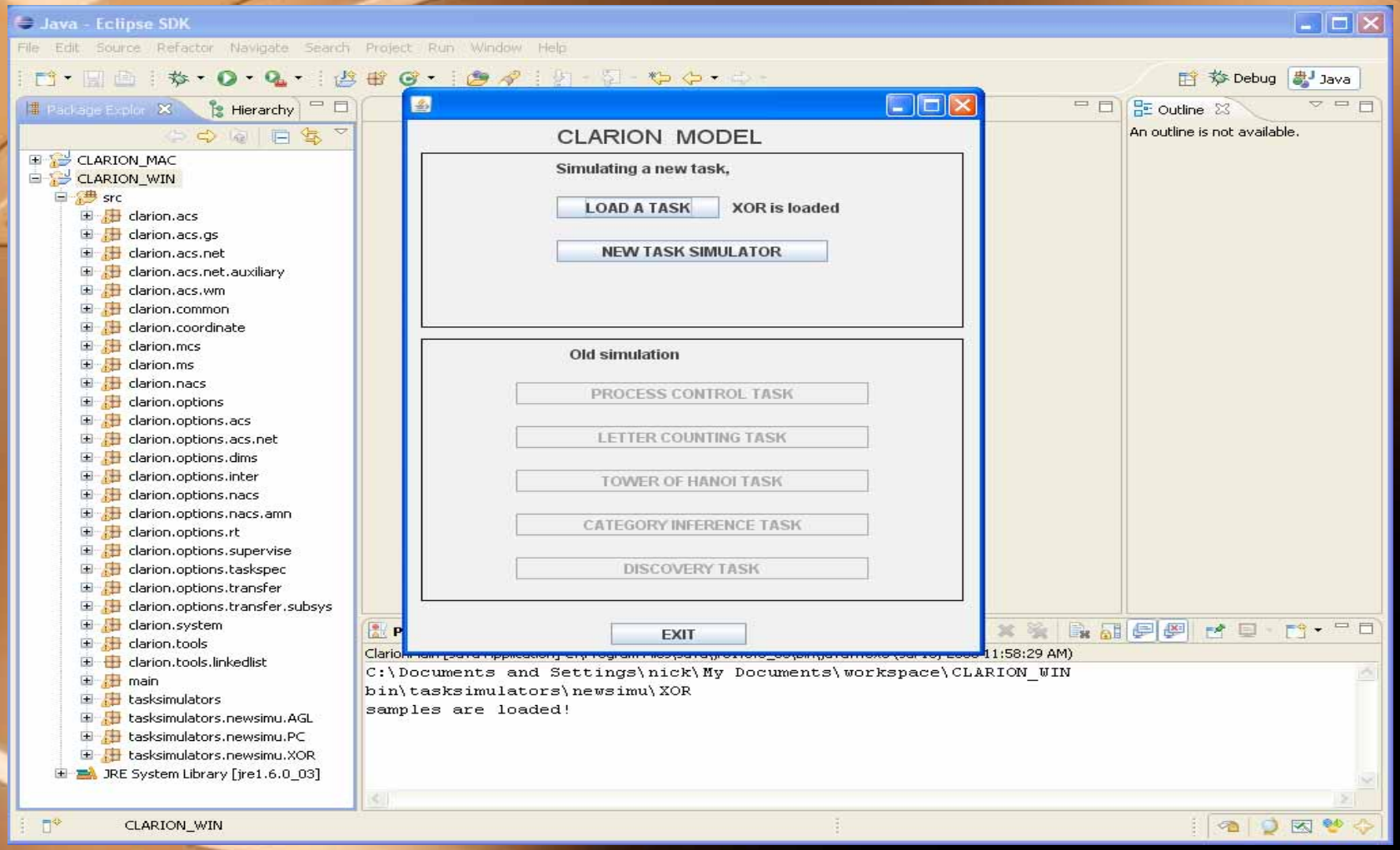
- Click on “LOAD A TASK”
- Select a task from the drop-down menu

Using CLARION



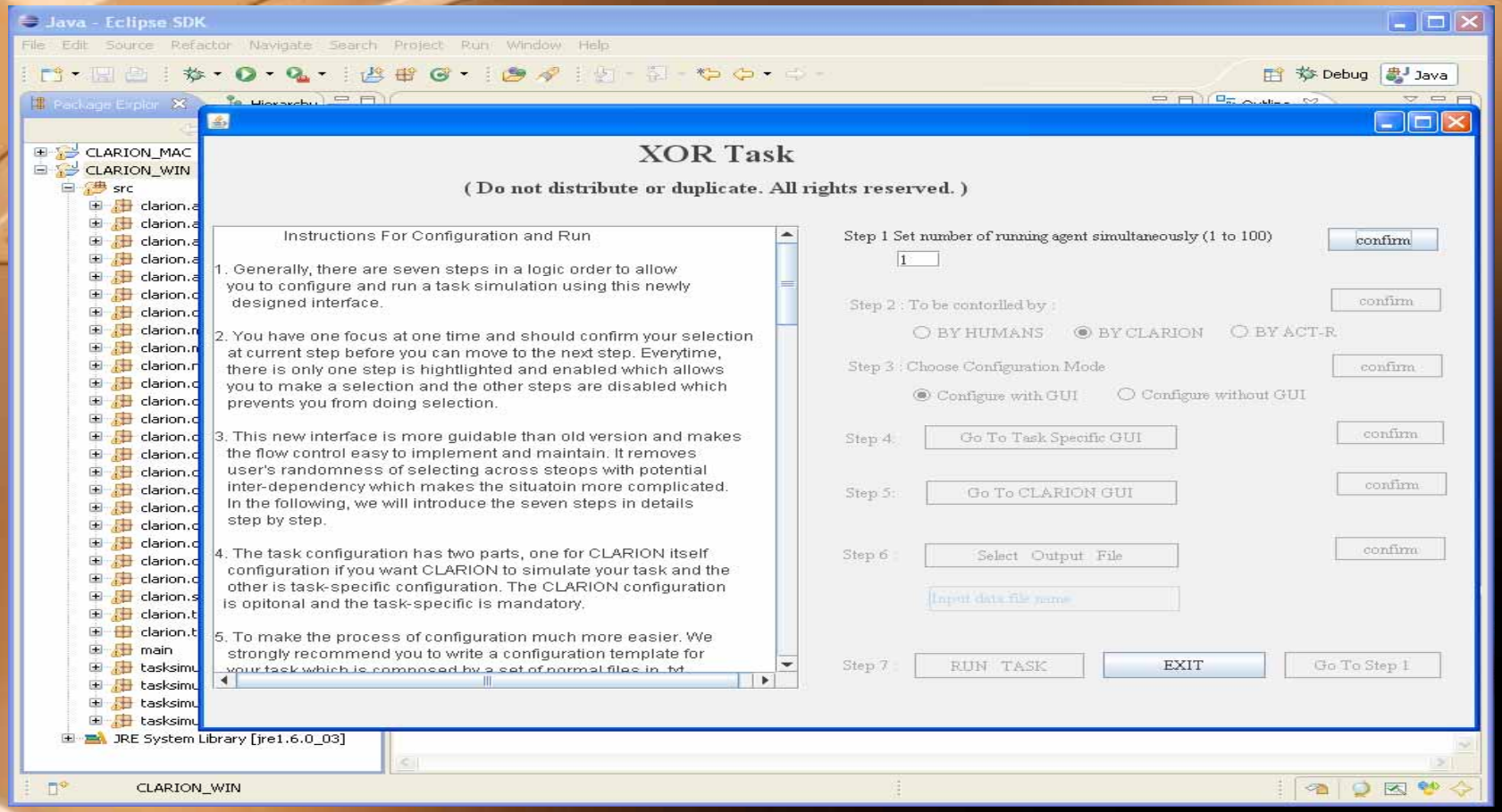
- A load task confirmation popup will appear; click “Yes”

Using CLARION



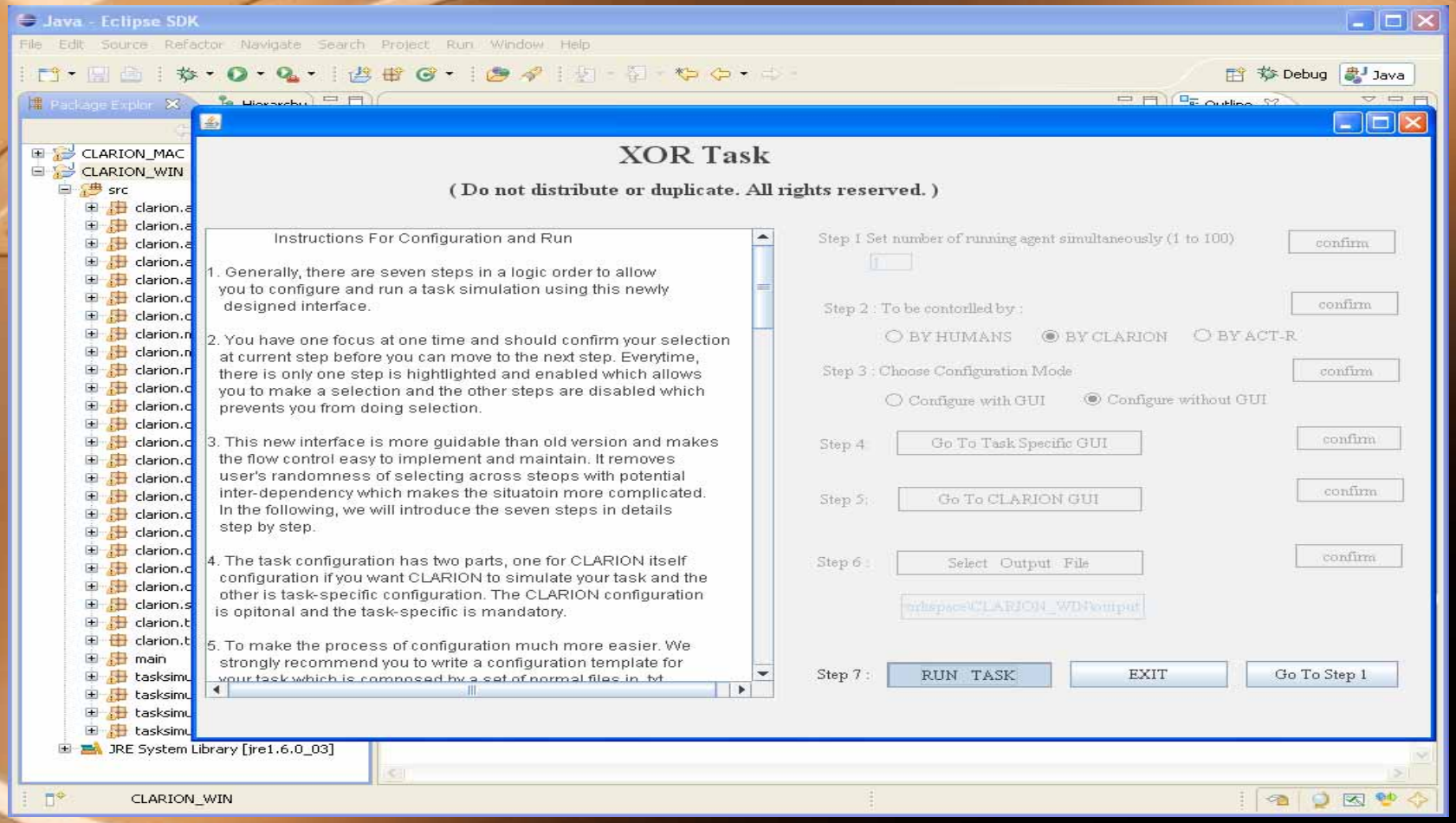
- After the task has loaded, click “NEW TASK SIMULATOR”

Using CLARION



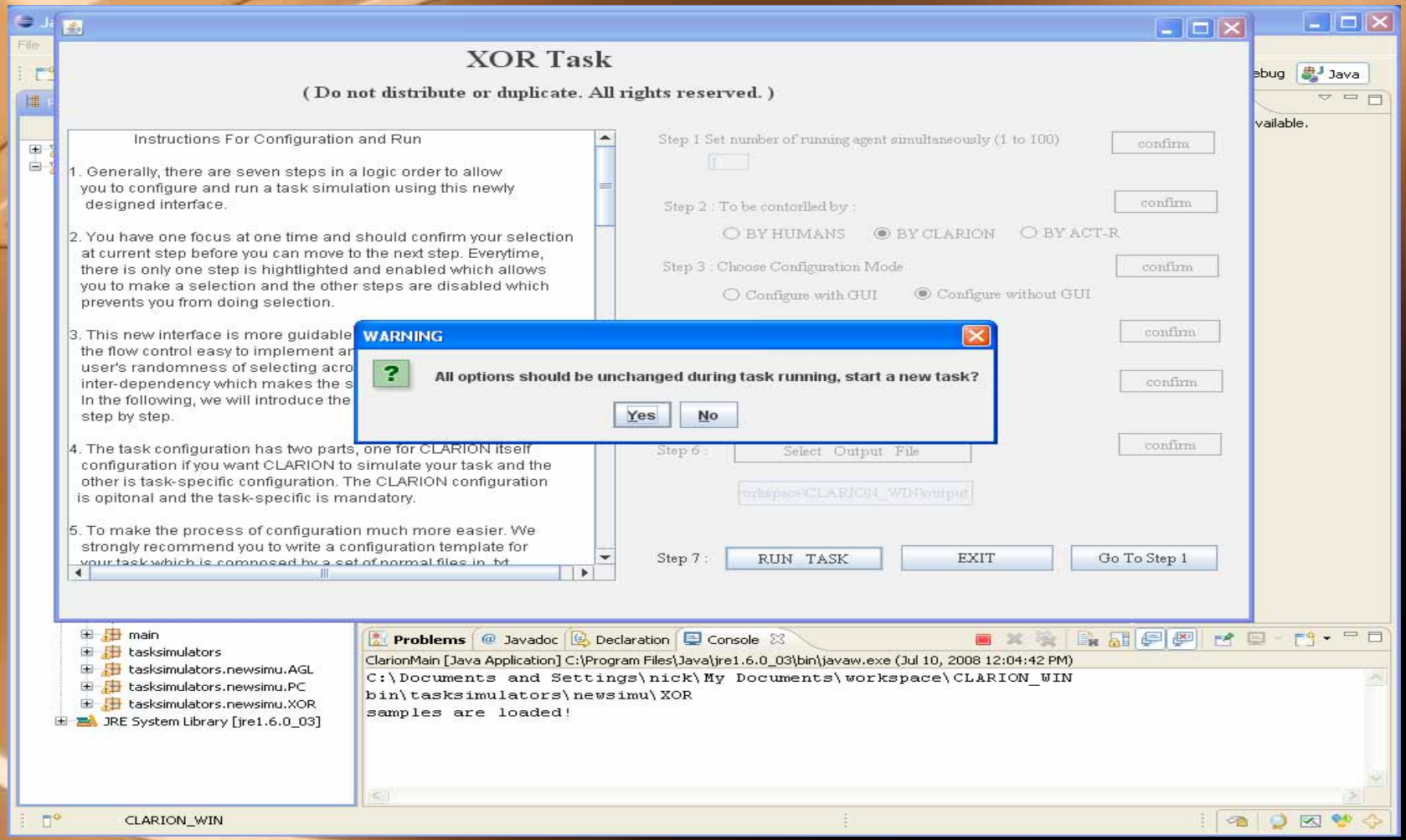
- The task simulator setup window will appear
- Push the “confirm” button to advance to the next step
- Steps 4 - 6 have their own configuration windows. See the documentation folder for details on using the configuration windows

Using CLARION



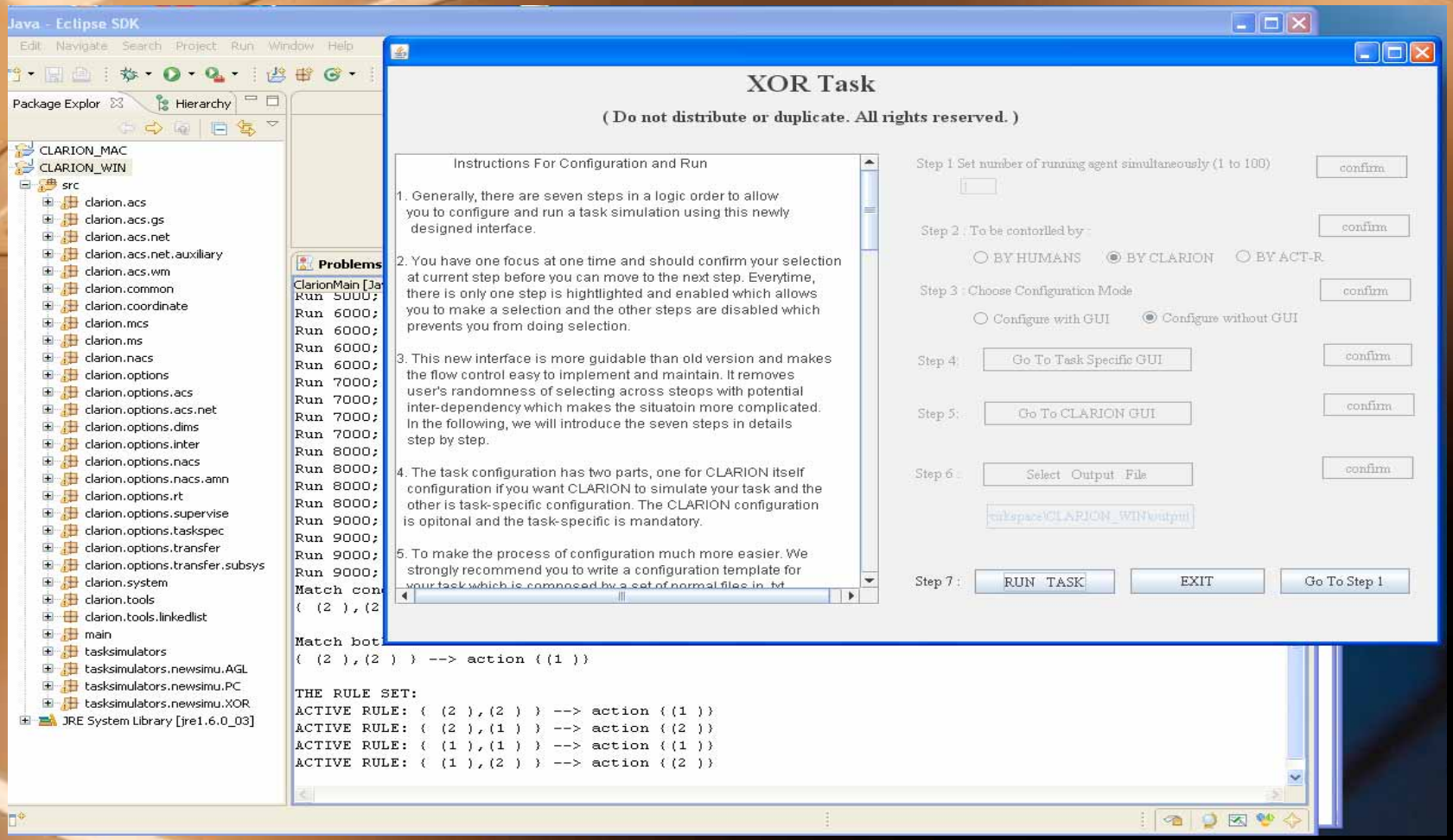
- The preloaded tasks are already configured so “Configure without GUI” can be selected in step 3
- Once all steps have been confirmed, select “RUN TASK”

Using CLARION



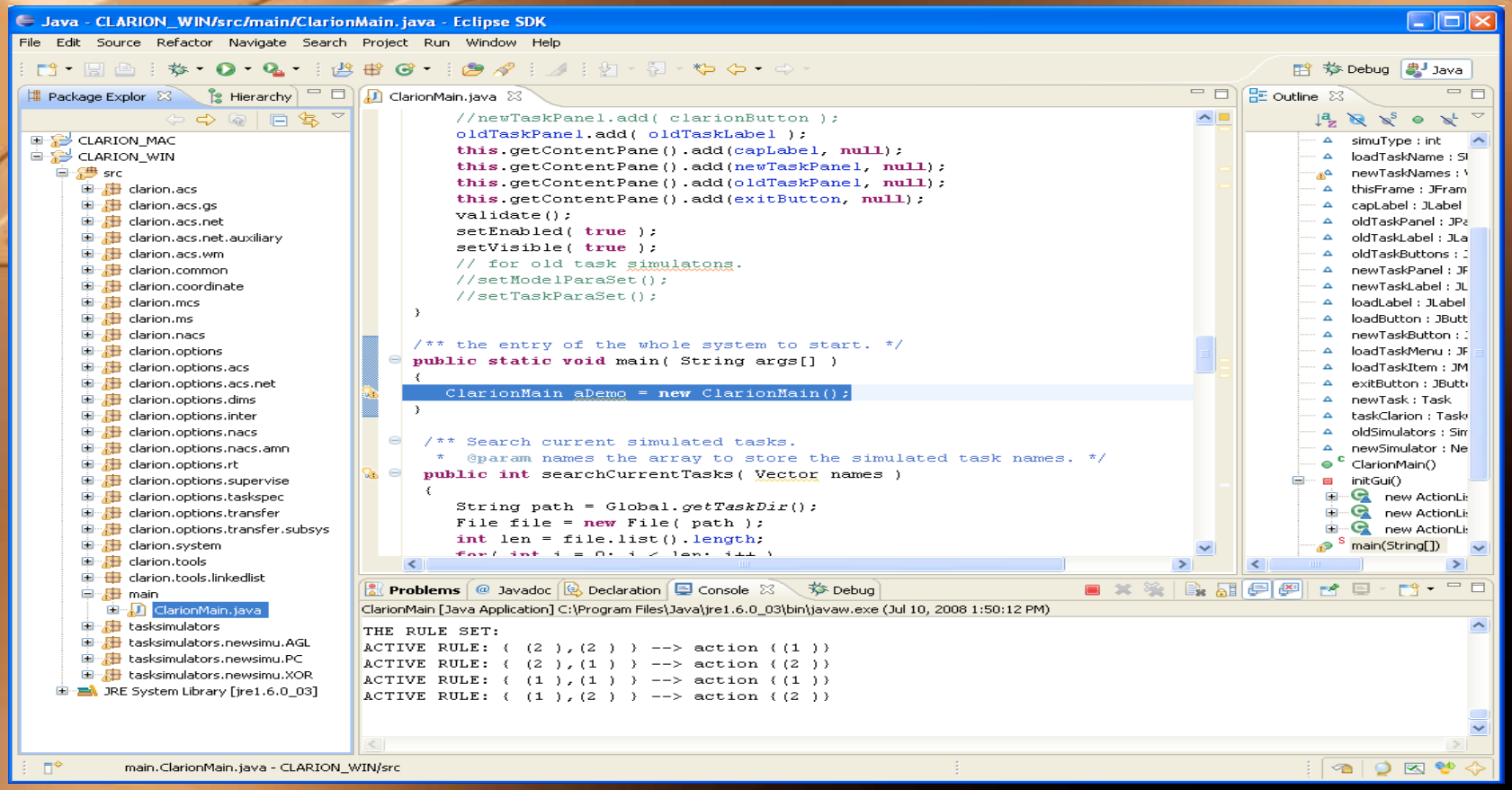
- A warning popup will appear; click “Yes”

Using CLARION



- All simulation output (including results) will appear in the console window of the Java SDK
- The results will also be output to the output file specified in step 6

Using CLARION: without GUI



- The “main” method is located in ClarionMain.java
- The java implementation of the CLARION subsystems can be implemented without the GUI by simply commenting out the ClarionMain instantiation in the main method and replacing it with you own simulation class instantiation

Creating a Simulation with CLARION

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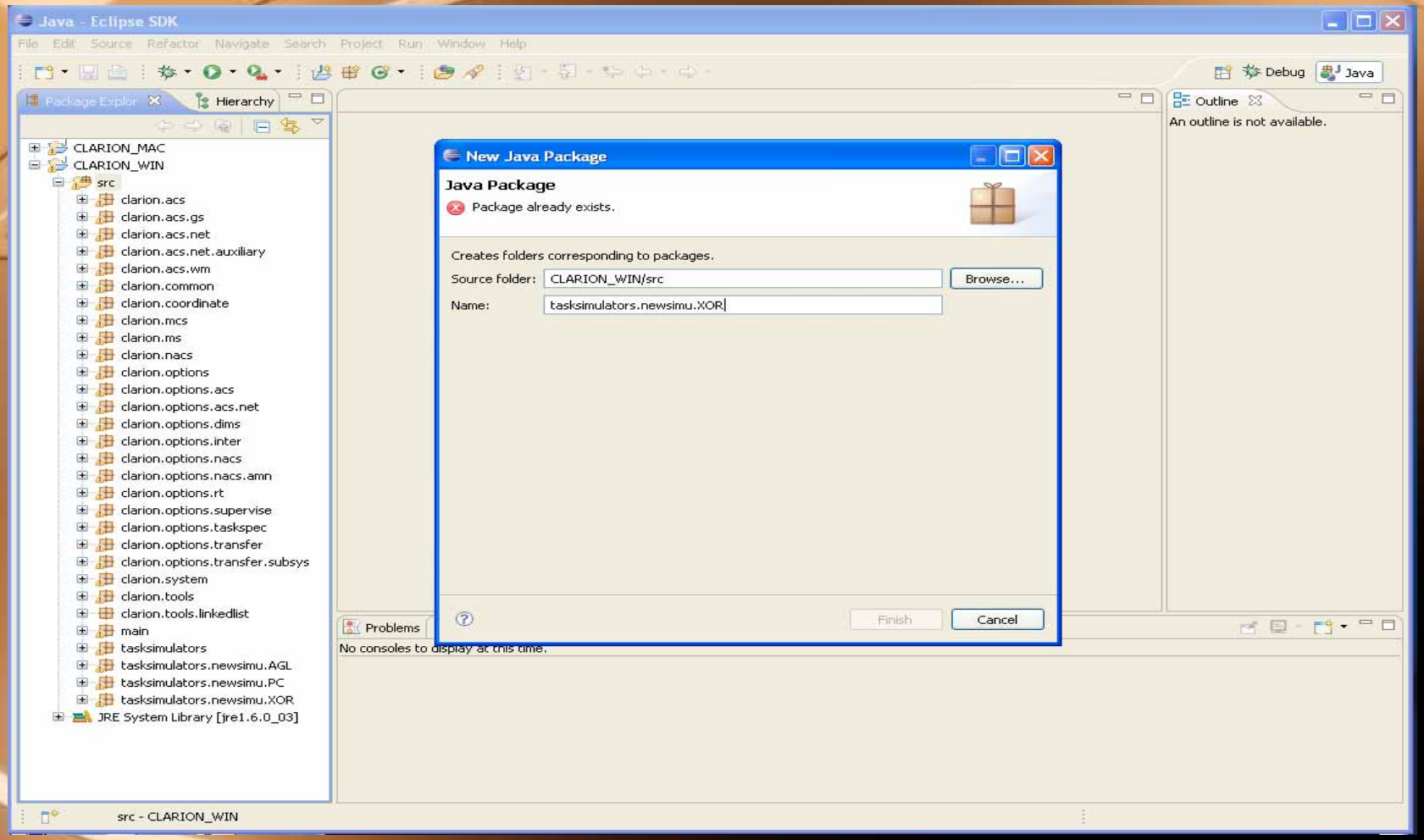
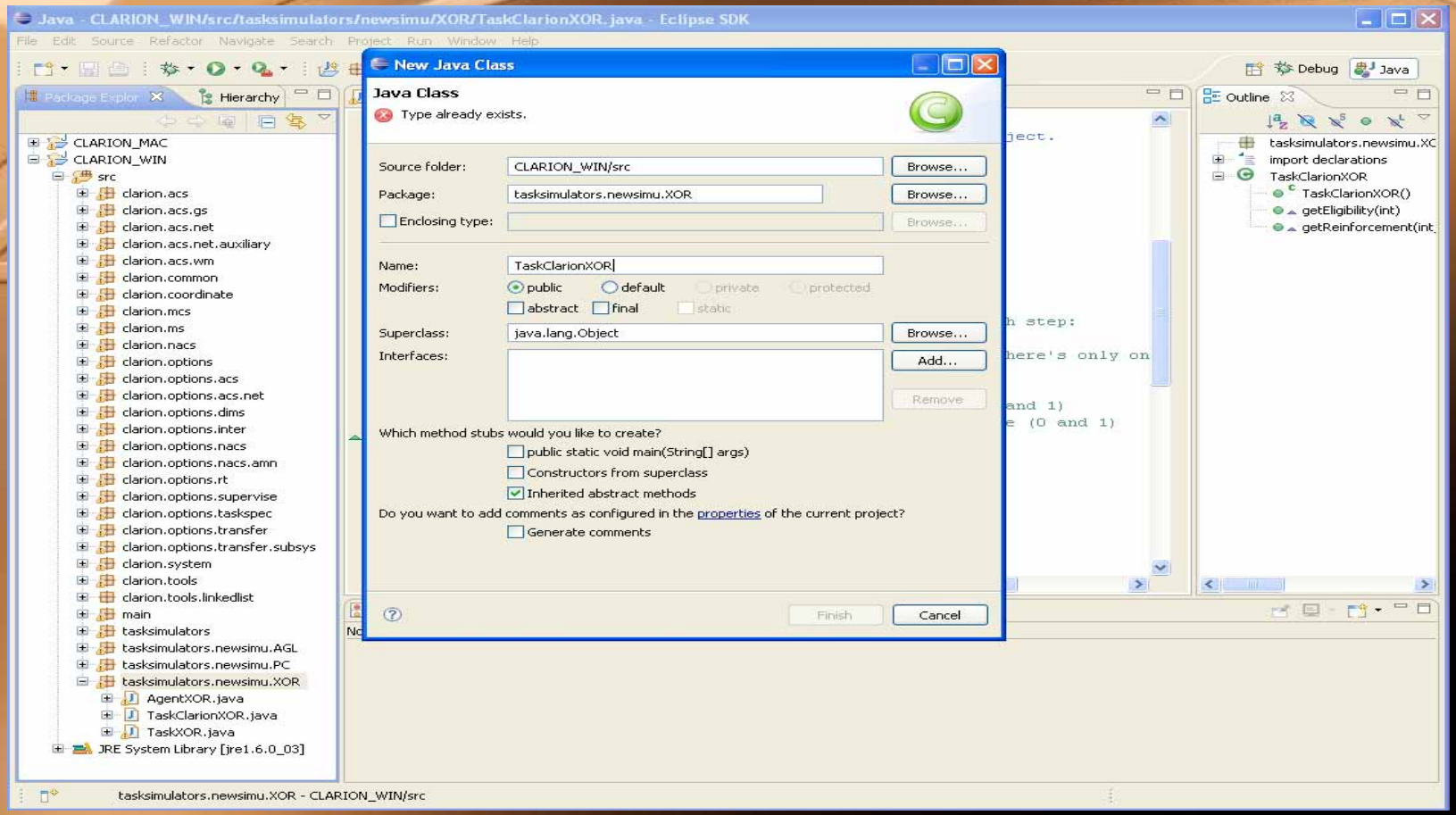
Creating a Simulation with CLARION



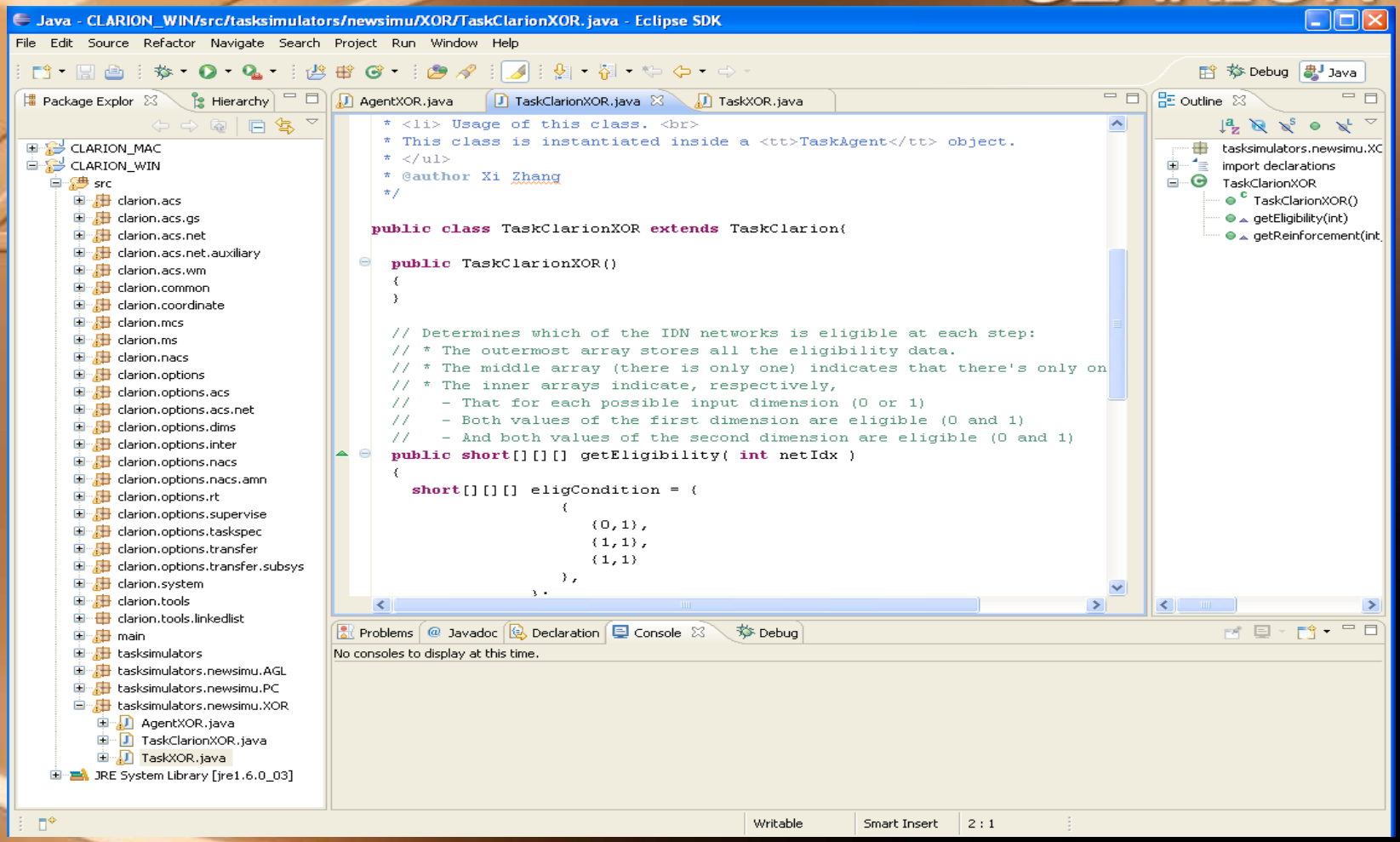
- Create a new Java package under “src” in the “CLARION_WIN” project
- Name the package “tasksimulators.newtasksimu.__XOR__“

Creating a Simulation with CLARION



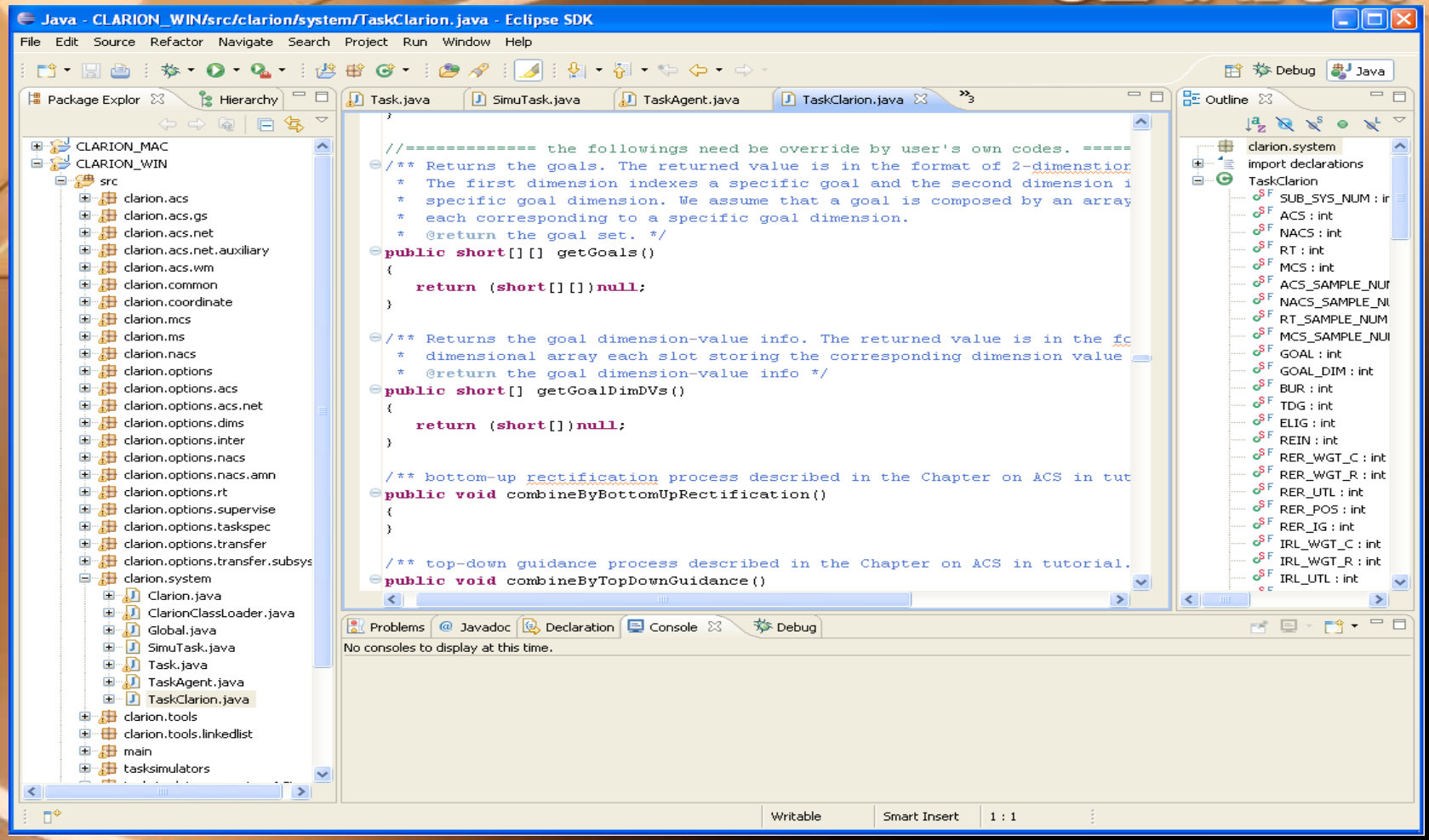
- Create the following classes:
  - Agent__XOR__.java
  - TaskClarion__XOR__.java
  - Task__XOR__.java

Creating a Simulation with CLARION



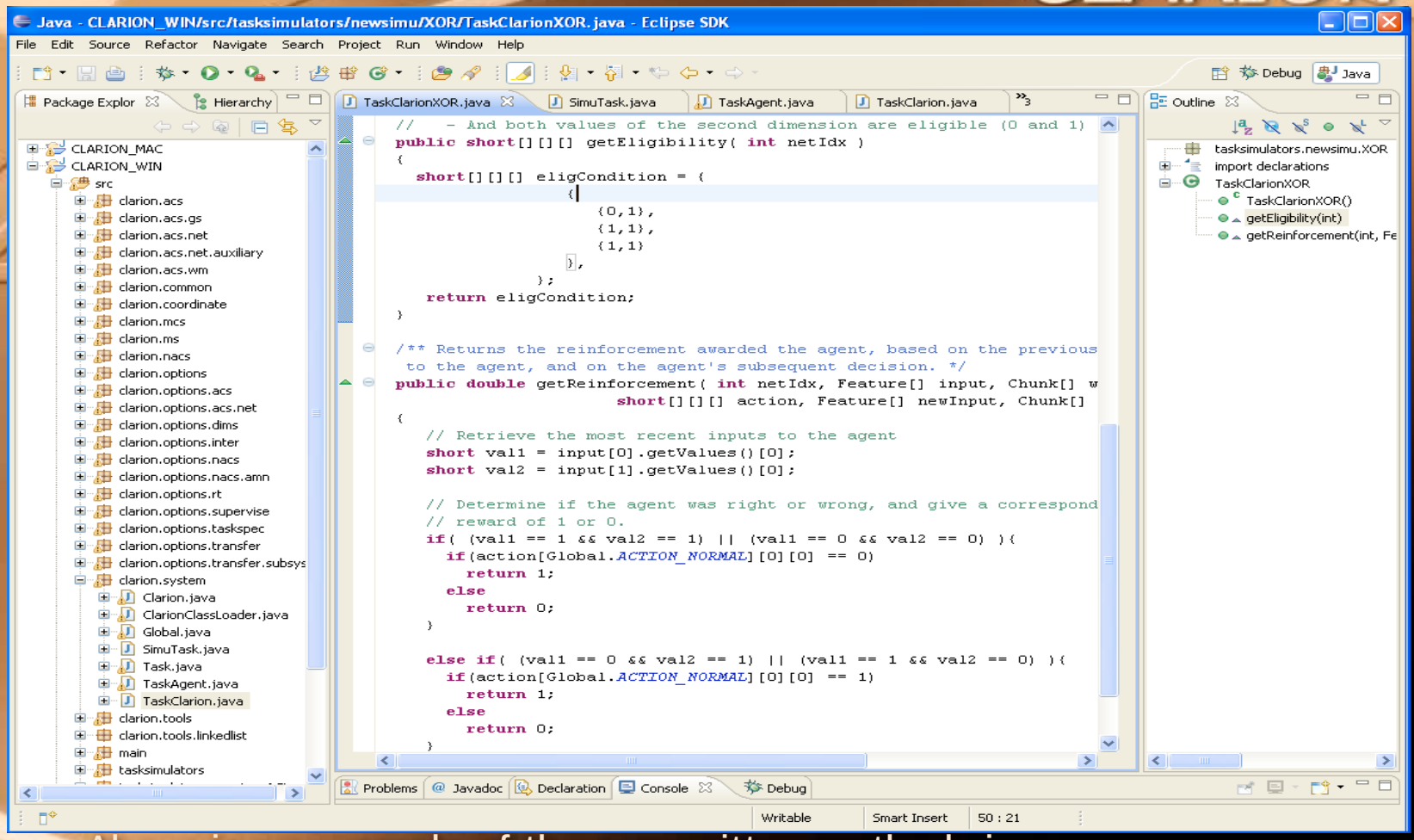
- Each of the newly created classes extend from other classes in the CLARION model (e.g. TaskClarionXOR extends TaskClarion)

Creating a Simulation with CLARION



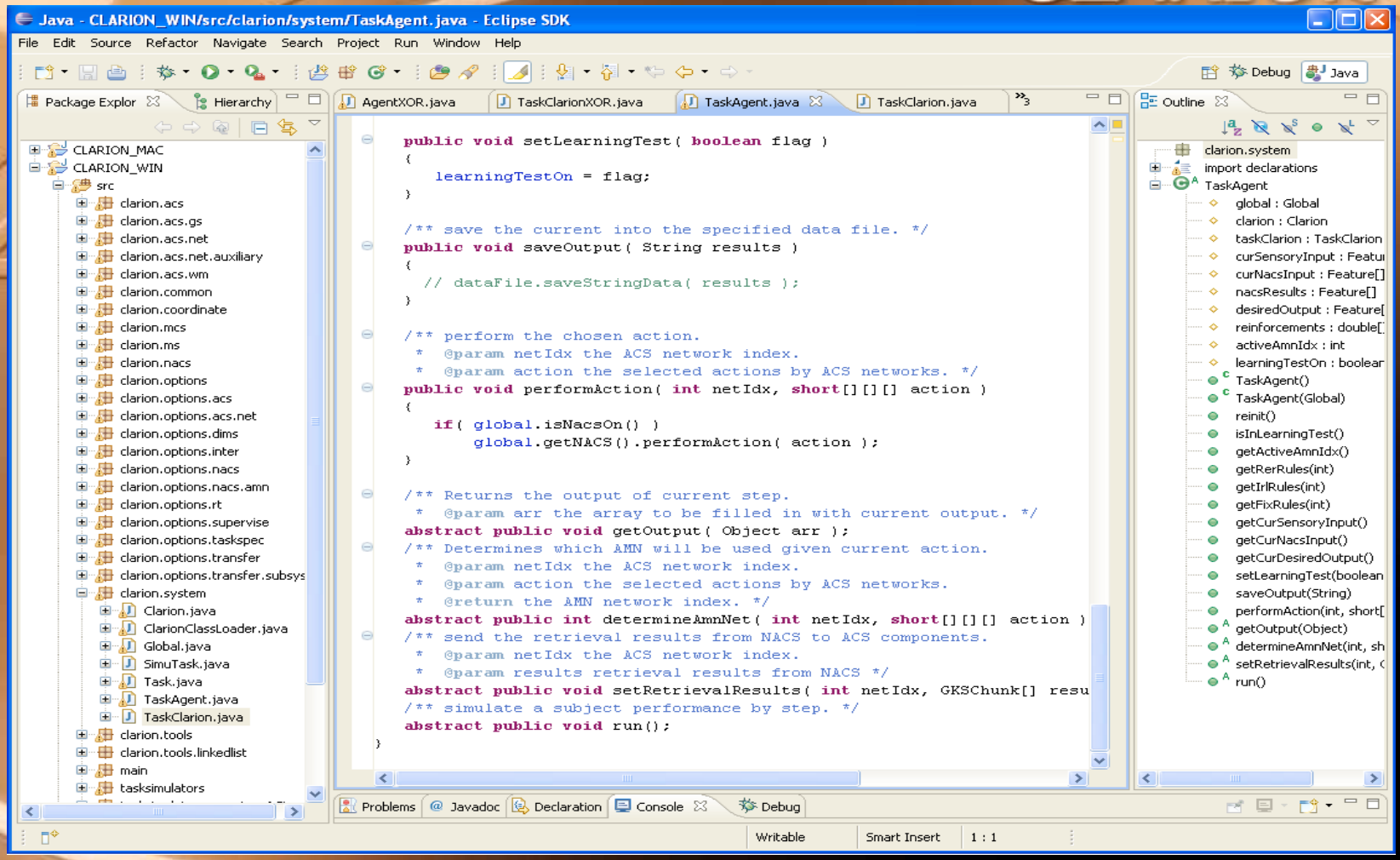
- The parent classes have specified methods that need to be overwritten with simulation specific information

Creating a Simulation with CLARION



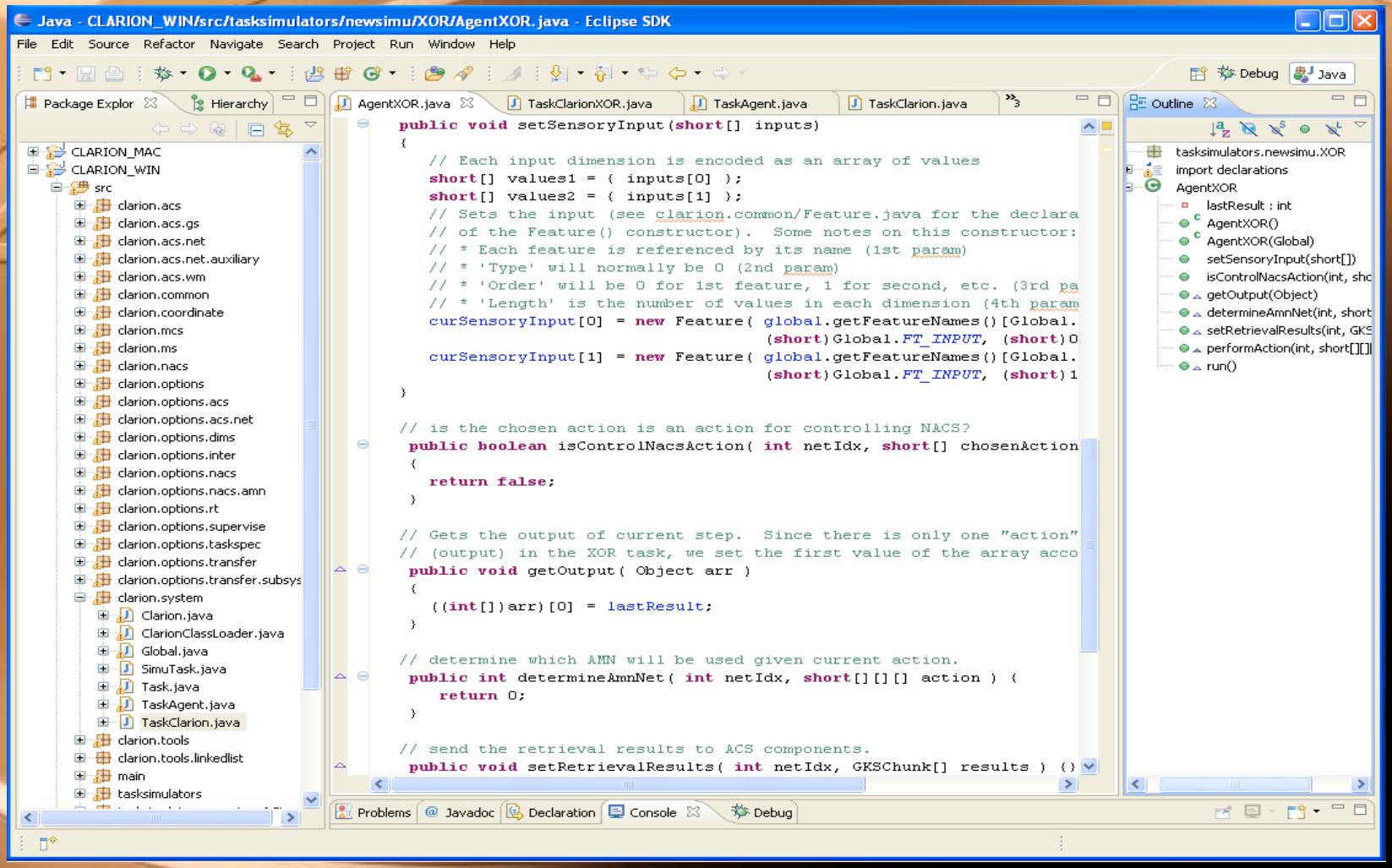
- Above is an example of the overwritten methods in TaskClarionXOR.java
- Note that not all methods in the parent class need to be overwritten, only methods needed to run the task

Creating a Simulation with CLARION



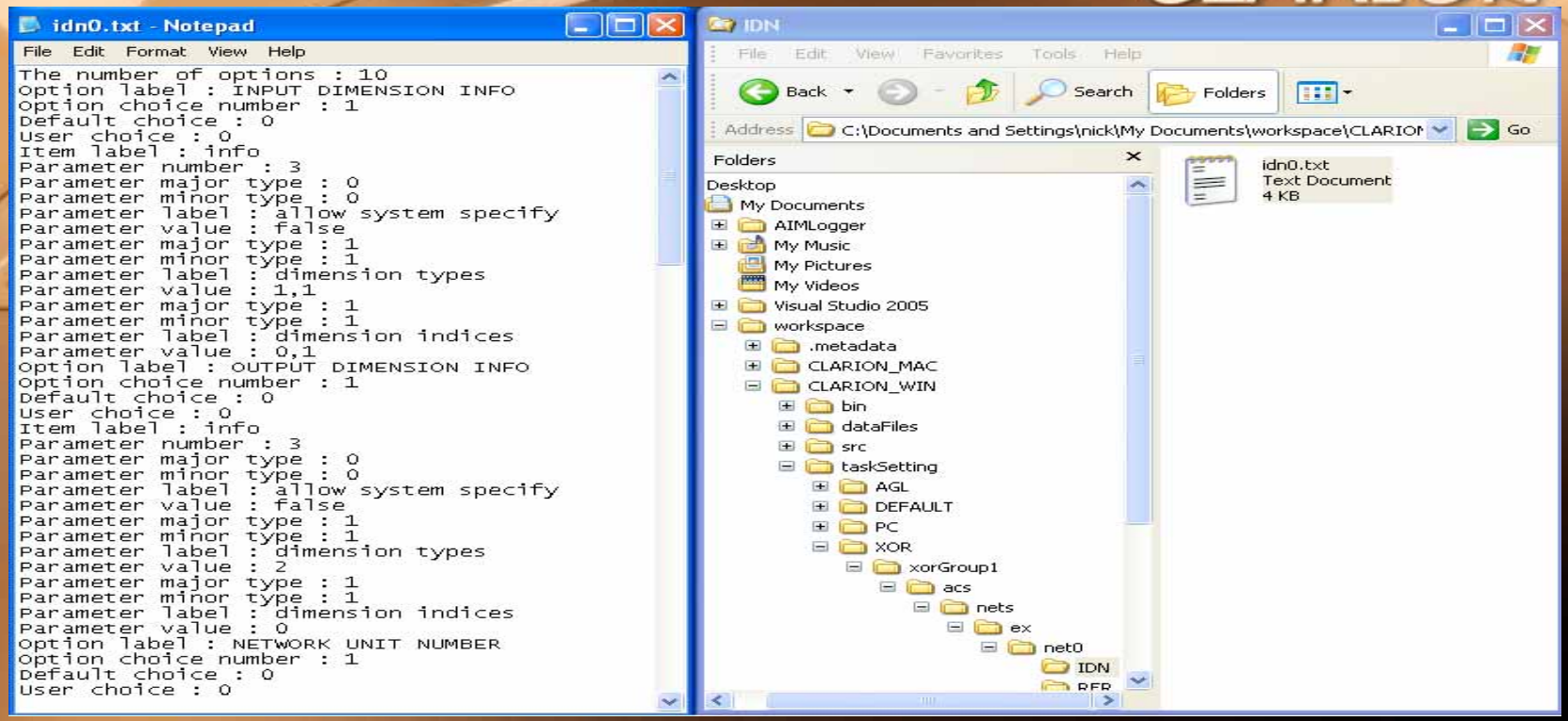
- Some of the methods in the parent class are abstract and must be overwritten in the child class

Creating a Simulation with CLARION



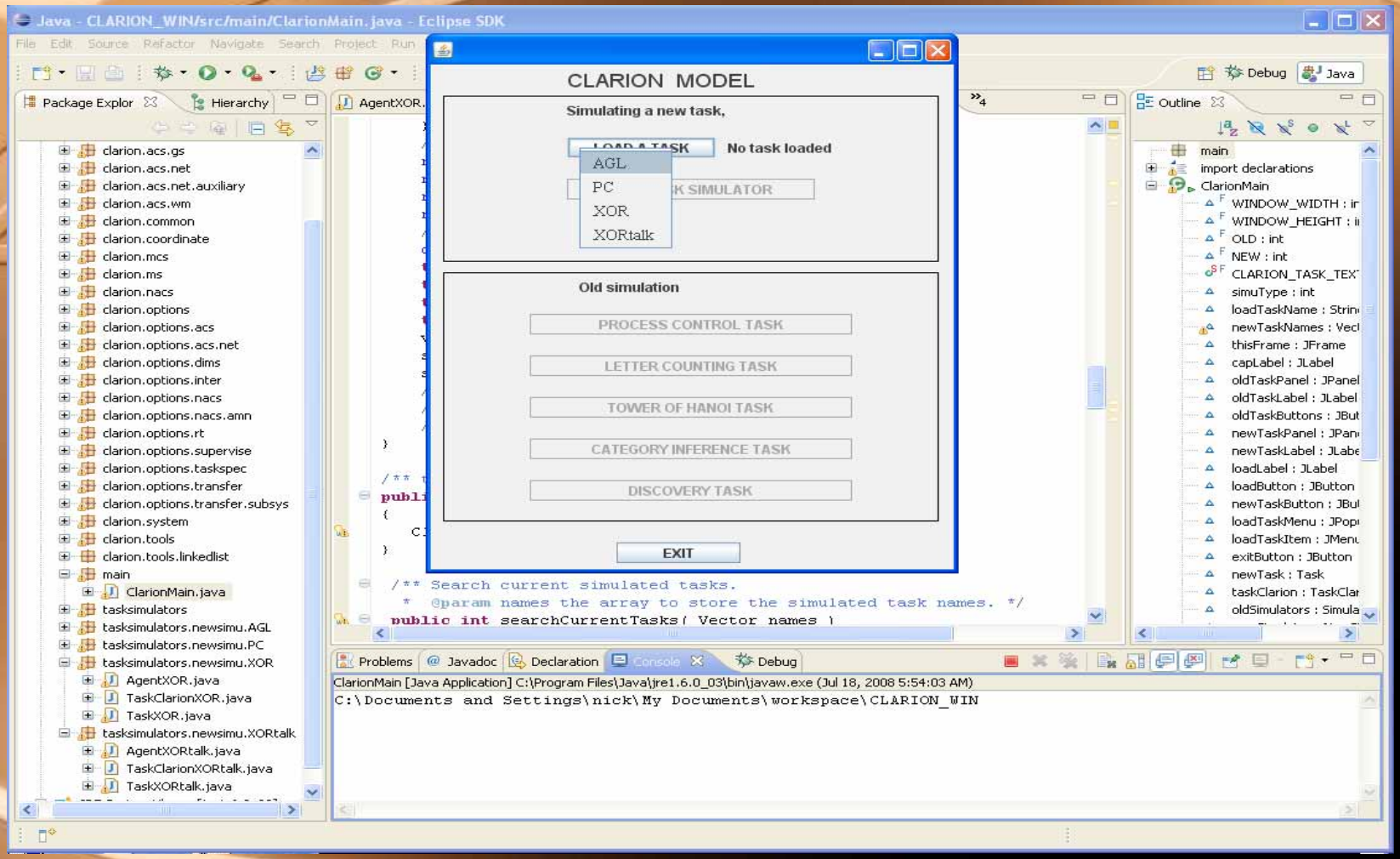
- Above is an example of the abstract methods from TaskAgent.java being overwritten in AgentXOR.java

Creating a Simulation with CLARION



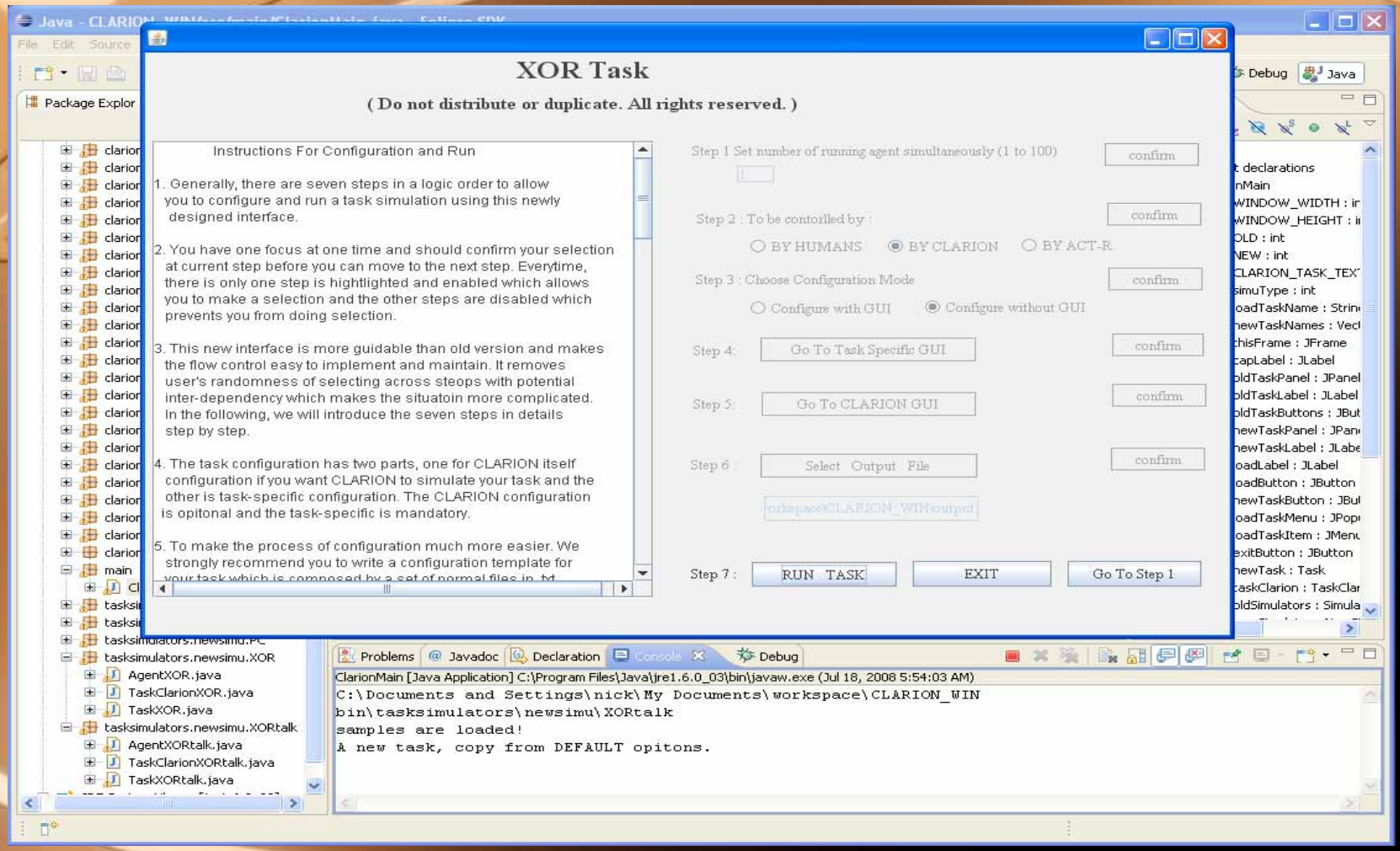
- There are several options for setting the parameters in CLARION (see the appendix of the tutorial for a list of the parameters and their default settings):
  - Manually configuring the settings in the various text files located under “taskSetting” (demonstrated above, advanced)
  - Using the GUI (see documentation for further details, buggy)
  - In code via direct manipulation of variables located in the “Global” class (best method)

Creating a Simulation with CLARION



- After the simulation is written, compile and run the project
- The new simulation should appear in the drop-down menu

Creating a Simulation with CLARION



- If methods 1 or 3 are used to set the CLARION parameters, select “Configure without GUI” in step 3.

The CLARION Java Package

These slides as well as further documentation can be found in the Java packages located on the website.

http://www.cogsci.rpi.edu/~rsun/clarion.html

Thank You

Questions?