

Crafting Quest – tutorial

Introduction

Crafting Quest is a two player turn-based strategy game. This tutorial describes how to run both the client and server software. It also shows how to build the jar archive that you will have to submit for the competition. It is based on Eclipse 3.6(Helios)

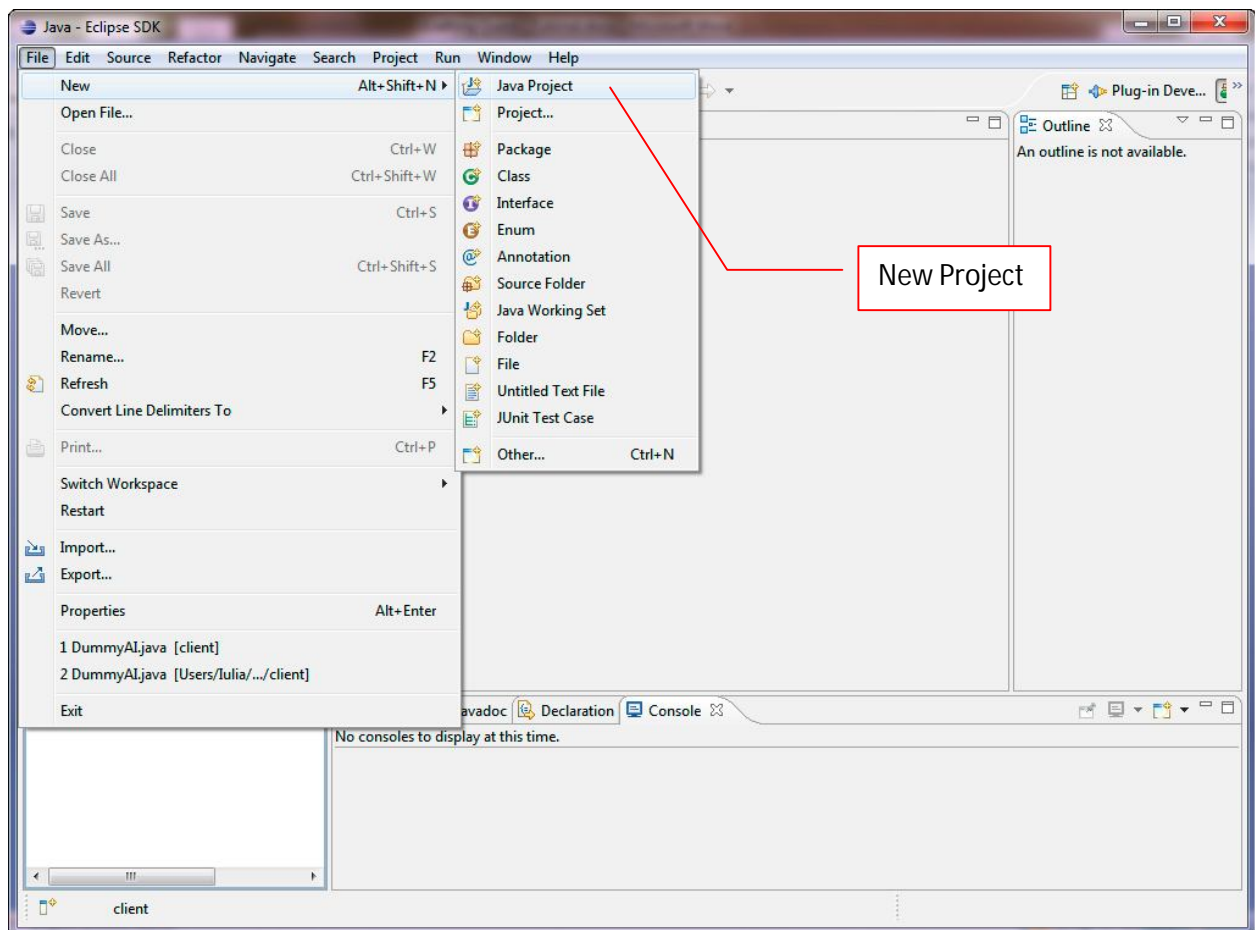
Pre-conditions

The following assumes that you already know how to use [Eclipse IDE](#).

Running the Client

In order to run your solution, you should create a new Java project, setting the folder extracted from the cqclient.zip archive as default location (uncheck *Use default location* and set the *Location* field)

Set your desired name for the project in the *Project Name* field and press *Finish*.



Create a Java Project
Enter a project name.

Project name:

☐ Use default location
Location: [Browse...](#)

JRE

☒ Use an execution environment JRE:

☐ Use a project specific JRE:

☐ Use default JRE (currently 'jre6') [Configure JREs...](#)

Project layout

☐ Use project folder as root for sources and class files

☒ Create separate folders for sources and class files [Configure default...](#)

Working sets

☐ Add project to working sets

Working sets: [Select...](#)

[?](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

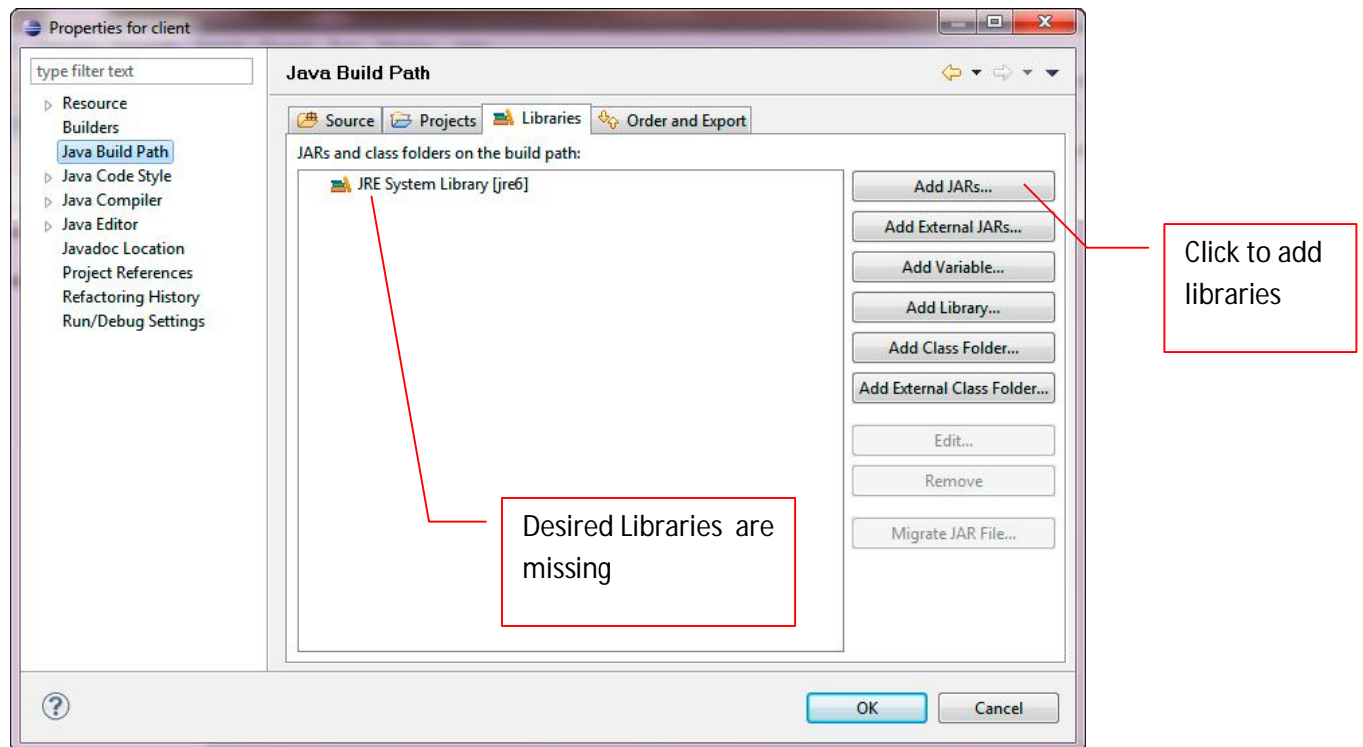
Insert desired name for the project here

Insert folder extracted from the client archive here

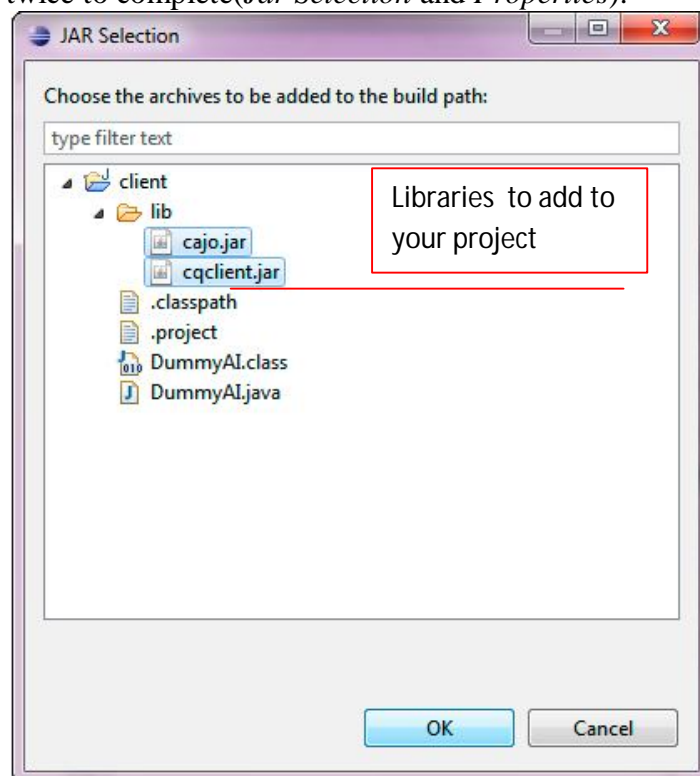
If the following libraries:

- cajo.jar
- cqclient.jar

do not appear in the project (select project, right mouse click and select *properties*, then go to the *Java Build Path* tab and look in the list for them).



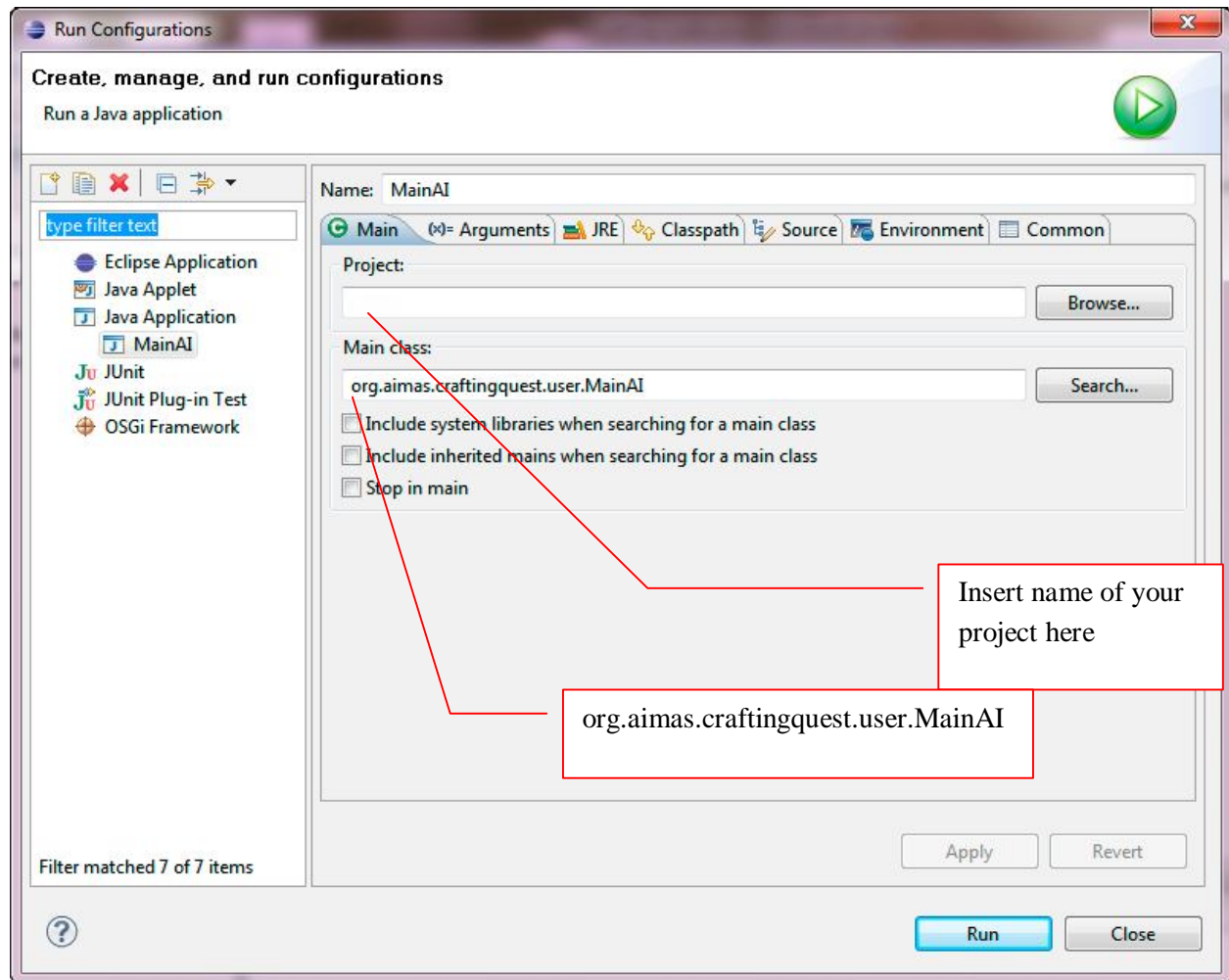
Otherwise, select your project, right mouse click and select *properties*. In the *Java Build Path* tab, under libraries select *Add JARs* and choose the three libraries from the *lib* folder. Hit *Ok* twice to complete(*Jar Selection* and *Properties*).



In order to run the client(as an Application), you should set a RunConfiguration for your project(Run->Run Configurations or right click on project and select Run-> Run Configurations)

It should have the following settings:

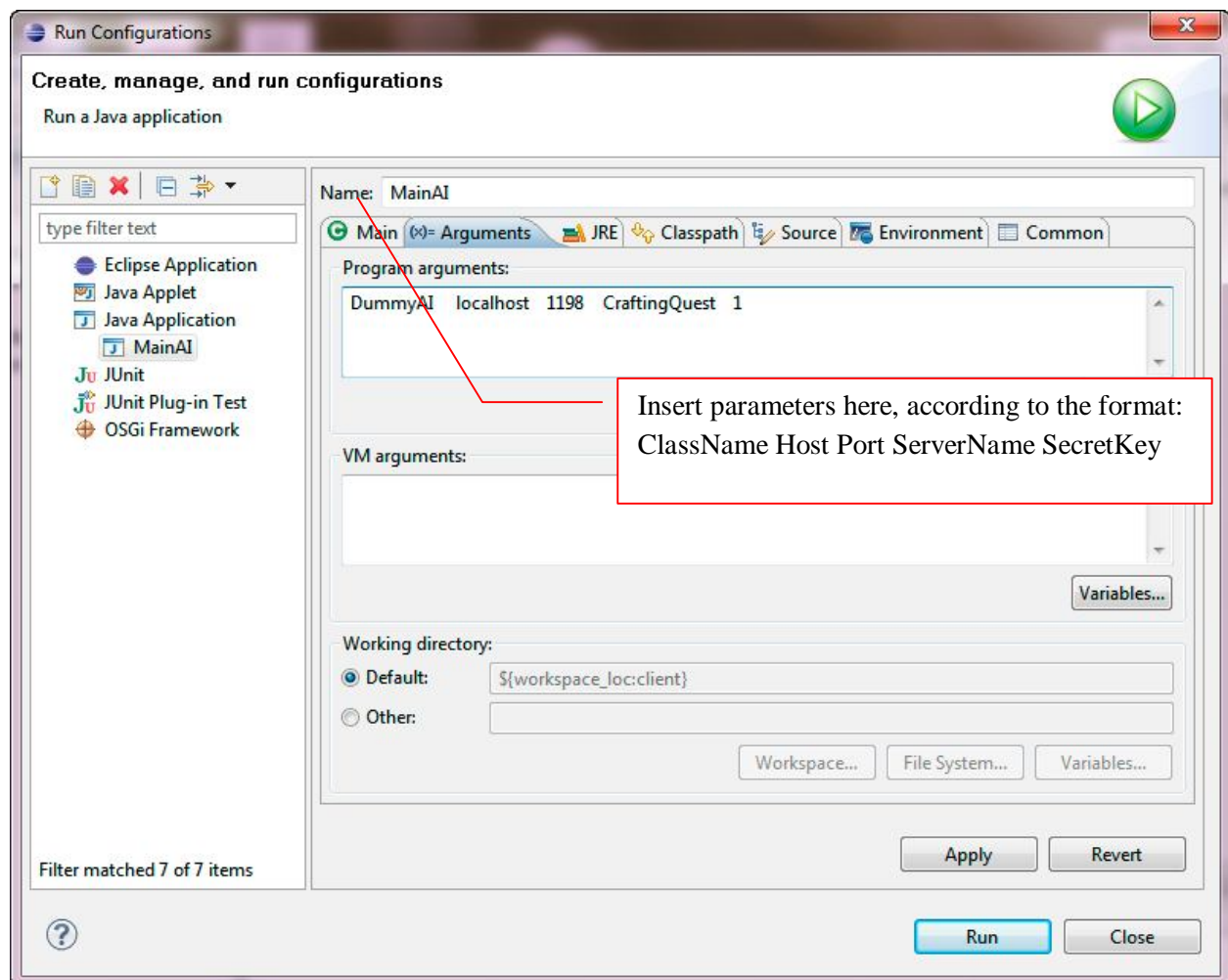
- org.aimas.craftingquest.user.MainAI must be set as Main class



- Insert the arguments:
 - ClassName – name of the class containing your solution
 - Host – probably localhost for your client
 - Port – must be identical to the server's port
 - ServerName – the name set for the server as a run argument(See Running the server)
 - SecretKey – a secret key defined in the secrets file from the server's archive

The image below contains the arguments for running our Dummy solution.

During the competition those parameters will be taken automatically by scripts responsible for launching the game.



- Click **Run** only after you have unzipped and started the server.

Running the Server

To run the server use the following command:

```
java -jar cqserver.jar [ServerName, Port, Secrets_file_name]
```

having the parameters defined above. The parameters in square brackets are optional. Default values exist for them. The default values for these parameters are:

- **serverName:** *CraftingQuest*
- **Port:** 1198
- **Secrets_file_name:** *secrets.txt*

If you do choose to change the values for the server parameters you have to specify all three of them, otherwise the server will signal an error.

Secrets.txt is a text file having the following format:

- The first line contains an integer *n* specifying the number of clients that must connect to the server
- The next *n* lines each contain an integer specifying a secret key

The secret keys (integers) are used for identification and security reasons and will be automatically generated by scripts running a game during the competition.

Setting custom logging configurations

Both client and server archives contain a file named **logging.properties** which is a **log4j** properties file, i.e. it gives directives for the way in which messages are logged. The default settings generate a ConsoleAppender which will print messages to System.out.

By un-commenting the rest of the directives you can also have the logging mechanism output messages to files called server.log and client.log respectively.

Additionally, you can customize the **logging.properties** file in any way you like to obtain desirable logging configurations.

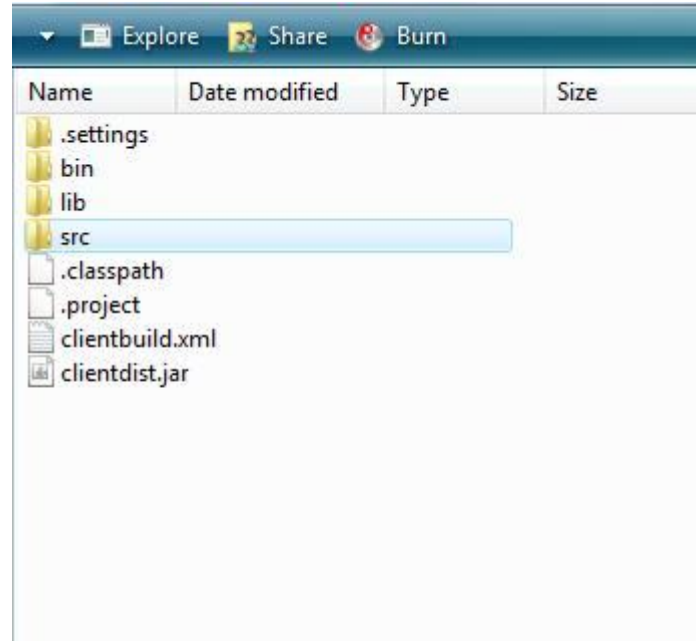
For details about this visit <http://logging.apache.org/log4j/1.2/manual.html>.

Building the solution needed for submission

Building your solution is done by running the **ant build script (clientbuild.xml)** included with the client archive (cqclient.zip).

Running the script requires that you have the **ant** utility installed on your system. You can download it from <http://ant.apache.org/bindownload.cgi> and set it up.

Let's assume that your project directory looks something like this:



The build script assumes that all your source files lie in the **src** directory. You must ensure this in order for the script to function properly.

If these conditions are met, navigate to the root of your project (where **clientbuild.xml** resides) and run the following command:

```
ant -Dmainclass=<your_main_class> -buildfile clientbuild.xml
```

The output of this command will be a jar archive named **clientdist.jar** which you will have to submit as your solution for the competition.

The parameter **<your_main_class>** represents the **fully-qualified java class name** of your solutions' main class (the one that **extends AIThread**).

Note: A fully-qualified class name is the name of a java class that includes its package name.

Running the above command will also produce a **build** directory in the project root.

After building your jar, you can delete the build directory.