

Programming Exam #1  
CSCI 201L Fall 2016  
10% of course grade

Part 1 – Factory Hierarchy

Your first task is to add the menu item pictured below, “Factory Hierarchy”. Clicking this item will open a new window which looks as close as possible to the following image:

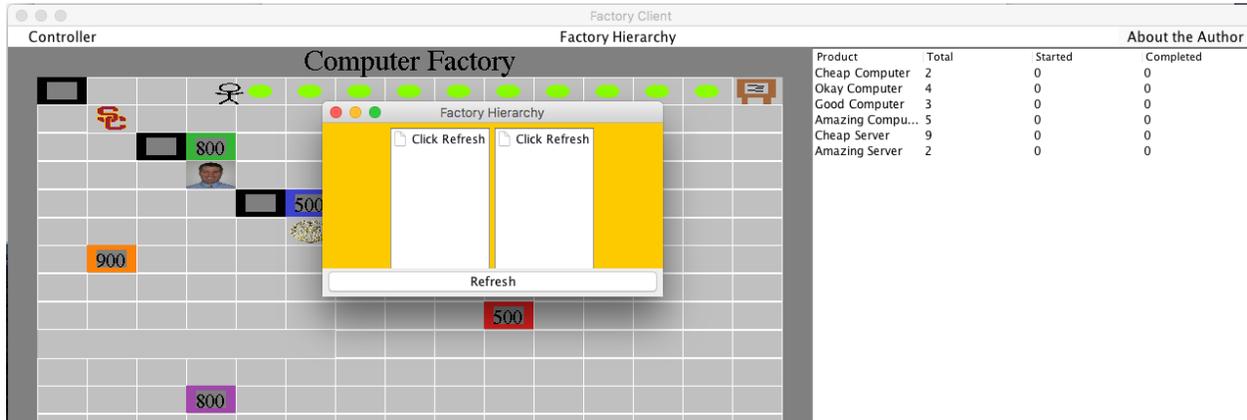


Figure 1.1 - Mac screenshot

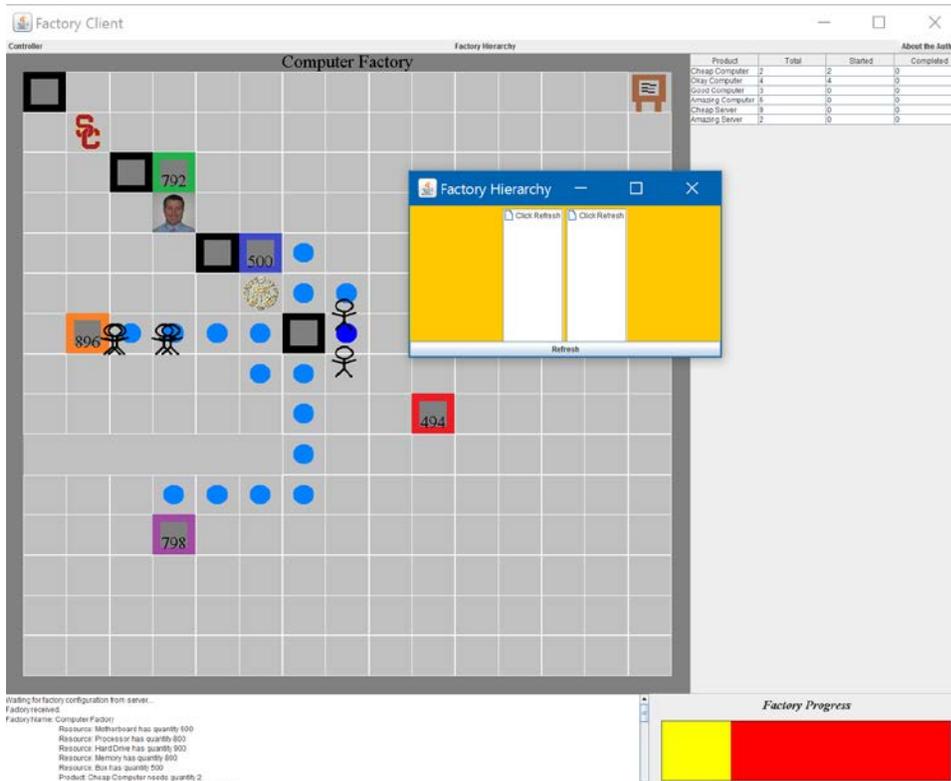


Figure 1.2 - Windows screenshot

After a user clicks the Refresh button, the window should now be populated with data and look like the photo pictured below. Hard-coding values other than the name of the root (i.e. “Products” and “Resources”) will result in a point deduction.

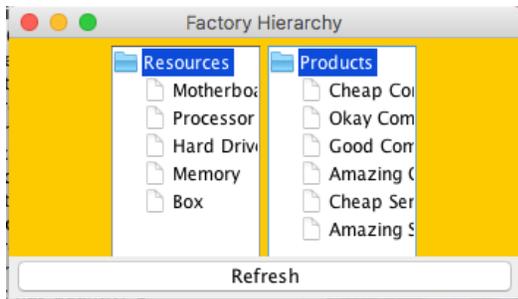


Figure 2.1 – Mac screenshot

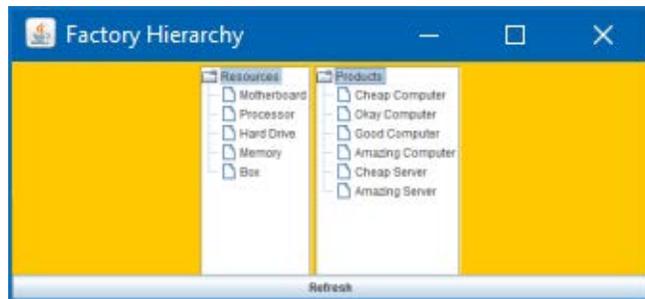


Figure 2.2 – Windows screenshot

Typing R when the dialog is open should have the same effect as clicking the refresh button.

## Part 2 – About the Author

Part 2 includes a change to the `factory.txt` file from which all factory information is parsed. First, replace your existing `factory.txt` file with the one included in the `resources.zip` file on the 201 website. The new file has two additional lines - the first represents the factory author’s name, and the second represents a relative path to a photo of the factory author.

Next, add the `pusheen.png` file to your workspace. It should be located in the same location as the `walls` file you already added, one directory *above* `src`.

Now create the “About the Author” menu and the associated menu items (“View Author”, “Set Author Name”, and “Set Author Photo”).



Figure 3.1 – Mac screenshot

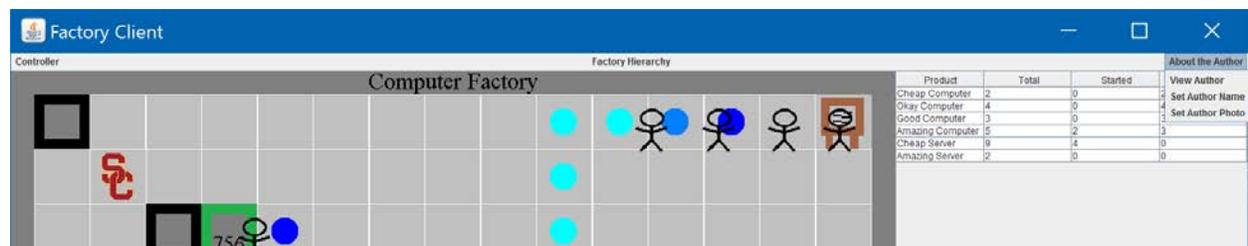


Figure 3.2 – Windows screenshot

Clicking “View Author” should open a new window which uses the two new lines from `factory.txt` to populate itself with data. The name and photo you see here are just default values.

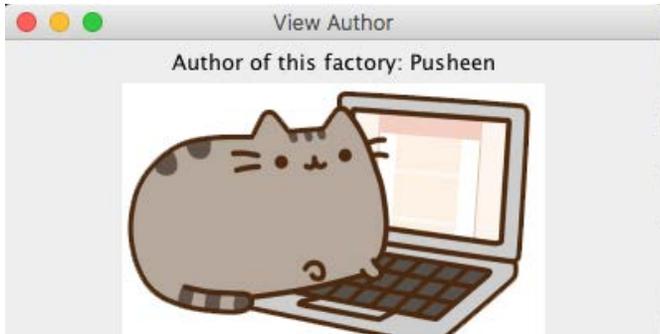


Figure 4.1 – Mac screenshot



Figure 4.2 – Windows screenshot

Clicking “Set Author Name” should open a window which looks like the following. If a user clicks the cancel button, the factory author name should not be reset. If a user selects OK, the Set Author Name window should disappear and the name of the author should be updated in the during this execution of the client only. If the client is executed again, the author’s name will be set to the value from the `factory.txt` file again.



Figure 5.1 – Mac screenshot

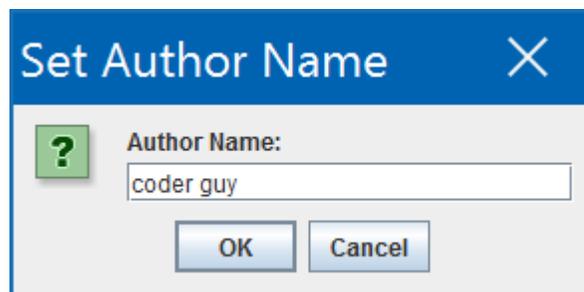


Figure 5.2 – Windows screenshot

Clicking “Set Author Photo” should open a window which looks like the following. If a user clicks the cancel button, the factory author photo should not be reset. If a user selects OK, the Set Author Photo window should disappear and the image selected will become the author’s image during this execution of the client only. If the client is executed again, the author’s image will be set to the value from the factory .txt file again. Only JPG and PNG files should be allowed.

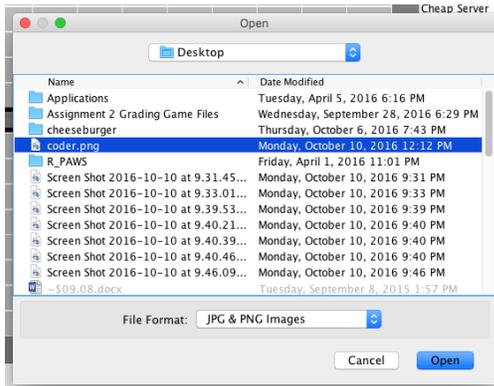


Figure 6.1 – Mac screenshot

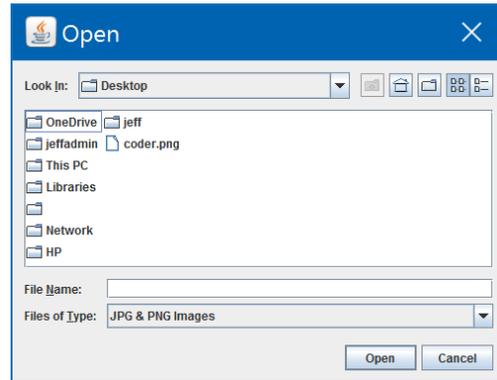


Figure 6.2 – Windows screenshot

Clicking “View Author” after changing the author name and author photo should now look like the following.



Figure 6.1 – Mac screenshot



Figure 6.2 – Windows screenshot

## Grading Rubric

\*Note: Part 1 will be tested with both the new formatting of `factory.txt` and the old formatting of `factory.txt`. If either works, you will receive points on Part 1.

<b>% of Final Grade</b>	<b>Criterion</b>
<b>Part 1 – 4.0%</b>	
0.25%	New "Factory Hierarchy" Menu Item Added
0.25%	Clicking Factory Hierarchy opens dialog with header "Factory Hierarchy"
0.50%	Typing R when Factory Hierarchy dialog is open refreshes
0.50%	Background is orange
0.50%	Code Check - data is not hard coded
1.00%	Clicking Refresh populates Factory Hierarchy window with new data
1.00%	GUI is similar to shown images: tree, relative size, locations, etc.
<b>Part 2 – 6.0%</b>	
0.50%	New "About the Author" menu item added
0.50%	New "View Author", "Set Author Name", and "Set Author Photo" menu items added
1.00%	Default "View Author" GUI is set up similar to pictured photo: relative size, locations, etc.
0.50%	Clicking "Set Author Name" opens up dialog that looks like pictured photo
0.25%	Cancelling "Set Author Name" does not change subsequent View Author dialogs
0.50%	Updating Author Name then clicking View Author changes the View Author Dialog
0.50%	Clicking "Set Author Photo" opens up dialog that looks like pictured photo
0.50%	"Set Author Photo" only allows JPG & PNG files
0.25%	Cancelling "Set Author Photo" does not change subsequent View Author dialogs
0.50%	Updating Author Photo then clicking View Author changes the View Author Dialog
1.00%	Code Check - Changing <code>factory.txt</code> author name and photo changes default View Author window