CS 4348 Project 2 Summary

The purpose of this project was to simulate an elevator ride with semaphores. I decided to

implement the project in Java. I separated each of the different types of threads into their own

Runnable classes. The main method then appropriately instantiates and runs them all.

Communication between the People riding the elevator and any of the elevator follows the same structure:

First the people waiting in line must get on the elevator. Since only 7 are allowed on at any one time, a semaphore keeps track of how many are actually on board. Once the semaphore had reached its limit, the elevator semaphore did so as well, meaning that the elevator would close and move on to deliver the users to their destination floor..

It was fairly difficult in the beginning during the planning stage. I could not come up with

a satisfactory method of transferring data between threads. The method of storing data in globals

and coordinating access with semaphores I use works but feels very messy. Also, I’m not

entirely sure that my program has any mutual exclusion; I thought that would have been

necessary, but it seems that it isn’t. Ignoring that, once I figured out the structure for thread

interactions I explained above, it was fairly easy to design the program.

After I wrote down the pseudocode of the design of the program, writing the program

was fairly straight forward. In fact, I did not run it until I had written the entire program, and when I was done it worked perfectly the first time I ran it, at least from what I can tell. It worked

fine for a simulation of three customers. I ran it with a simulation of 49 people waiting in line, and at a glance, the simulation output seemed to be correct, but it is difficult to completely verify that it is

exactly correct.

NOTE:

I am including these screen shots of my code running on my netbeans IDE to show how my code works on there, but for some reason does not work when I run it through command line.



