Margaret Reagan
Evie Kyritsis

16.35 - Final Assignment
May 15, 2015

Multi-Client Chat Application - Overview Report

System description

For our final project, we have developed a simple chat application that allows one to chat with anyone else with the system specifications outlined in the software requirements document. In this system, one would start running the ChatServer on the host computer. After the ChatServer has been started, a ChatClient has a limited amount of time (60 seconds) to connect to the ChatServer. Once at least one ChatClient has connected before this time limit, any other ChatClient can connect at any time. The ChatClient application can be run on any computer that is trying to connect to the ChatServer; all that is needed to connect is the ChatServer IP address and a username. Once connected, the user can chat with any other user connected to the ChatServer like they are in a chatroom.

The development of our system was done using the spiral method of software development. We first started off by discussing some very basic requirements, such as having multiple clients be able to connect to a remote server, and then started researching sockets and planning our code layout before moving onto writing the basic framework of our code, making it minimally functional. After writing the basic framework of our code, we moved back into writing the requirements for the first SRS deadline, after which we again wrote code. Our process has remained fairly spiral, with some overlap where one person was writing code and another person was writing requirements simultaneously. For coding our project, we would often work on different classes or components at the same time, or one of us would watch the other code as they looked up resources, examples, documentation, etc.

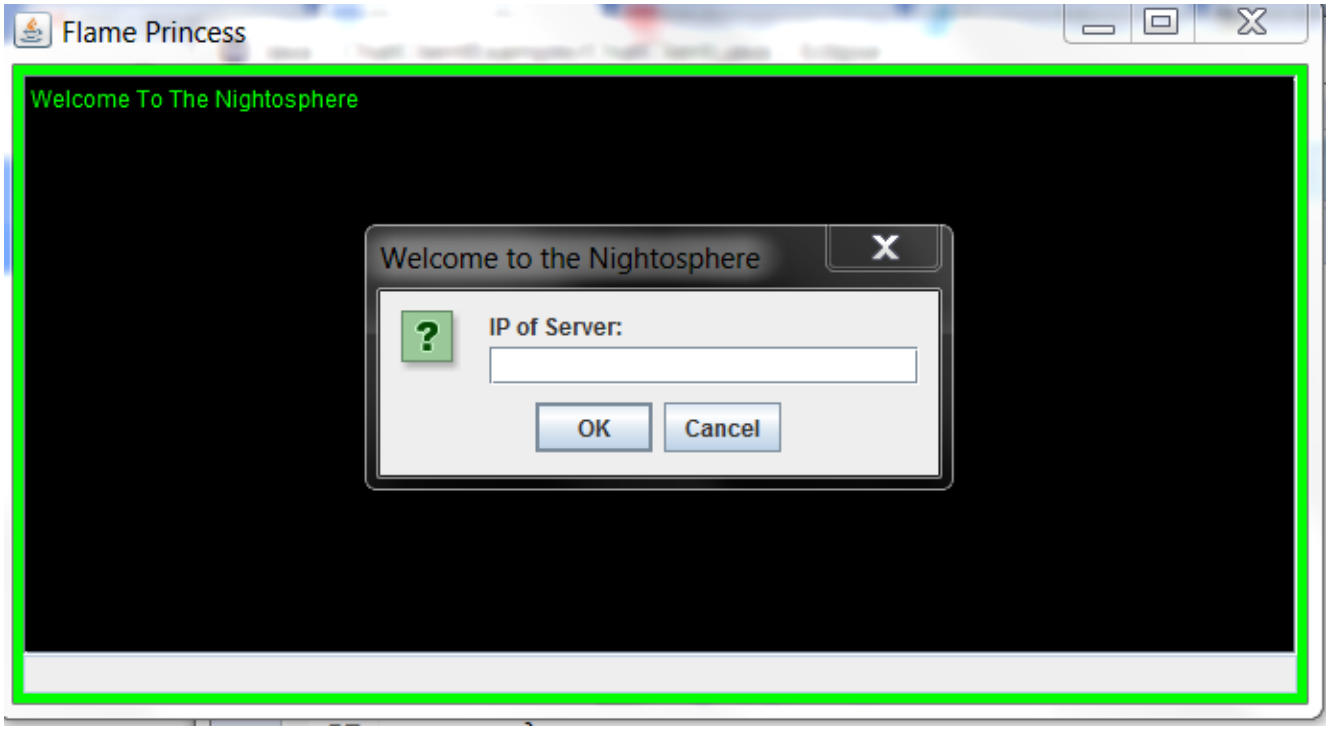
The end product is something we were very proud of. It does exactly what we want: it allows multiple users to talk to each other in a single place, and allows you to run the ChatServer remotely. If there was one thing we would have done differently, it would have been in the first stage to spend more time deliberating the structure of our code before moving into coding itself. After initially deciding on a structure, we spent quite a bit of time trying to make that structure work in code before we decided to go back and rethink the structure, modifying it to make something simpler. If given more time, we would have added a way to make writing long paragraphs less visually annoying-- we would have added a text wrapper or something of that nature. We also would have made the GUI prettier given more time-- unfortunately, figuring out a way to close the server socket took much longer than we expected, as did our first few stages of development in which we switched the structure of our code around after discovering our initial plan was too complicated.

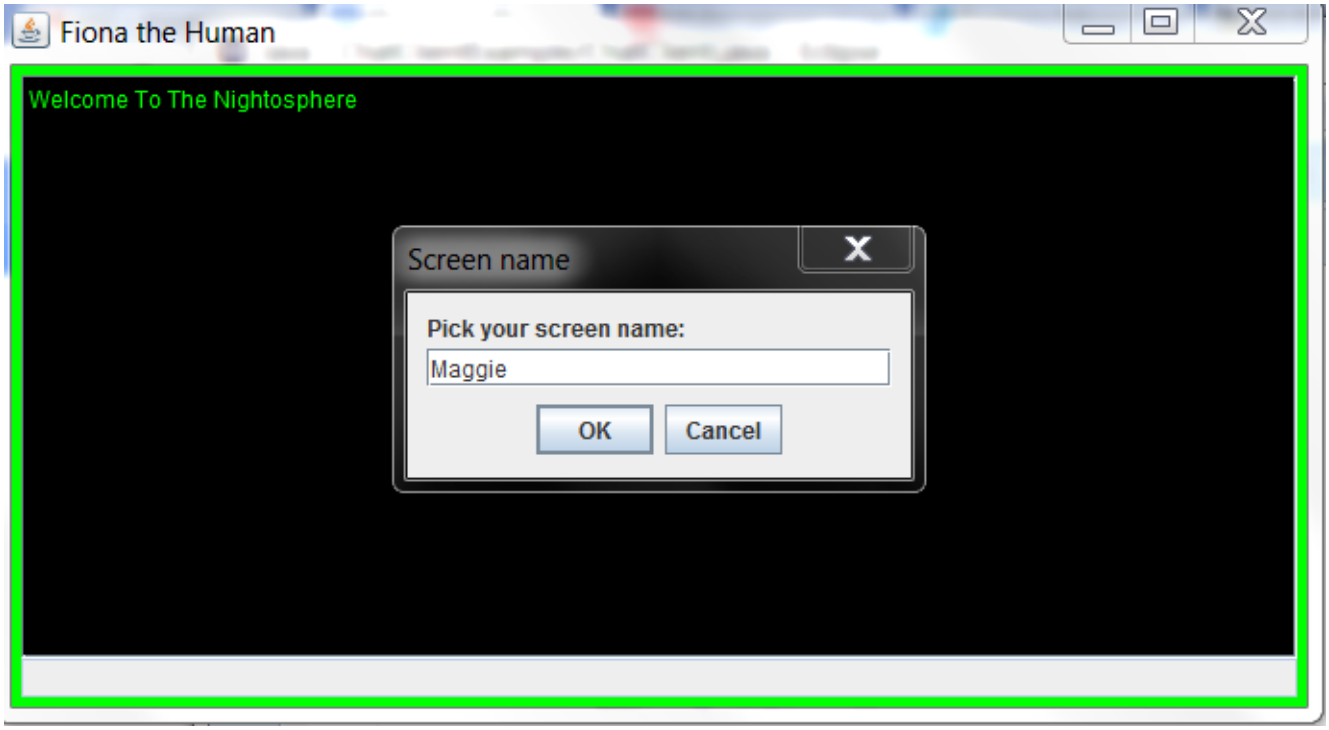
How to run our code

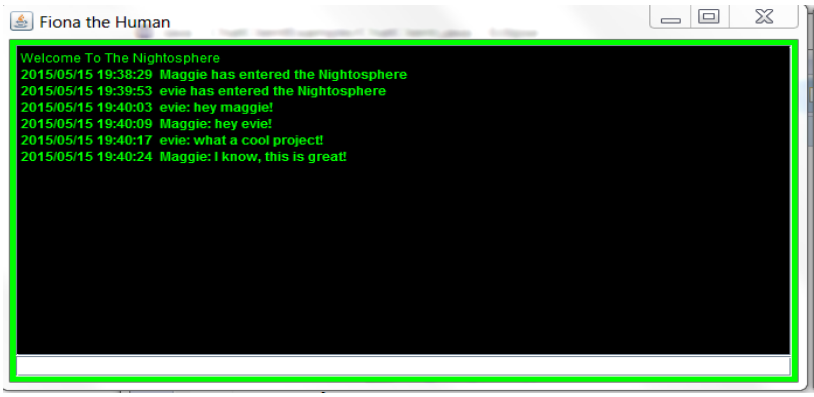
1.) Run ChatServer on the host computer of your choice (can even be the class remote server) with the command **java ChatServer**, or hitting “Run” in eclipse.
2.) Run ChatClient on your computer. When the ChatClient prompts for the IP address of the ChatServer, input the IP address printed out by the ChatServer on its host computer. If ChatServer is being run on the same device as ChatClient, you can enter “localhost” as the IP address.
    a.) Make sure to start ChatClient right after starting ChatServer, since the ChatServer has an initial timeout of 60 seconds before the first client connects.
3.) Enter a username when prompted.
4.) Chat!

Contingency: If for some reason you can’t use port 5451, the default socket port, in the code this can be changed via the LISTENER_PORT variable in ChatServer and the SERVER_PORT variable in ChatClient.

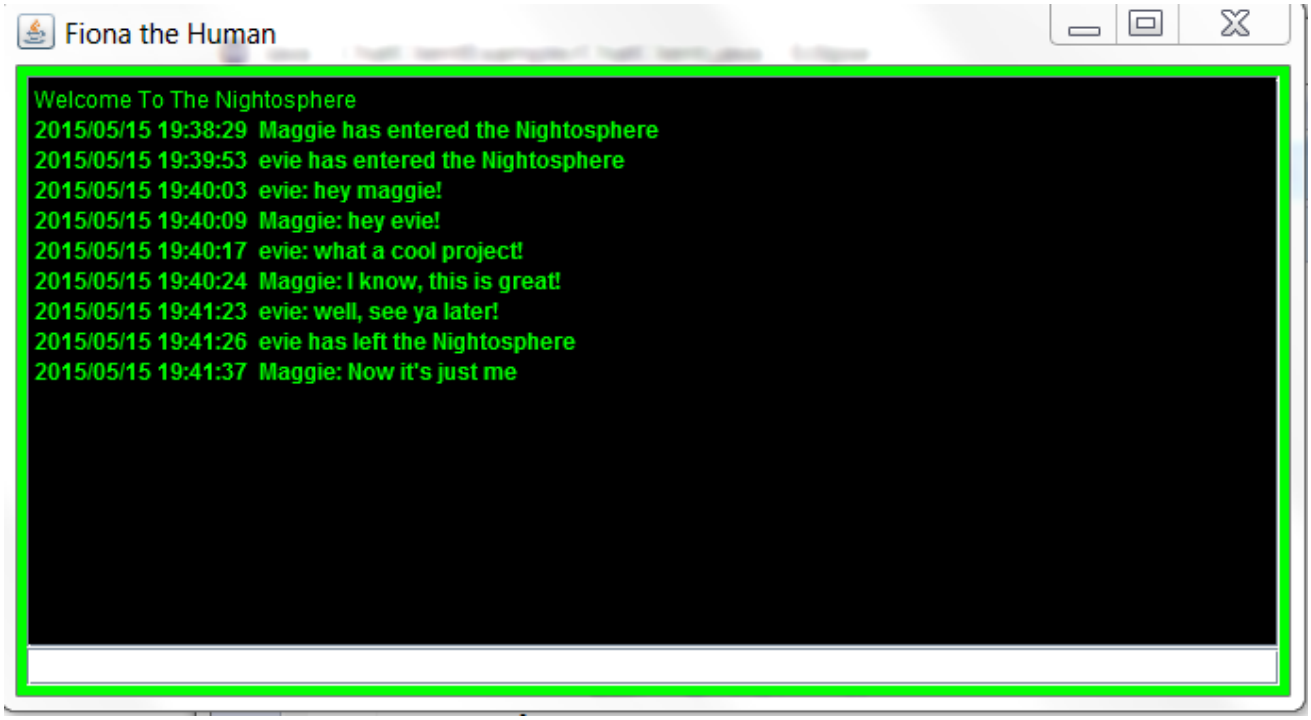
Screenshots




Fiona the Human
Welcome To The Nightosphere
Screen name
Pick your screen name:
Maggie
OK
Cancel


Fiona the Human
Welcome To The Nightosphere
2015/05/15 19:38:29 Maggie has entered the Nightosphere
2015/05/15 19:39:53 evie has entered the Nightosphere
2015/05/15 19:40:03 evie: hey maggie!
2015/05/15 19:40:09 Maggie: hey evie!
2015/05/15 19:40:17 evie: what a cool project!
2015/05/15 19:40:24 Maggie: I know, this is great!


Ice King
Welcome To The Nightosphere
2015/05/15 19:39:53 evie has entered the Nightosphere
2015/05/15 19:40:03 evie: hey maggie!
2015/05/15 19:40:09 Maggie: hey evie!
2015/05/15 19:40:17 evie: what a cool project!
2015/05/15 19:40:24 Maggie: I know, this is great!


Fiona the Human
Welcome To The Nightosphere
2015/05/15 19:38:29 Maggie has entered the Nightosphere
2015/05/15 19:39:53 evie has entered the Nightosphere
2015/05/15 19:40:03 evie: hey maggie!
2015/05/15 19:40:09 Maggie: hey evie!
2015/05/15 19:40:17 evie: what a cool project!
2015/05/15 19:40:24 Maggie: I know, this is great!
2015/05/15 19:41:23 evie: well, see ya later!
2015/05/15 19:41:26 evie has left the Nightosphere
2015/05/15 19:41:37 Maggie: Now it's just me