Louis Keith 10-13-20

Alex Cohen CS 242 Advanced Programming Concepts in Java

Project Part 2 Submission Report

This was a fairly straightforward part, though we had more issues than we probably should have had. At first there was an issue where nothing would connect under any circumstance, but that was found to be caused by a single missing line in a constructor. After that, we ran into an issue where the client would close its side of the connection without telling the server, and the server would remain in a loop that couldn’t end while trying to talk to a client that no longer existed. After we fixed that, we ran into the issue that we were on separate networks and needed to use a VPN client in order to connect to one another. Once all of that was resolved, the project began to work.

The only concern we have (and we will attend office hours on the morning of the 14th to talk about it) is that our fix for the “DONE” command would not work over the network but does on both of our machines when we run it locally with ourselves. I do not understand the reasoning for this, thus the need to come to office hours.

Here is the sample output over the network with Alex running the server and Louis running the client (we tested both from both ends):

java -jar ClackClient.jar Louis@25.81.201.32

Enter command: this is a message

25.81.201.32 sent a message with contents: this is a message

with type: 2

Enter command: DONE

25.81.201.32 sent a message with contents: DONE

with type: -1

Here is what the same exchange looks like from the server side:

java -jar ClackServer.jar

Waiting for a client to make connection...

Connection made, waiting for stuff...

We did not end up testing SENDFILE over the network (since didn’t think to add text files to the folders containing the jar files), but we confirmed that it works locally, and there is no reason to believe that it would not considering the message functionality does work. Below is some sample output of that:

Enter command: here is a test message

localhost sent a message with contents: here is a test message

with type: 2

Enter command: SENDFILE fileName1.txt

localhost sent a file: fileName1.txt

with contents: A digital computer can usually be regarded as consisting of three parts: (i) Store. (ii) Executive unit. (iii) Control. ...The executive unit is the part which carries out the various individual operations involved in a calculation. ...It is the duty of the control to see that...[the table of] instructions are obeyed correctly and in the right order. ...A typical instruction might say—"Add the number stored in position 6809 to that in 4302 and put the result back into the latter storage position." Needless to say it would not occur in the machine expressed in English. It would more likely be coded in a form such as 6809430217. Here 17 says which of various possible operations [add] is to be performed on the two numbers. ...It will be noticed that the instruction takes up 10 digits and so forms one packet of information...

with type: 3

Enter command: DONE

localhost sent a message with contents: DONE

with type: -1

The server side of this looks identical to the version over the network except it is missing the line to start the program (taken care of by IDE).