Zachary Golla

Project 2

Computer Networks

Design Document

Overall, one single ‘server.c’ file was created. The file creates a server socket, binds the socket to an address, and listens for incoming connections.

The incoming connection provides to the server an IP address from the agents, a port, and a command from the agents telling the server what the agent is trying to do.

The program accepts one command line argument from the using for a port being used.

There are 4 different commands that can be used:

Join

Leave

Log

List

The join command allows the agent to join the server if the server has space and/or the agent is not already part of the server.

The leave command allows the agent to leave the server unless it is not already part of the server.

The list command provides a list of currently connected agents to the server and the times at which they connected to the server.

Last, the log commands provides a log of all actions performed or requested to the server.

Two other functions were created in the ‘server.c’ file. LogAction which logs the action of the agent to the server and logReply which logs the reply to the client from the server.

The ‘agent.c’ file was supplied and not altered in anyway.

Command Line to test the code:

Create two different instances of shell or terminal.

In one compile and run the server.c file using:

cc server.c -o tcp\_server

Run the output using the command ./tcp\_server Port, where port is any port that you wish.

In the other compile and run the agent.c file using

cc agent.c – o tcp\_agent

Run the output using the command ./tcp\_agent IP Address Port Command, where IP address is the address of the server you want to connect to, the port is same port that you used for the server file, and command is the action you want the server to perform for the agent.

Overall, I believe the program compiles and runs properly and successfully.