Server/client Communication Test – Phase Two

**Protocol**

1. Upon initialization of the GUI, try pressing a Floor button to see that the server rejects the command when the password is bad.
2. Reconnect using a good password and press the same Floor button again to check that the command is received.
3. Push each button on the GUI and check that the message was received at the server side.
4. Get Reports button, check that each one sends back a correct, different report. Format for reports is below.
5. Check that the save button for saving Reports functions properly. I.e. It saves to a .log file the exact data that was in the text box.

**Data Report Format**

*Simple:*

[timestamp]Current Floor:  
[timestamp]Direction:  
[timestamp]Destination:   
[timestamp]Call Buttons:   
[timestamp]Car Buttons:

*Detailed: There will be 1 second intervals on the sensor distance timestamps.*

[timestamp]Current Floor:  
[timestamp]Direction:  
[timestamp]Destination:   
[timestamp]Call Buttons:   
[timestamp]Car Buttons:   
[timestamp]Sensor Distance:   
[timestamp]Sensor Distance:   
[timestamp]Sensor Distance:

**Test Results**

1. Server successfully rejects all commands unless a good password was sent. \*Note there is an exception that occurs often when the Client GUI is started and attempts to connect to the server with a bad password. It does not affect the operation of the software, but seems important to note.
2. Connection was successful and buttons were able to be sent. \*Note there is a double text issue when reconnecting. The last two responses from the server are displayed instead of just one. We do not use a buffer for incoming data, so the error is most likely an issue with program logic.
3. See Table below.

Command buttons:

|  |  |
| --- | --- |
| **Button** | **Received at Server?** |
| Floor 1 Up | Yes |
| Floor 2 Up | Yes |
| Floor 3 Up | Yes |
| Floor 1 Down | Yes |
| Floor 2 Down | Yes |
| Floor 3 Down | Yes |
| Floor 1 (Car) | Yes |
| Floor 2 (Car) | Yes |
| Floor 3 (Car) | Yes |
| E-Stop (Car) | Yes |
| Door Open (Car) | Yes |
| Door Close (Car) | Yes |

1. Both reports come back completely and correctly. However, they were delayed by one button click. This happened because of the way that the server software sent the reports. The GUI was set up to receive only one TCP message, but the server sent two. As a result, the GUI only grabbed one message from the TCP buffer at a time. In the future, we should be mindful of the TCP buffer. We should be more careful in how we send TCP messages.
2. Grabbed reports are saved without issue.