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COSC350-001

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Phase 4

1. Core Socket Functionality:

Final deliverables have been modified to clearly display when a connection is/ is not established, and messages can successfully be sent to and from both the client and server.

1. GUI Enhancement:

Final deliverables now include rich error messages, as well as responsive elements, and a real-time message display. Port number and IP address input must be validated before attempting to establish a Socket. Connection status indicators are color coded. Chat area is scrollable in the event that so many messages are sent.

Phase 5

1. Unit Testing:

All socket communications work as expected.

All GUI components work as expected.

All interaction between GUI and socket work as expected.

1. Integration Testing:

Entire system can successfully send messages between a client and server across separate devices, as well as on the same device using the feedback address.

1. Wireshark Analysis

This describes the captured packets in the attached file “COSC350 Wireshark Capture.pcapng”, which can be opened and inspected in Wireshark. The numbers represent the packet number, followed by a brief description of what occurred at that time. In the filter bar, type “tcp” + enter for best results. The host was running on 25.54.150.64. The client was running on 25.38.148.230. They were connected via a LogMeIn Hamachi virtual network.

89-91 on client connecting

169-171 on client sending message (“Hello World!”)

207-209 on client sending 2nd message

229-232 on client disconnecting

252 on client program closing

288-290 on new client instance connecting

351-353 on new client message (“This message from a new client!”)

384 on new client close

449-451 3rd client connects

495-497 on server sends message (“This message is from the server!”)

526-529 on server presses "Quit"

1. Task Assignment by member:

Nathan Ketterlinus: Phases 5.2, 5.3: Integration Testing, Wireshark analysis and Deliverables 4, 6, 7: Description of the Socket Implementation, Wireshark Screenshots and Analysis, and Task assignment

Preet Chodavadia: Phase 4.2: GUI Enhancement and final code review

Legendre Cooper: Phase 4.1: Core Socket Functionality

Owen Segala: Deliverable 5: Explanation of the API

Kevin Yomba: Phase 5.1: Unit Testing