

COL334 Assignment 2

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1 Design Decisions

1.1 Client Registration

1. The malformed username is checked at both the server side and the client side. The client side program checks the username while taking input from the user.
2. Checks for already existing usernames is not done and it is assumed all usernames are distinct
3. Closing of client programs has not been handled. If a client program exits, then its respective entries stored at the server is not modified and this may cause failure in sending future messages and might result in some unexpected behaviour.

1.2 Messaging Protocol

1. Whenever an unidentified header is received, the ERROR 103 Header Incomplete message is sent to client (or server) and the connection is closed. Similarly, on receiving ERROR 103 Header Incomplete message, the connection is immediately closed. In such cases, only a particular connection (either TOSEND or TORECV) is closed and the client immediately restarts the registration process for that connection by creating a new socket for the purpose.
2. Clients are allowed to send messages if they are currently only registered for TOSEND connection and also allowed to receive messages if they are registered for TORECV. However, the client program keeps trying to establish the other connection as well.
3. Maximum allowed size of the header is 1024. A buffer of capacity 1024 is used for reading the headers and it will not be able to parse headers larger than that.

1.3 Broadcast

1. Stop-and-wait protocol as described in Iteration 1 in Piazza has been implemented.
2. The user sending the broadcast also receives the broadcast message.