**Networks Assignment 2 – Report**

Improvements

* Adding NAMES command – adding the ability for the server to allow clients to use the name command to see what clients where currently connected to the channel was attempted, but unable to be successfully implemented without multiple messages being buffered and stalled. Letting the client call the /NAMES command would be a potential improvement.
* Adding the ability for client to use second or third nicknames to be called if their initial nickname gets rejected (due to duplicate nicknames) on server join would be a potential improvement. This would require the client to send over second and third option nicknames, and the server would have to store these and use them (if they themselves aren’t duplicates) if they initial nickname is a duplicate.
* Adding the ability for clients to create a new channel if they attempt to join one that doesn’t exist would be a potential improvement. Would have to slightly alter the way channels are stored by creating a list of channel objects; these objects would contain a unique identifier for the channel (channelID for example) and a list of clients connected to that channel. If a client attempts to join a new channel that doesn’t exist, the server would create a new channel object with a unique channelID that doesn’t conflict with other channels.
* Adding the ability for a client to change their current nickname would be a potential improvement. This would require simply checking that newly requested username does not conflict with the nicknames in the server currently, and then altering the nickname of the appropriate client object.