COMP 4958: Assignment 2

Information on submission and submission deadline will be announced. You will need to submit a zip file containing a folder named `chat`. Under `chat`, there should be one folder (`server`) for the server and another (`client`) for the two clients. Document your program, particularly its design & data structures using comments. You will need to set up and demonstrate your chat system as well as explain, and possibly answer questions about, your code. *If you are unable to explain the workings of your program satisfactorily, you may fail this assignment.*

For this assignment, you are asked to re-implement the chat system from assignment 1 in Go.

As before, the user connects to the system via TCP and issues commands, with the supported commands being:

- /NCK <nickname>
- /LST
- /MSG <recipients> <message>
- /GRP <groupname> <users>

These 4 commands have the same syntax and semantics as in assignment 1. Refer to the write-up of that assignment for details.

Unlike the Elixir version where the chat server and the proxy server are separate and there can be multiple proxy servers running, for the Go version, everything is in one process where the goroutines can share data.

Use as few "global" variables as possible. Your system should work with the Java or Elixir "dumb" client you implemented in assignment 1. Re-submit that client (suitably modified if necessary). In addition, you'll also need to implement a Go client. Note that the chat program needs to remove the relevant nickname when a client terminates.