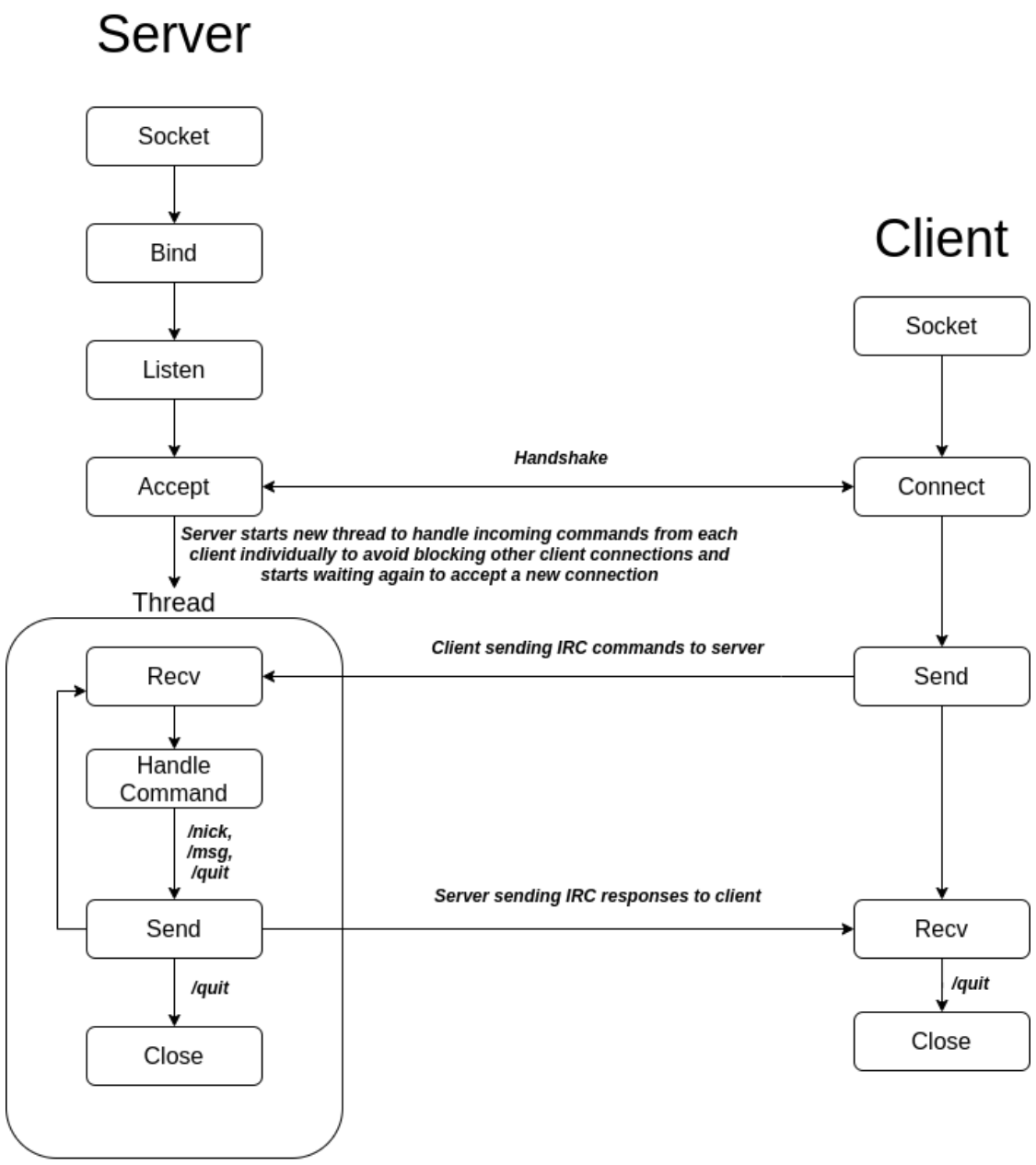
Comp 445 Assignment 2
Design Document

Karl-Joey Chami 27736657
Nicolas Zito 40029473

Design overview



Implementation Flow

- Server instance starts
    - Create a socket
    - Bind socket to a hostname (localhost in this case) and port number (specified in script parameters)
    - Socket starts listening for new connections constantly even if new connections are received
- Client instance starts
    - Create a socket
    - Connect socket to the server by providing server's hostname and port number
- Handshake
    - Handshake between server and client sockets to establish a connection
- Thread (Server-Side)
    - New thread starts that handles incoming commands from the client to the server
    - Server receives command
    - Command is parsed through regex to verify validity
    - Command is treated
        - NICK, USER, PRIVMSG, QUIT
        - NICK, USER : Create new user connection object and add user to a list of connected users
        - PRIVMSG : Broadcast messages to the list of connected users except sender
        - QUIT : Removes user from connected users list, closes client side socket (server socket stays on) and stops running thread.
        - Following IRC implementations and standards
    - Server sends a response to client
- Client receiving responses
    - Client receives server response, decodes and displays formatted message on the console
    - Waits for user input after receiving
- Any abrupt console interruption on the client side will clear the client connection and stop the thread on the server side