Algorithm explanation

These programs work by creating two queues to communicate back and forth with one another. The client creates a message queue and sends data over to the server, call this queue 1. Conversely, there exists another message queue between the client and the server where the server sends data the client, call this queue 2. Each process knows which command which is because there is an attribute in the message that denotes the type of command, 0 for input, 1 for search name, etc. This also works for the return message, which uses the same structure as the sending message. The program works like this

Administrator:

{setup connections for queue1 and queue2}

{while program is running}

{enter command}

{if command 1 scan for this data from keyboard}

{if command 2 do this…}

{for all commands do this}

{send message to server}

{for command 7 exit the while loop}

{listen for server response}

{if response message is type 1 do this…}

{do this for all types}

{exit, break connections}

Record Keeper:

{setup up connections for queue 1 and queue2}

{while program is running}

{listen for incoming messages}

{if response message is type 1 do this…}

{do this for all types}

{return messages using queue 2}

{exit, break connections}