

```
wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$ make
g++ -c server.cpp
g++ server.o -o server
g++ -c client.cpp
g++ client.o -o client
wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$ ./server
Sent acknowledgment to:
X: A
Sent acknowledgment to:
X: A
Y: B
Sent acknowledgment to:
X: A
Y: B
Z: C
wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$

wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$ ./client
Order Received:
X: A
Y: B
Order Received:
X: A
Y: B
X: Hello B
Y: Hello A
Order Received:
X: A
Y: B
Z: C
Z: Hello A & B
X: Hello C
Y: Hello C
Bye
wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$

wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$ ./client
Order Received:
X: A
Y: B
Order Received:
X: A
Y: B
X: Hello B
Y: Hello A
Z: C
Order Received:
X: A
Y: B
Z: C
Z: Hello A & B
X: Hello C
Y: Hello C
Bye
wzhangc1@q22-35:/import/linux/home1/wzhangc1/Desktop/CS428/PA2$
```

Design Choices:

Decided to make the chat client to be able to be used by up to 30 clients, which can be increased to even more.

The first message from a client is expected to be in the format “X: Name”, which will be used to print out messages.

Following messages also have to state the client name in the format “X: Message”, but this is not necessary.

The acknowledgement message was changed to accommodate multiple clients from the default to “Order Received: X:A Y:B Z:C”.

Failing Cases:

No major failing cases, the server code handles a lot of error cases.

Improving:

One improvement would be to replace the \n character for spaces to improve readability, but for simplicity and time constraints, I decided not to do it.