

CS232 Operating Systems
Assignment 04: Introduction to Socket Programming

Muhammad Shahrom Ali (ma03559) Fatima Nadeem (fn03768)

Fall 2019

1 Client

2 Server

3 Makefile

```
file = gp05_A4

all: *.c *.h
    make client
    make server

client: client.c
    gcc client* -l pthread -o client.comp

server: server.c
    gcc server* -l pthread -o server.comp

wrap:
    make cleantex
    mv -i -f ./*.tar.gz ../endgame_old.tar.gz
    tar -zcvf go05_A4.tar.gz ./*.c ./*.h ./Makefile
    #add pdf file aswell    ./go05_A4.pdf

assign4: $(file).pdf

maketex : assign4

$(file).pdf: *.tex
    pdflatex $(file)
    pdflatex $(file)
    bibtex $(file).aux
    pdflatex $(file)
    pdflatex $(file)

cleantex:
    rm -f *.aux $(file).log $(file).lof $(file).toc $(file).bbl $(file).blg $(file).pdf

clear:
    rm -f *.comp
```

4 Comments

4.1 Deficiencies

1. **Indicated their group in the excel sheet before submission deadline** - 10 marks
2. **Files named correctly** - 10 marks
3. **PDF submitted correctly** - 10 marks
4. **Codes compile without errors and warnings** - 10 marks
5. **Client communicates with server** - 10 marks
6. **/list command working correctly** - 10 marks
7. **/msg command working correctly** - 10 marks
8. **/quit command working correctly** - 10 marks
9. **linked list implementation is thread safe** - 10 marks
10. **no memory leaks** - 10 marks

4.2 Credits

1. Credits to Muhammad Shahzain for the motivation to do the assignment
2. Credits for L^AT_EX colored font to

<https://tex.stackexchange.com/questions/308087/command-for-both-bold-and-colored-text>

3. Dr. Musabbir Abdul Majeed's group project 4 zip for CS 340/MATH 321, support with makefiles.

4.3 General Comments

Enjoyed learning about sockets, considering enrolling in the networking course next year. Really wish had more time for the assignment. [and a live-in campus but we can't always get what we want :(]