Subject: Some suggestions about project2: 2020 Fall - C S-484-M01-COMPUTER

**NETWORKS I** 

From: 2020 Fall - C S-484-M01-COMPUTER NETWORKS I < notifications@instructure.com>

**Date:** 12/11/20, 3:38 PM **To:** cgros@nmsu.edu

Hi all,

Hope all of you are doing well in the final. Here are some tips for project 2.

In the project, now you need to implement a chat app between two users.

- 1, For socket usage, you can refer to the previous uploaded slides, socket programing via C/C++.
- 2, To implement the app, you may start with building client-and-server programs. The server program listens to the socket connection and prints what it receives, while the client initiates the connection and sends data to the server.

Some header files you may need:

#include <stdio.h>

#include <sys/socket.h>

#include <stdlib.h>

#include <netinet/in.h>

- 3, Later, you can implement parallel reads and writes from the clients and servers via pthread. You can also use pthread to allow more users involving in the chat.
- 4, When you initiate the socket, you need to define a port number. The common known port number is from 0~1024. To avoid confilicts, you should select a port with a larger number. Otherwise, you may get binding errors. If you get error message, 'bind failed: address already in use', you may change to a different port number, or terminate the process using that port, but be careful.
- 5, When you try to connect computers via public IP address over the Internet, you need to first check its reachability (e.g., telnet IP PORT). A computer may block messages from certain ports or has been protected by the firewall.

Let me know if you have any questions.

Best,

Tao

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