ICS (II) NetworkLab_(your final lab for this semester)

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DDL： 2019-1-3 @ 23: 59

Requirements:

1. A code skeleton is offered to aid you finish this lab. Any new functions can be added to the skeleton as you wish. It is also OK if you want to start from scratch.
2. Fulfill the functions of a chatroom application (for multiple members) based on the server-client model.
3. Make sure after compilation, you have a runnable executable on ubuntu16.04.
4. The code skeleton includes “csapp.h(c)”. But you are not allowed to use “csapp.h(c)”. Instead, you may learn from it and write your own mini-lib.

The following are asked of you:

(i) use the idea of RIO (robust I/O) and multi-thread programming. (40’)

(ii) use protocol-independent code (at least make sure it is compatible with IPV6). (15’)

(iii) make sure you show the members’ chat-names & each message’s sent time on the screen. (10’)

(iv) one may enter the chatroom if and only if he/she is invited. This can be realized by using a passcode to enter the chatroom. (The passcode should be obtained dynamically by a member who’s already in the chatroom and shared to an outsider, who then apply the code to enter the chatroom through passcode validation). (20’)

(v) you are not required to save anything to disk but you are encouraged to do so.

[Doing so won’t give you extra credit!]

(vi) you are not required to implement a GUI but you are encouraged to do so.

[Doing so won’t give you extra credit!]

(vii) give a detailed documentation. (15’)

The Network_Lab should be uploaded with FTP. You should tar your working directory, which should contain:

1. a PDF form documentation of your lab implementation(should contain screenshots of your run-time demo).
2. Source code in a sub-directory (makefile is needed).

And upload the tar to FTP before DDL.

Any upload after DDL will have a maximum of 80/100.