Design your chatting app GUI including basic input and output functions.

The goal of homework 3 is to design and implement the chatting app with basic input and out functions.

Logging in Accounts

OOutput

Current time

Elapsed time

Oinput

[Guide line]

No need to use fork(), thread synchronization, and etc.

Modify “chat.c” I showed this week as the follwoings:

[1] Use ncurses to divide the main screen into 4 sub-windows

[2] Each sub-windows has box line.

* Terminal size is 80 X 24
* Output window size is 60 X 20
* Input window size is 60 X 4
* “Logging in Accounts” window size is 20 X 20
* “Time” window size is 20 X 4

[3] Display the current time and elapsed time (time will be refreshed in every 500ms)

[4] When a person logs in, his/her account will be appeared in the “Logging in Accounts” window.

When he/she type “/bye”, his/her account will be disappeared in the “Logging in Accounts” window.

(Question: do we need another shared memory?)

[5] Try to do your best to apply your output produced in Homework#2 to this homework!!

[6] How to test your app:

* Open the first terminal and run chat Jico to write text messages (Actually, you don’t need to create a new user account “Jico”. It is enough to use the terminal where you logged in)
* Open the second terminal and run chat Izzy to write text messages
* Open the third terminal and run chat GD to write text messages
* Chat sequences are randomly and one person by one person. We do not consider that three persons chat at the same time. (We need threads. However, we do not need thread synchronization, fork, and etc for this work.)

**=====================================================================**

**1. Put your program source as here (Do not put the screen shot of your source code!! If you insist, you will get zero point)**

**2. You must show the building result after compiling and linking your source codes. You must show no warnings and errors (Use gcc -Wall option).**

**(Put a screen shot of your C debugging output)**

**3. Put a screen shot of output generated by your program. Your output screen shot must be readable for me to verify your chat program.**