CS 470/570 Fall 2007 Programming assignment 1 – Due Sept 19 2007

Based on the sockets programming discussion in Section 1.4 of the text, build a two-PC chat program. Your program will allow a user on either PC to type text and will send it over the network to the other user's PC for display. Your program must allow a user on either PC to send. Your program will run in the CS department PC lab under Windows XP. You may program in C, C++, or Java.

You are to deliver a (commented) code listing, a CD with the source and binary, and any documentation you feel is necessary for me to understand your approach. I will select some students at random to demonstrate the operation of their program.

Hints and other information:

The text provides most of what you need to know about socket programming. If you'd like more, there are numerous tutorials on the web. Here's one for Java: http://www.javaworld.com/javaworld/jw-12-1996/jw-12-sockets.html.

Note that the text's examples are written for Unix/Linux sockets implementations. For windows, you will use the MS WinSock sockets implementation. You'll find Winsock documentation at MSDN (http://msdn2.microsoft.com/en-us/library/ms740673.aspx).

You may copy code from elsewhere as long as you give credit in the comments. Refer to my policy on plagiarism (handed out with the syllabus). Note that the midterms and final may include questions about sockets programming, so you should make sure you understand what is going on.

I expect you to know and follow good programming practices. Written documentation is not required for this assignment, but all code should be thoroughly commented internally.

Your score on this assignment will include consideration of the correctness of your code, readability of the code, quality of internal documentation (commenting), and quality of other documentation, if any. While it is technically possible to have a program that does not work and still get points on this assignment, bear in mind that later programming assignments will be built on this code, so you want to make sure it works correctly.

While it is possible to build the application using a non-threaded approach, many students feel that it is easier to use a threaded design. If you know threaded programming, I encourage you to build a threaded application.