CSc 422 — Final Project, Spring 2005

Due Dates:
Project Proposal: Tuesday, April 19
Project Demonstration: May 9, 10, or 11 *or*
Paper: May 12 at 9:00 AM

Grading Weight: 60 points

For your final project, you are to do one of the following. The choice of topic is purposely unspecified; pick something that *you* think would be interesting and educational.

- Design and implement a distributed program that makes creative use of several processes. You may use Java, MPD, C with a message passing library (sockets or MPI), or some other language. *Your program must have both client/server and peer-to-peer interactions.*
- Write a paper that analyzes some aspect of concurrent programming. For example, you could study one of the topics in the textbook that was not covered in class, such as a type of algorithm, a different programming language, or a different application. The Historical Notes and References at the end of each chapter give pointers to additional information. Some of the Exercises also introduce new topics.

Exercise 7.26 of the text gives several ideas for final projects. Many of the other exercises in Parts 2 or 3 of the text could also serve as the starting point for a project. Or you could take a modern application such as Google or music swapping and create a prototype that mimics some of the functionality of the application. You can find a few samples from prior years in `/home/cs522/SampleProjects`, but be forewarned that these were quite elaborate projects.

You may work on your own or with one other classmate; two person groups are expected to undertake a more ambitious project. For example, a simple interface would be fine for a single-person project, but I expect two people to have a nice interface as well as a solid system.

By April 19 email or give me a brief (one page) description of what you propose to do. If you are going to do a programming project, be sure to say how you will employ interacting peers. I will give you feedback on your proposal by April 21.

If you do a programming project, I want to see a demonstration of your program no later than Wednesday, May 11. We will do signups for project demos at the end of the last class period on May 3. *To the demonstration bring:*

- A written summary (2-3 pages) of your project *and* an assessment of what you learned.
- A one-page block diagram showing the structure of your program.
- A well-commented program listing.

If you write a paper, it should be about 10-15 pages in length, be your own original writing, and contain a good reference list of the papers, books, and Web sites that you consulted in writing the paper. If you describe a programming language or tool that is available (and hopefully it is), then I expect that you will use the language or tool and append sample programs to your paper.