CMSI 182
INTRODUCTION TO COMPUTER SCIENCE
Fall 2007

Midterm Review Sheet

The midterm will take place as scheduled, on October 4. It will be open book, notes, and handouts, but not open computer. This guide should help you to prepare for it properly.

Covered Material

The midterm covers the non-optional sections of Chapters 0 to 3 in the Brookshear textbook. Coverage also includes all handouts and sample code that have been distributed in support of this content, plus prominent material from class discussions and activities.

Sample Tasks and Questions

The assignments so far generally reflect the same types of tasks and questions that are fair game for the midterm. In addition, there will also be questions meant to determine your overall conceptual understanding of the ideas we've discussed thus far, such as:

- The big picture view of computer science — what it is about, what it studies, what its concerns are, and what its [current] tools are
- How computers represent information — the basis for binary (1/0) representation, how different types of information can be represented in binary, specific examples of such representations (hexadecimal, numbers, text)
- Basic parts of a computer — what they are, what they do, how they are frequently "measured"
- Basic operation within a computer — the core activities performed by modern computers, the stored-program model, the fetch-decode-execute cycle, main memory and mass storage, input/output devices
- The general concept of a "machine" — how to think of different machines in terms of their parts, fundamental activities, and the information they need to do their work
- The history and purpose of operating systems — how they evolved, what their primary functions are, how they start up a computer
- Core operating system concepts: processes, scheduling, what is common across all operating systems, where operating systems tend to differ, resources, interrupts, security
- Ethical/philosophical considerations relating to any of the topics covered so far

Questions concerning these topics may range from brief explanations of certain ideas to applications of these ideas to real-world problems and/or situations.