COLBY COLLEGE
Computer Science Department

CS231 **Allen B. Downey**
Fall 1999

Syllabus

- Professor: Allen B. Downey (downey@colby.edu)
- Office: Mudd 417, x3672
- Class time: MWF 9:00am to 9:50am, Mudd 405.
- Textbook: Standish, *Data Structures in Java*, Addison-Wesley.
- I also recommend the following textbooks as auxiliary material: Waite and Lafore, *Data Structures and Algorithms in Java*, Waite Group Press; Goodrich and Tamassia, *Data Structures and Algorithms in Java*, John Wiley and Sons; Bailey, *Java Structure: Data Structures for the Principled Programmer*. All (?) are available from the science library.
- Mailing list: the mailing list for the class is cs231@colby.edu As soon as possible, you should send email to majordomo@colby.edu with the following text in the body of the message: subscribe cs231.

  You should receive confirmation that you have been added to the list. I will use the mailing list to distribute some class information, especially last-minute corrections and things like that. I also encourage students to use the mailing list to contact each other, ask questions, make suggestions, or anything else, as long as it pertains to the course.
- Class-related email: I don't use a Macintosh or a Windows NT machine, so please don't send me attached documents in formats other than plain text.
- Web page: The handouts that I produce (as opposed to the ones I photocopy from other sources) will be available from the class web page. The URL is http://rocky.colby.edu/cs231

1 Coursework

Work in this class will include readings from the textbook and from additional sources I provide, weekly programming assignments, two one-hour exams, a final exam, and in-class activities including collaborative exercises and written quizzes.

The total course load is intended to be 12 hours per week (including class time); the load should be spread evenly across the semester.

- Grading: Final grades are determined by the weighted average of exam scores (15% for the two one-hour exams, 30% for the final), quizzes (10%) and homeworks (30%). I reserve the right to adjust final grades based on in-class participation and other factors.

- Exams: The two midterm exams are scheduled for Wednesday 6 October and Wednesday 10 November. The final exam is scheduled for exam slot 2. If you cannot attend one of the exams, please let me know as soon as possible so that we can make arrangements.

  If you miss a midterm for an extremely legitimate reason, your final grade will be based on the other exams. If you miss a midterm without a legitimate reason, you will receive a zero. If you miss two midterms or the final for any reason, you cannot pass the class.

- Assignments: We will have weekly assignments that are meant to give you an opportunity to apply and practice the material we cover in lecture. You will get the most benefit from these assignments if you work on them alone, although you are of course free to discuss the problems with other students and me.

In any class like this, it is difficult to draw a sharp line between accceptable and unacceptable forms of collaboration. Here are some guidelines that might help:

1. In general, it is acceptable to talk about programs using natural languages, but not acceptable to use any formal language, and especially not Java. In other words, you should not be looking at other people's code or showing them yours.

2. It is never acceptable to present someone else's work as if it were your own. Unless stated otherwise, I will assume that all work you hand in is yours and yours alone. If you work with another student, you must acknowledge that student's contribution in writing on your assignment. If you get help from me or a TA that constitutes a significant part of the assignment, you should acknowledge that, too. If you are not sure, err on the side of caution.

3. Copying other people's code is a serious violation and may be regarded as a disciplinary matter. It is sometimes tempting to make superficial changes to copied code to disguise it, but I should warn you that (1) similarity between programs is often more obvious than you think, and (2) any attempt to disguise cheating will be regarded as an admission of guilt, and will be treated as a more serious offense, since it compounds plagiarism with further deceit.

2 Approximate calendar of topics

We will be following the order of presentation in the book for the most part, covering about one topic per week.

Topic 0: Review of Java.
Topic 1: Object-oriented programming.
Topic 2: Linked data representations.
Topic 3: Recursion.
Topic 4: Stacks.
Topic 5: Queues.
Topic 6: Lists and Strings.
Topic 7: Memory allocation.
Topic 8: Trees and graphs.
Topic 9: Hashing.
Topic 10: Sorting.
Topic 11: Huffman code.