$22\mathbf{C}:031$ ($CS:3310:0001$) **Algorithms**
Homework 7

This homework is based on our discussions of Randomized from Chapter 13 of the text and poly-time reductions and NP-completeness from Chapter 8. Each question is worth 10 points.

- Exercise 3 of Chapter 13, after modifying the question as follows:

    1. In part (a), replace the last sentence "Also, give a formula ..." with: Also, give a formula (in terms of d, the number of conflicts per process) for the probability that a given process is in S.

    2. In part (b), replace the last two sentences ("In terms of ... this optimal value.") with: Give a value for p (in terms of d) so that the probability that a given process is in S is as large as possible.

- Exercise 9 of Chapter 13.

- Exercise 1 of Chapter 8.

- Exercise 6 of Chapter 8.

- Exercise 14 of Chapter 8.

- Exercise 20 of Chapter 8.

The homework is due Tuesday, May 3, in class; if you can't make it to class on that day, just make sure you get it to me by that time.