

# Computer Science 2300: Homework 6

Due: April 28, 2011

**Note:** Please use rigorous, formal arguments. If you are asked to provide an algorithm then you may either write pseudocode similar to the pseudocode in the DPV text, or provide a clear description in English. You **must** also provide an argument for why the algorithm is correct and an analysis of the running time. We encourage you to collaborate with other students, while respecting the collaboration policy. Please write the names of all the other students you collaborated with on the homework.

1. (10 points) DPV Problem 6.4 (the dict problem)
2. (15 points, 5 for part (a) and 10 for part (b)) DPV Problem 6.13 (the card dealer problem)
3. (5 points) DPV Problem 6.17 (making change)
4. (15 points) DPV Problem 6.24 (time and space complexity of DP)
5. (5 points) DPV Problem 6.26 (sequence alignment)
6. (15 points) DPV Problem 6.27 (gap penalties)