Computer Science 2300: Homework 4

Due: February 26, 2009

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 (similar to the description of the permutation algorithm given in the Homework 1 handout). 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. **Hardcopies are required by submission time. E-mailed versions will not be accepted.**

1. (5 points) DPV Problem 4.1 (page 120).
2. (5 points) DPV Problem 4.2 (page 120).
3. (10 points) DPV Problem 4.13 (pages 121-122).
4. (10 points) DPV Problem 4.19 (page 124).
5. (10 points) DPV Problem 4.21 (page 125).
6. (10 points) CLRS Problem 24.3-4 (page 600).