

Computer Science 2300: Homework 3

Due: March 1, 2012

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. 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. (5 points) DPV Problem 3.2(b) (DFS on a particular graph)
2. (15 points) DPV Problem 3.4 (i) (parts a, b, c, d, but for Graph (i) only)
3. (10 points) DPV Problem 3.15 (one way streets in Computopia)
4. (10 points) DPV Problem 3.23 (number of different directed paths)