

Comp 7712 (Algorithms/Problem Solving) Fall 2018. Homework 4.

Submissions: This assignment is due on the 1st of November, 2018. Please note:

1. Each student must submit his or her own assignment.
2. Solutions should preferably be typed in Latex, MSWord or other such word processing software, or printed clearly. In either case, submit a hard copy of your solution.
3. You must write your name and UUID clearly on your submitted assignment.
4. **Staple the pages together.** Write your name and UUID on top of each page.
5. It is preferable that you submit solutions to me in class, but it is ok if you can't do that - just make sure to submit solutions by end of day (i.e., 11:59 PM) by sliding it under my office door (DH 307).

Academic Integrity: You are encouraged to work in groups, but everyone must write out their own solutions. Absolutely no word to word copying is allowed. **If you have worked with other students on the assignment or referred to external sources, please mention all names and sources on your assignment.**

Partial solutions: Document your efforts at solving a problem even if you cannot solve it. Write why your approach failed.

DPV \equiv Dasgupta-Papadimitriou-Vazirani Book. **JE** \equiv Jeff Erickson's notes

For all proposed algorithms, unless we have seen that in class or it is an algorithm from the textbook, give a proof why it is correct or runs in the desired time bound, for full points.

Problem 1[20 pts]: Problem 5.20 from DPV.

Problem 2[20 pts]: Problem 5.21 from DPV.

Problem 3[20 pts]: Problem 5.22 from DPV

Problem 4[20 pts]: Problem 5.28 from DPV.

Problem 5[20 pts]: Problem 5.31 from DPV.