

COMP 550-001. Fall 2016

Homework assignment 3

Assigned: October 10th

Due: October 19th in class

Honor pledge. When submitting your work, please include a signed honor pledge statement: *I certify that no unauthorized assistance has been received or given in the completion of this work.* As stated in the course syllabus, you are encouraged to work on assignments in groups, but must (i) must explicitly list all your collaborators, and (ii) construct and write up your final solutions independently. **Assignments without the list of collaborators (“none”, if you worked independently) and the signed honor pledge will not be graded.**

Numbered questions are from the assigned textbook (CLRS 3/E):

1. Exercise 9.3-8
2. Exercise 8.2-4
3. Exercise 8.3-4
4. Problem 8-3 (a)
5. Implement the dynamic programming algorithm for solving the egg-drop problem discussed in class. Your algorithm should accept as input the number of floors in the building n and the number of available eggs e , and determine (i) the strategy you should adopt to minimize the number egg drops it takes to find the lowest-numbered floor from which a dropped egg breaks (and the worst case for the number of drops it will take);and (ii) an actual sequence of egg-drops that achieves this worst case.