CIS 502: Algorithms

Spring 2008

Homework 1: Due Thu Feb 7^{th} at 5pm. Submit Hw at Levine 502, you can also submit earlier. Late submissions (accepted till 5pm, 8^{th}) will lose 25%. The solution will be up by 5pm, 8^{th} (on Blackboard website) and no further submissions will be accepted. [1]

Remember, the answered have to typed up, you can use any software, and you need not copy the questions.

Problem 1: Question 4, pg 23-24.

Problem 2: Question 5, pg 24-25.

Problem 3: Question 6, pg 25-26.

Problem 4: Question 8, pg 27-28.

Problem 5: Question 4, pg 107-108.

Problem 6: Question 11, Pg 111-112.

Problem 7: Given a **directed** graph G and a vertex s we wish to find the smallest cycle containing s. Give an $O(m+n)$ time algorithm for the problem.

[1] Recall that each of you can discuss the problems with *exactly one other person* but have to write the solutions on your own. Further you have to mention your collaborator. You are expected to think about the problems. You **cannot** use newsgroup or internet resources to solve the problems. If the problem is solved in any of the books suggested in class and your solution is modeled after such, you need to add reference to it.