

CS 332: Algorithms
Homework #4

Assigned: Thursday, November 16

Due: Tuesday, November 28 **at 2 PM** (i.e., beginning of class. After the lecture starts assignments will be considered 1 day late)

Please turn in the assignments to Ginny or Brenda at the Computer Science front desk.

1. Exercise 15-3.7. Additional (perhaps obvious) hint: use an interval tree. This is a good example of a problem in the field of *computational geometry*.
2. Exercise 24.2-4.
3. Exercise 24.2-5. Ignore the case where edge weights range from 1 to $|V|$, just focus on the case when edge weights run from 1 to a constant W .
4. Exercise 23.4-5. Give a detailed answer, with pseudocode, analysis of running time, a proof that all vertices are output when there are no cycles, and a description and proof of what happens when a cycle exists.