

# CS 362, Algorithms & Data Structures, Spring 2022

## Homework 4

Due Sunday, May 1, 2022, 11:59pm

**General Instructions:** There are 3 exercises, worth a total of 50 points. Start early, so you will have time to get help if you need it. A general hint is to go back through the problems we have been discussing in Chapter 8, and try to identify one that is similar to the problem being asked about in the exercise. Pinpointing exactly how it is similar may help you get started.

**Note:**

**Start each problem on a new page!** It is preferable if your solution is typeset using a program such as Latex (for instance, using Overleaf), or any other document preparation software with good math support. However, a scanned handwritten solution is acceptable, as long as it is legible.

Include a cover sheet with your name (and partner's name, if applicable), but do not put your names on the problem solution pages.

Submit your solution on GradeScope, using its interface to tell it which pages correspond to each problem.

### Exercise 1

(20 points) Solve Exercise 8.1 from Kleinberg & Tardos. (Hardness of Interval Scheduling?)

### Exercise 2

(10 points) Solve Exercise 8.5 from Kleinberg & Tardos. (Hitting Set is NP-Complete)

### Exercise 3

(20 points) Solve Exercise 8.19 from Kleinberg & Tardos. (Loading Hazardous Materials: 2 Versions)