

DM551 – Fall 2023 – Weekly Note 8

Stuff covered in week 44

We covered

- Rosen 8.1-8.2. Covered by a video lecture.
- Kleinberg and Tardos 13.5
- Kleinberg and Tardos 13.9. Covered by video lecture (already in week 41)
- Cormen 7.4.2 on Quicksort
- Cormen 26.1-26.2 on flows. You may also use Bang-Jensen and Gutin Chapter 3, sections 3.1-3.6.1. Note that these pages contain more material than we will cover so if you have access to Cormen, you should use that is the primary source.
- We postponed the midterm evaluation to Week 45

Lecture in week 45

We will continue on flows and cover the rest of Cormen 26.1-26.3.

Exercises in week 45

- You will discuss selected parts of the first set of exam problems (only those where many had issues. I will upload my solutions later this week).
- Kleinberg and Tardós Problem 7 page 787.
- DM538 Exam 2015 Problem 1
- DM528 Exam 2009 Problem 1
- Solve the linear recurrence equation $a_n = 4a_{n-1} - 4a_{n-2}$ with initial conditions $a_0 = 1, a_1 = 4$
- Solve the linear recurrence equation $a_n = 4a_{n-1} - 4a_{n-2} + n^2$ with initial conditions $a_0 = 22, a_1 = 43$.