Institut for Matematik & Datalogi
Odense Universitet

February 27, 2014
JBJ

Randomized Algorithms DM839) — Ugeseddel 5

Stuff covered in week 9

- Sections 13.10 and 13.11 from the Book Algorithm Design by Kleinberg and Tardos, Addison-Wesley.
- Exercises 4.8 (last part) and 4.20 in MU
- Sections 5.1-5.3 in MU.
- You should know the results in Section 5.4, but the proofs are not pensum.

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Classes March 3, 2014

- Sections 5.5 and 5.6 in MU. It is important that you read these in advance.
- Excercises 4.1 and the first part of 4.8 in MU.

Classes March 5, 2014

- First part of MU Chapter 6.

Exercises March 7, 2014

- Consider the following process: we start with a graph on $2n$ vertices and no edges and then we throw in n distinct edges (no two edges are the same, but two different edges may share one end-vertex) at random. Assume n is large and calculate the probability of the following events:
  - No two edges share a vertex.
  - Exactly n vertices are incident with an edge.

  Hint: use an anology to the balls in bins problem.
- MU Exercise 5.16
- MU Excercise 5.21
- MU Exercise 5.25