Final Review

COT5405, Fall 2017

Chapter 6 (Dynamic-Programming.ppt): 2, 9, 13-15, 20, 21, 25, 26, 28, 35, 37, 44, 45.

Chapter 7 (Maxflow.ppt): 3-16, 21-24, 27

Chapter 7 (Demo-maxflow.ppt): all slides

Chapter 7 (maxflow-application.ppt): 5-8, 16-18, 23-26, 28, 29, …

Chapter 8 (Intractability.ppt): 6-8

Chapter 8 (NP-Complete.ppt): 3, 5-7, 9, 10, 13, 15, 18, 19

Chapter 11 (Approx-algo.ppt): 2, 5, 8, 12, 42, 44

Chapter 13 (Randomized.ppt): 2

Guidelines:

- Dynamic programming: make observations, how to define the OPT() with required input, how to use OPT() in the recurrence formula, design DP program based on the recurrence formula.
- Maxflow algorithm: review the demo, how to map problems into the maxflow problem (i.e., maxflow formulation), how to translate the results back (i.e., prove their equivalence)
- NP problems: how to classify them, how to show a problem is NP, NP hard, NP complete?
- Review all homework problems.