

22C : 031 (CS : 3310 : 0001) Algorithms  
Homework 5

This homework is based on our discussions of Network Flow from Chapter 7 of the text. The first four questions are on the basic notions of flow and cut, and on ideas covered in our development of the Ford-Fulkerson algorithm. The last two questions are about applications of network flow. Each question is worth 10 points.

- Exercise 2 of Chapter 7.
- Exercise 3 of Chapter 7.
- Exercise 4 of Chapter 7.
- Exercise 5 of Chapter 7.
- Exercise 6 of Chapter 7. For this question, the problem says you can assume a certain subroutine that runs in  $O(1)$  time. You can also assume a poly-time subroutine that, given a fixture, a switch, and the floor plan, determines if the fixture is visible from the switch.
- Exercise 7 of Chapter 7.

The homework is due Thursday, April 7, in class; if you can't make it to class on that day, just make sure you get it to me by that time.