



# CS 312

## Algorithm Design

### Homework 7

### Dynamic Programming

### Due: April 10, 8:35 AM

1. The knapsack problem is an extension of the subset sum problem (spending someone else's money) that we did in class. The knapsack problem is described in the text on pages 271-272. Solve the knapsack problem for the following items where the maximum weight that you can carry is 11.

Item	Value	Weight
Flashlight	18	4
Map	6	2
Cellphone	5	3
Food	22	6
Water	28	8

2. Do Chapter 6, Problem 1.
3. Do Chapter 6, Problem 7.
4. Do Chapter 6, Problem 11.

**Extra credit:** Chapter 6, Problem 8.