

CS 332: Algorithms
Homework #4

Assigned: Tuesday, November 28

Due: Tuesday, December 5 **at 2 PM** (i.e., beginning of class. After the lecture starts assignments will be considered 1 day late)

Honor Code: Unlike other assignments, on this homework you are *not* allowed to consult with your classmates.

1. Give a dynamic programming algorithm to solve the 0-1 knapsack problem that runs in $O(nW)$ time, where n is the number of items and W is the maximum (integer) weight of items that will fit in the knapsack.