CSCI 503B:

HOMEWORK 3

Each problem is worth 100/3 points. For each, construct a dynamic programming solution by doing the following: write down the recursive formulation, describe the data structure you will be using and how you would be filling it up using a bottom-up strategy, a method for constructing the solution (as opposed to getting just a number), and analyze running time.

1. Solve activity selection using dynamic programming.

2. Look up the Longest Increasing Sequence (LIS) problem, solve using DP.

3. Solve rod-cutting using DP.