

Other applications of Dynamic Programming

We have already shown DP algorithms for some other problems, such as:

- ▶ Coin changing problem
- ▶ Computing the longest increasing substring in a sequence
- ▶ Finding the longest increasing subsequence in a sequence
- ▶ Finding all-pairs shortest paths in an edge-weighted graph

You can also find DP algorithms online for:

- ▶ Longest common subsequence of two sequences
- ▶ Minimum edit distance between two strings (where insertions, deletions, and substitutions each cost 1)
- ▶ Biology problem: optimal pairwise alignment between two DNA sequences (corresponds to minimum edit distance)
- ▶ Biology problem: maximum parsimony on a tree

Let's do DP for a two-person game.