

CSC 226: Summer 2018: Lab 8

July 11, 2018

1 Coins-in-a-line

Rules of the game:

- It is a two person game.
- There would be n coins in a line, where n is an even number. Each coin has a value.
- Each player can take one coin, but from either end.
- At the end, the player who has more money wins.

1.1 Play the Game

Let's divide in pairs and play the game. Check out these links:

- <http://web.uvic.ca/~rayhan/game/game.html>: Two players can play.
- <http://web.uvic.ca/~rayhan/game/game2.html>: A player will compete against the computer. The computer will choose the first coin.

1.2 Play to Win

- Suppose you are player 1. Think of an algorithm/strategy so that you can always win. How about a greedy algorithm?
- Can you find an example where the greedy strategy won't work?
- What about a dynamic programming algorithm? Apply your algorithm to a line of coins with the following values from left to right: 6, 5, 2, 7, 3, 5.