

CSE 374: Algorithms I (Spring 2020)

Coding Homework #3 Greedy Algorithm

Grading Rubric:

1. The program submitted for this homework must pass the necessary base case test(s) in order to qualify for earning any score at all. Programs that do not meet base case requirements will be assigned zero!
2. The code should be well formatted and commented on. The basic requirement is the code is understandable for a person who has basic coding knowledge.
3. There is some additional test case will be used for grading. Your code must complete it correctly and efficiently

Requirements:

Given an array of non-negative numbers. Each number represents the max length (or any less) you can pass over the array.

E.g., for an array indexed (0-5) - [4, 0, 2, 0, 0, 0], from index 0 spot, the max length you can go is 4, so you can go to index 0, 1, 2, 3, 4; from index 2 spot, the max length you can go is 2, so you can to index 2, 3, 4.

You begin with the first index (index 0). Determine if you can get to the last index.

Example 1:

Input: [1,2,3,4]

Output: true

Explanation: Jump 1 step from index 0 to 1, then 2 steps to the last index.

Example 2:

Input: [3,2,1,0,3]

Output: false

Explanation: There is no way to go behind index 3.

Example 3:

Input: [0,1,3,4]

Output: false

Explanation: There is no way to get out from index 0.