

Assignment 1

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Part 4

1 Greedy Algorithms

A greedy algorithm produces a solution for a problem while using the least amount of effort. It chooses the easiest way, shortest way, and fastest way to solving a problem.

2 Other Solution

Instead of dividing by the largest coin, finding the remainder, and then dividing by the next largest coin, I could have used if else statements. I could have does some kind of if the change is greater than or equal to a coin value to divide by that coin value, else it would move to the next coin value.

3 Other Uses

I think greedy algorithms go hand in hand with Dijkstra's algorithm of finding the shortest path. We just learned about Dijkstra's algorithm in math class and it seems to follow the same principle of finding the shortest path by evaluating the cost of each path. Greedy algorithms seem to be based on cost as well.