



Stack Overflow



Oh no we have hit stack overflow

How do we define recursion?

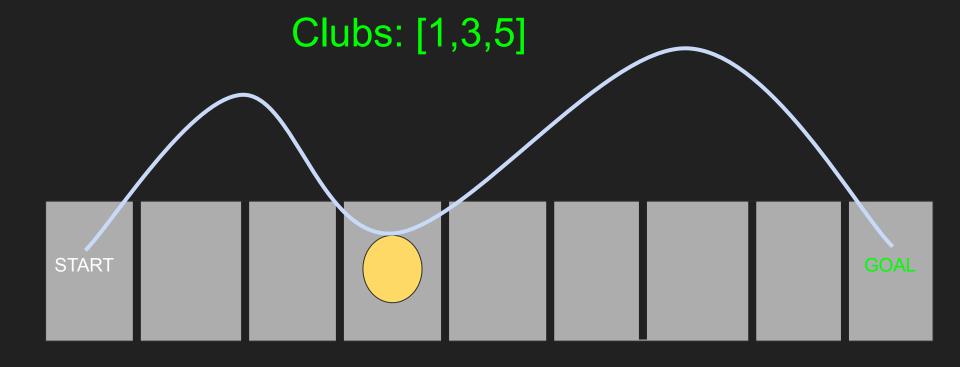
When a process is defined in terms of itself.

This can look like a method calling itself.

CCC 2000 s4

- Old Roberta and golfing
- Wants to hit N distance using given clubs with the minimum number of strokes





Answer: 2

But what about that dynamic programming

Lookup Table





Solutions for DP problems

- Recursive

Repeated method calls, no optimization for repeated subproblems

- Memoize

- Store intermediate solutions to subproblems in case you see them again

Bottom-up

Work from the base case and build to the desired value

Sample Code

https://hastebin.com/itix urubad.cs

Test case #1: AC [0.385s, 34.04 MB] (10/10) Test case #2: AC [0.195s, 34.00 MB] (10/10) Test case #3: AC [0.172s, 33.85 MB] (10/10) Test case #4: AC [0.192s, 33.99 MB] (10/10)

Test case #5: AC [0.190s, 34.03 MB] (10/10)

Questions?

- What is recursion?
- What does stack overflow mean?
- What's the time complexity of the algorithm?