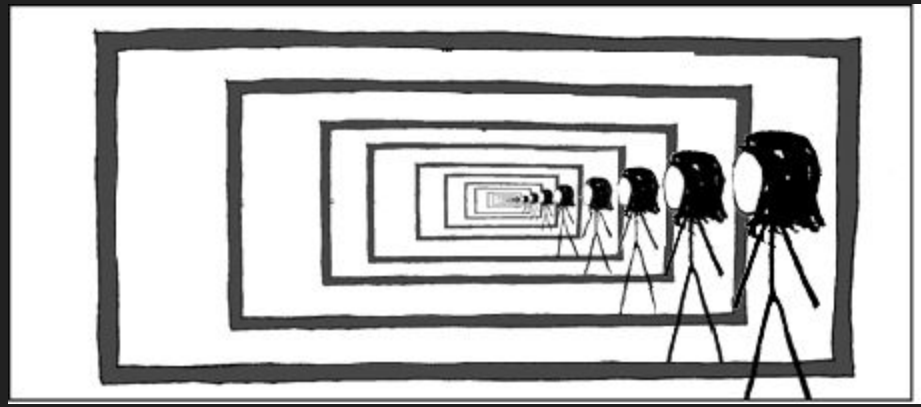
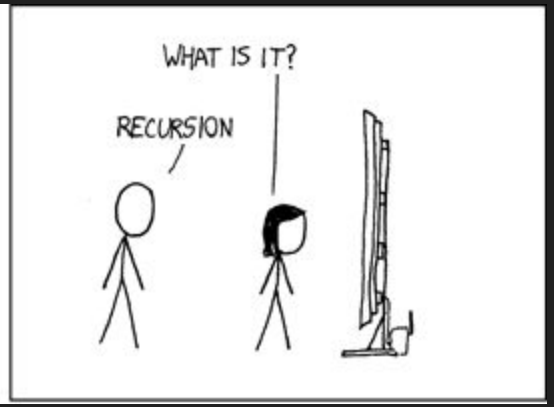
What is Recursion?

Dhrumil and Gabriel




WHAT IS IT?
RECURSION

What is Recursion?

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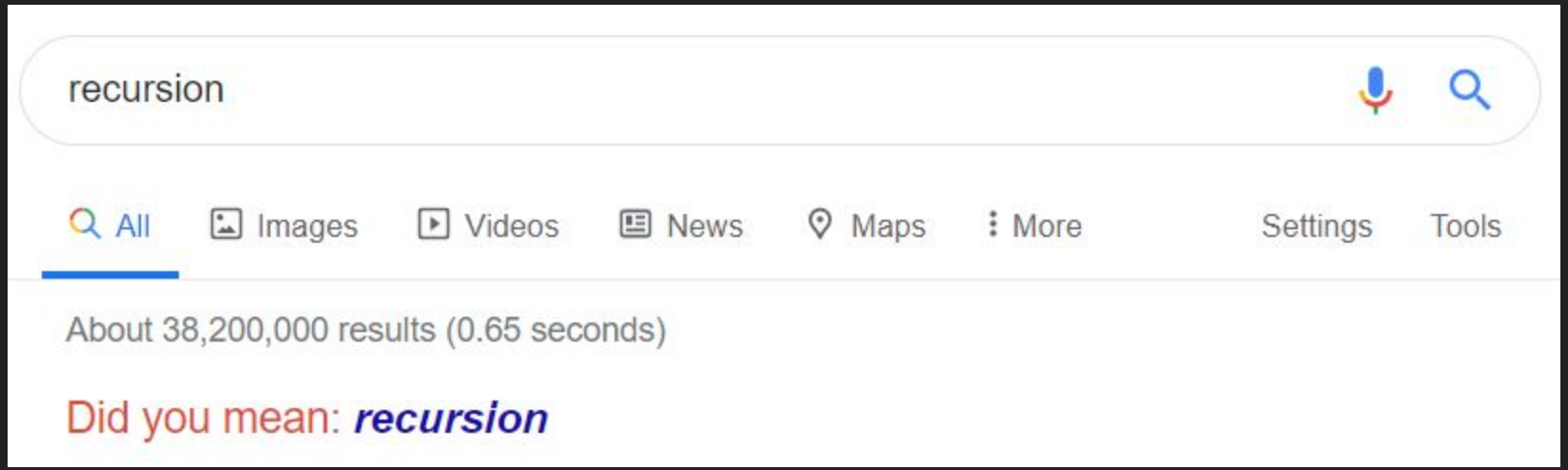
recursion
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About 38,200,000 results (0.65 seconds)
Did you mean: recursion

What is Recursion?

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STACK OVERFLOW

Oh no! We have hit stack overflow!

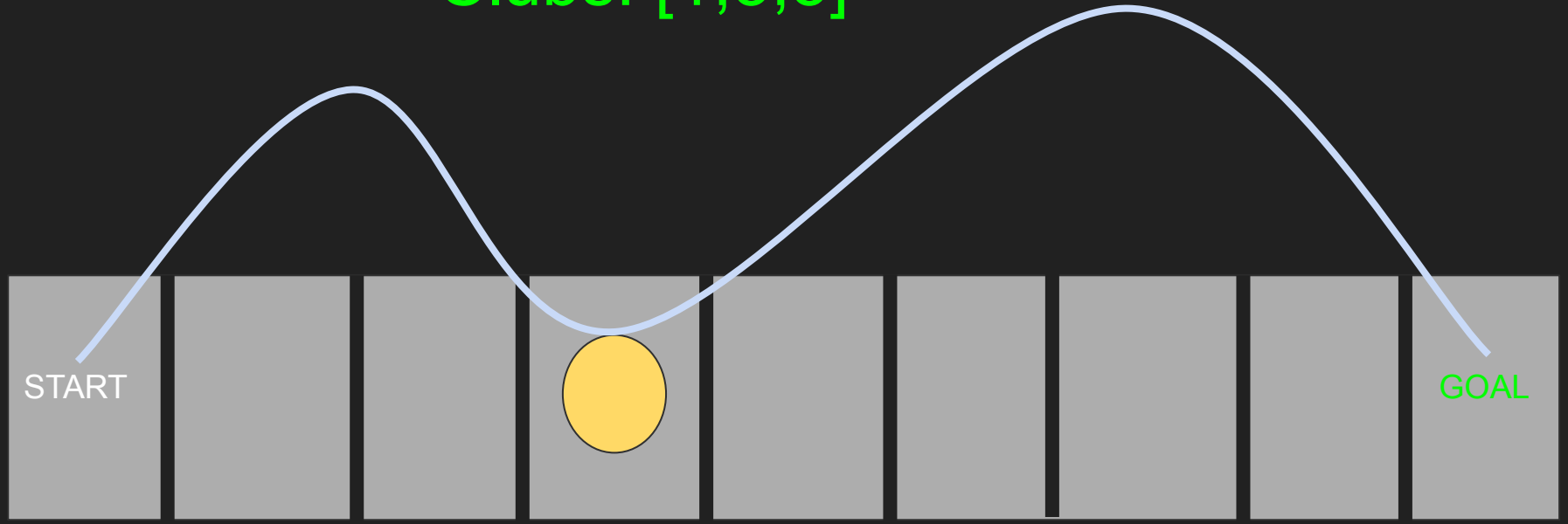
How do we define recursion?

- 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

Clubs: [1,3,5]



Answer: 2

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/itixurubad.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?

What is Recursion?

Dhrumil and Gabriel