From: Daily Coding Problem Sent: 07 October 2019 22:04 To: sohail47k@gmail.com

Subject: Daily Coding Problem: Problem #12 [Hard]



Good morning! Here's your coding interview problem for today.

This problem was asked by Amazon.

There exists a staircase with N steps, and you can climb up either 1 or 2 steps at a time. Given N, write a function that returns the number of unique ways you can climb the staircase. The order of the steps matters.

For example, if N is 4, then there are 5 unique ways:

- 1, 1, 1, 1
- 2, 1, 1
- 1, 2, 1
- 1, 1, 2
- 2, 2

What if, instead of being able to climb 1 or 2 steps at a time, you could climb any number from a set of positive integers X? For example, if  $X = \{1, 3, 5\}$ , you could climb 1, 3, or 5 steps at a time.

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