



# Lab 7: More on proofs

## Exercise

### Problem:

*A staircase has  $n$  steps. You can climb 1 or 2 steps at a time. How many distinct ways are there to reach the top?*

### Task:

Design and implement an iterative algorithm in Dafny that solves this problem. Prove the correctness of your iterative implementation by specifying the properties it must satisfy.

**Hint:** First define a recursive function that specifies what the correct answer should be, then use this function in the specs of your iterative method to prove correctness.

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