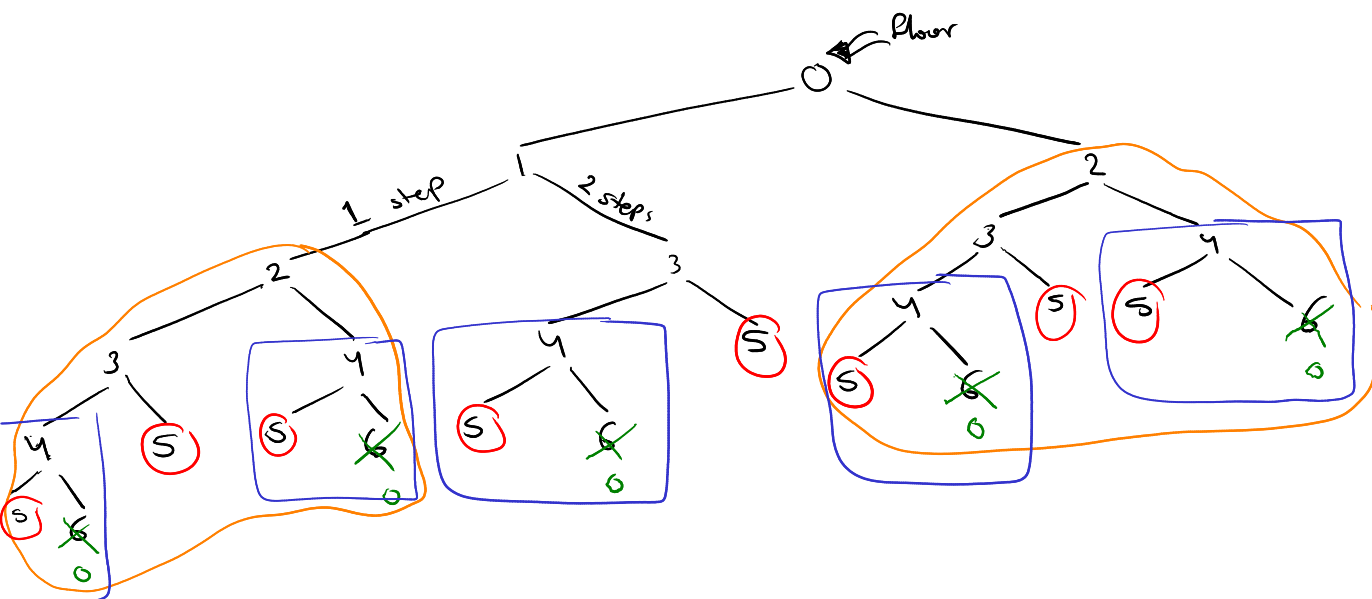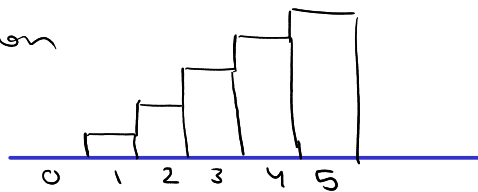# 70. Climbing Stairs
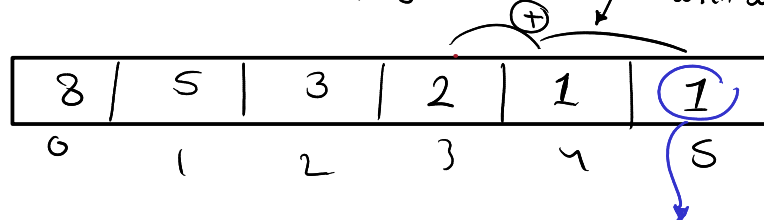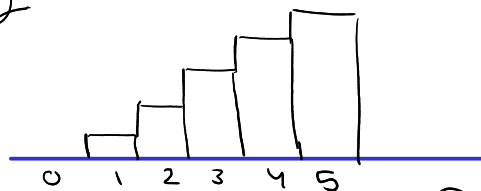
① Decision tree and memoization

- $n = 5$
- you can only go 1 or 2 steps



- You can notice that some branches are repeated, so we can cache the path from 4 to 5 once and use it whenever needed
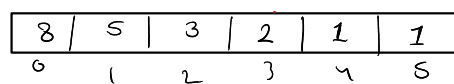- You can use DFS with memoization.

② DP with single array



we can only move one step when we're at n-1 stair.

Numbers here represent the possible ways to get to 5

If we're at 5, we can reach 5 in one way which is staying at 5.

- We can optimize the used space by using only two variables!

keep moving the variables