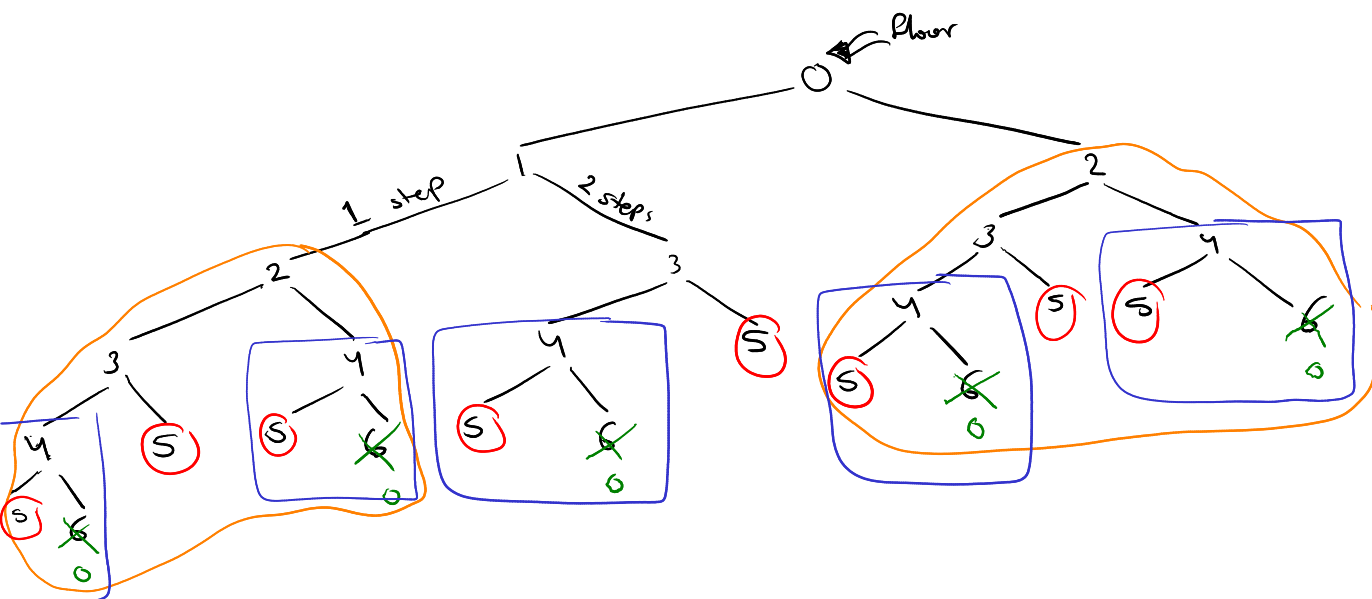
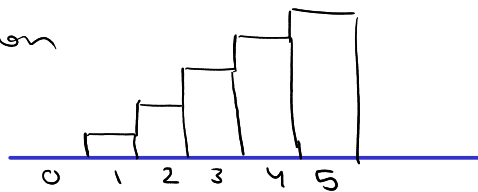


## 70. Climbing stairs

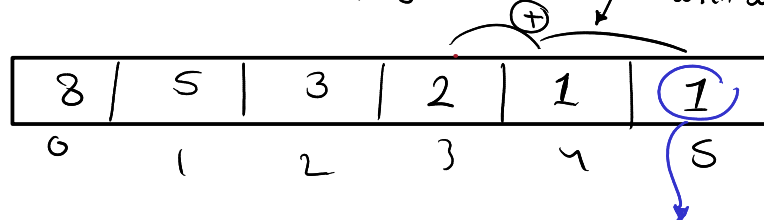
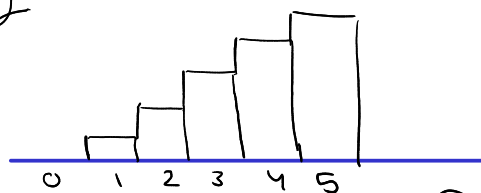
### ① Decision tree and memorization

- $n = 5$
- 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 memorization.

### ② DP with single array

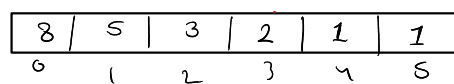


we can only move one step when we're at  $n-1$  stair.

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 one two the variables