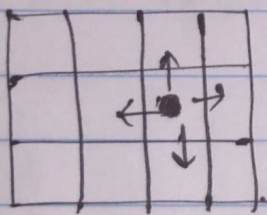


* Out of Boundary Paths



in N moves, # of out of box movements. Revisit allowed

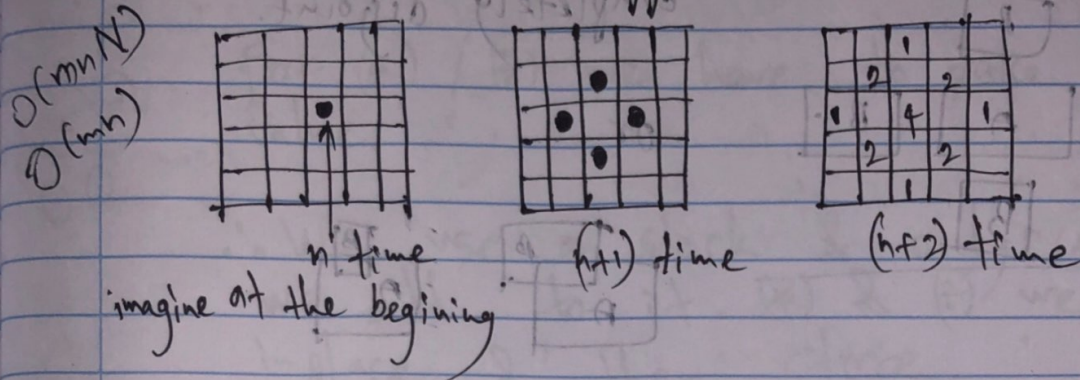
$O(4^n)$
 ~~$O(4^n)$~~
 $O(4^n)$

backtrack brute force - TLE

Atlas

$O(mnN)$ • backtrack (with memoization) $O(1)$
 $O(mnN)$ use a 3D matrix to store moves.
 In each cell, ^{movement} number with # of out of box movement is stored.

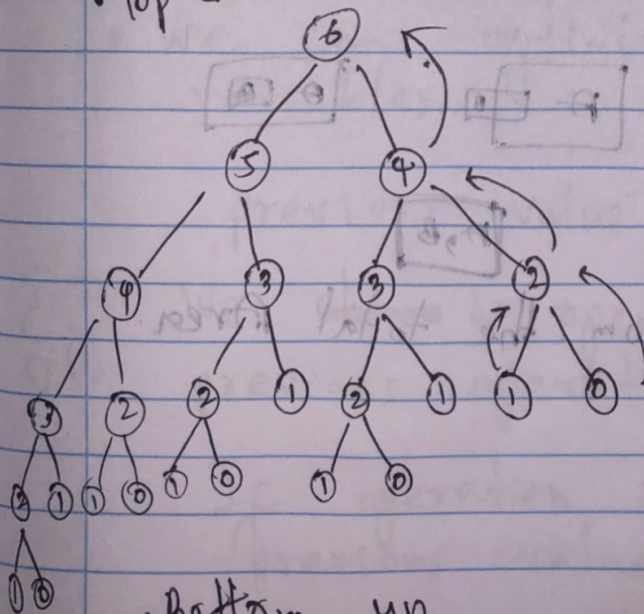
• dp - top down approach



when in (t) time if goes out of the grid, count the total # of grid movement is.

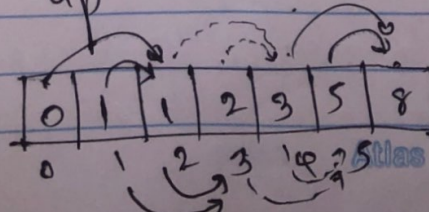
in fibonacci series

• Top down



explore to bottom & then come back to the top

• Bottom up



start from end case & build upto expected level.

No: _____

Date: ____/____/____

$$(A+B) \% M = [(A \% M) + (B \% M)] \% M$$