RECURSION Concepts & Qns

Video 7

"मैं, DSA की शपथ लेता हूँ कि मैं जो पढ़ाऊंगा बहोत अच्छे से पढ़ाऊंगा।"

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Motivation (भाषण)

"Remember, coding is a journey of constant learning and improvement.

- Stay motivated
- Embrace challenges
- Keep coding"

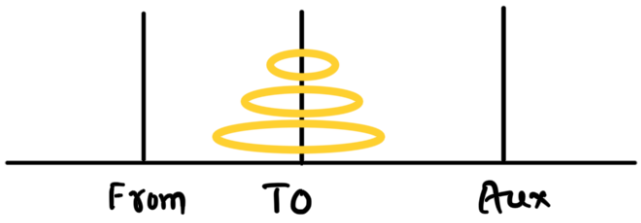
Tower Of Hanoi

Medium Accuracy: 35.23% Submissions: 130K+ Points: 4

The tower of Hanoi is a famous puzzle where we have three rods and **N** disks. The objective of the puzzle is to move the entire stack to another rod. You are given the number of discs **N**. Initially, these discs are in the rod 1. You need to print all the steps of discs movement so that all the discs reach the 3^{rd} rod. Also, you need to find the total moves.

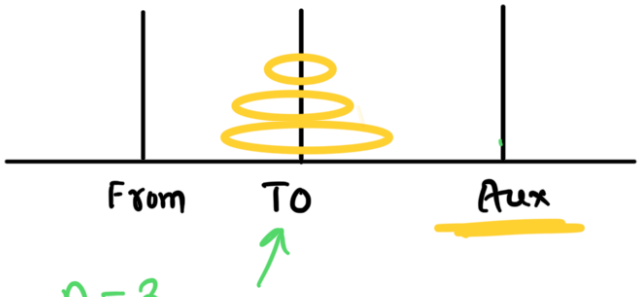
Note: The discs are arranged such that the **top disc is numbered 1** and the **bottom-most disc is numbered N**. Also, all the discs have **different sizes** and a bigger disc **cannot** be put on the top of a smaller disc. Refer the provided link to get a better clarity about the puzzle.

Example :- N = 3



1+1+1+1+1+1+1 minimum = 7 moves

From_rod ⟶ To_rod



n=3

n-1 ⇝ 2

x = Solve ((n-1) disks : From_rod ⟶ Aux_rod Helper To_rod

1 : (n^{th} rod : From-rod → To_rod)

y = Solve ((n-1) disks : Aux-rod → To-rod From-rod)

return x + 1 + y ;

Solve (n , From, to, aux) {

x = Solve (n-1 , From, Aux, to) ;

//

}