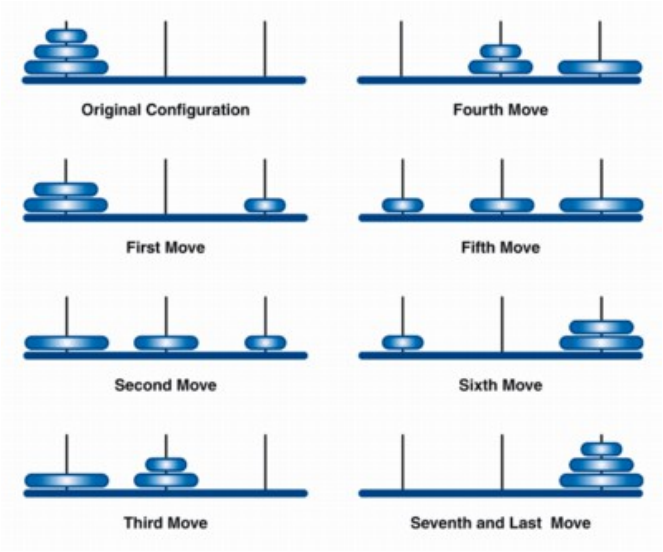
CSI32 **Final Project**

Towers of Hanoi

(solved by Recursion) (using graphics)

The game begins with three pegs and a tower of *n* disks on the first peg, stacked from largest at the bottom to smallest at the top. The goal is to move them all to the third peg, moving only one disk at a time. Moreover, you are not allowed to place a disk on top of a smaller disk. Write a program that generates a solution to the problem + show it graphically.

With three disks, the puzzle can be solved in seven moves:

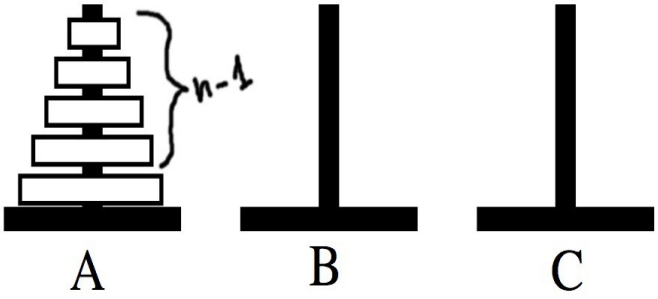


In general: the minimum number of moves required to solve a Tower of Hanoi puzzle is $2^n - 1$, where *n* is the number of disks.

Recursive Algorithm:

goal: to move n-disk tower from **source** to **destination**.

move n-1th disk tower from **source** to **resting place**



move 1 disk tower from **source** to **destination**
move n-1th disk from **resting place** to **destination**

You can find more information about it here:
https://en.wikipedia.org/wiki/Tower_of_Hanoi