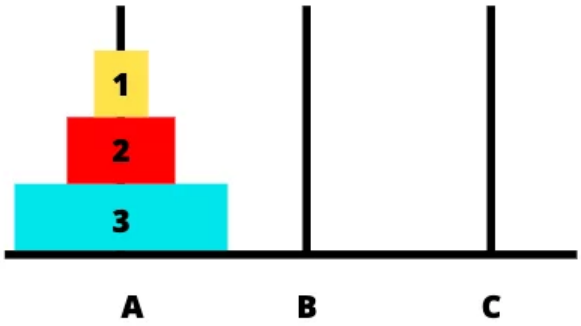
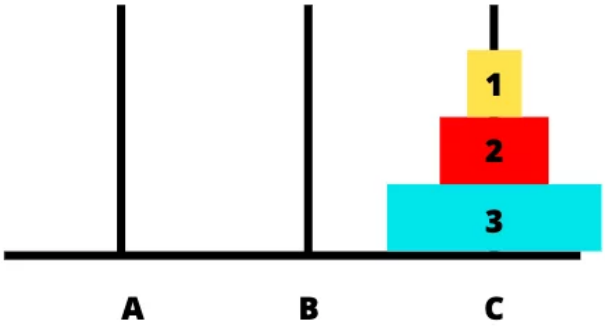
TOWER OF HANOI

Tower of Hanoi is a mathematical puzzle, where we have three rods and n disks. On the leftmost rod, disks are arranged largest on the bottom to smallest on top placed on the rod. The Game is to transfer the disks to the rightmost rod, while only one disk can be moved at a time and a larger disk should not be kept above a smaller disk.



We need to transfer all the disks from A rod to C rod like in the image below.



This game is implemented using stack data structure using array. In the element which is inserted last is retrieved first. Major operations such as PUSH() and POP() are done in the TOP position. Here in this program each rod A,B,C are stack of positive integers. Initially the stack B,C are set to zero, which shows no disks. Disks of different sizes are represented using these integers. Largest number means largest disk. The value of the number represents the size of the disk.

User can specify the from_rod and to_rod, and the possible entries are A, B, C. Pop operation will be done on the from_rod and Push opertion will be done on the to_rod if it obeys rules otherwise it will show invalid move. Invalid moves will reduce the life. Life left will be displayed above the screen.

After pressing ENTER key the top disk in the rod A will be placed on to the rod C.

Here we can see (refer the figure below) that 1 from rod A is moved to the rod C.

After few steps we could transfer all disks from A to C.