

Tower Of Hanoi - Problem Statement

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Tower of Hanoi is a mathematical puzzle where we have three rods and n disks. The objective of the puzzle is to move all disks from source rod to destination rod using third rod (say auxiliary).

The rules are :

- 1) Only one disk can be moved at a time.
- 2) A disk can be moved only if it is on the top of a rod.
- 3) No disk can be placed on the top of a smaller disk.

Print the steps required to move n disks from source rod to destination rod.

Source Rod is named as 'a', auxiliary rod as 'b' and destination rod as 'c'.

Input Format :

Integer n

Output Format :

Steps in different lines (in one line print source and destination rod name separated by space)

Constraints :

$0 \leq n \leq 20$

Sample Input 1 :

2

Sample Output 1 :

a b
a c
b c

Sample Input 2 :

3

Sample Output 2 :

a c
a b
c b
a c
b a
b c
a c