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19-EE-328

Case Study

Tower of Hanoi

A)

Minimum steps required for 5 disks is 31. Took me more than 2s to solve the 5 disks or to place the 5 disk in good rod.

B)

Output:

Move disk 1 from A to rod B
Move disk 2 from A to rod C
Move disk 1 from B to rod C
Move disk 3 from A to rod B
Move disk 1 from C to rod A
move disk 2 from C to rod B
move disk 1 from A to B
Move disk 4 from A to C
move disk 1 from B to C
move disk 2 from B to A
move disk 1 from C to A

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Move disk 3 from rod B to rod C
Move disk 1 from rod A to B
Move disk 2 from rod A to C
Move disk 1 from rod B to C

Tower of Hanoi solution for 4-disks

A=[4,3,2,1] B:[ ] C:[ ]

move disk 1 from A to B
A [4,3,2] B:[1] C:[ ]

move disk 2 from A to C
A:[4,3] B:[1] C:[2]

move disk from B to C
A:[4,3] B:[ ] C:[2,1]

move disk from A to B
A:[4] B:[3] C:[2,1]

move disk from C to A
A:[4,1] B:[3] C:[2]

move disk from C to B
A:[4,1] B:[3,2] C:[ ]

move disk from A to B

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A:[4] B:[3,2,1] C:[ ]

move disk from A to C
A:[ ] B:[3,2,1] C:[4]

move disk from B to C
A[ ] B:[3,2] C:[4,1]

move disk from B to A
A[2] B[3] C[4,1]

move disk from C to A
A:[2,1] B[3] C:[4]

move disk from B to C
A:[2,1] B:[ ] C:[4,3]

move disk from A to B
A:[2] B:[1] C[4,3]

move disk from A to C
A:[ ] B[1] C[4,3,2]

move disk from B to C
A:[ ] B:[ ] C:[4,3,2,1]

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Flow Diagram: