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Lab 08

Towers of Hanoi Stack of Activation Records (IN ORDER OF CALLS)

Height	fromPole	toPole	withPole	Return address	Pop order
3	A	B	C	*	15
2	A	C	B	**	7
1	A	B	C	**	3
0	A	C	B	**	1
0	C	B	A	***	2
1	B	C	A	***	6
0	B	A	C	**	4
0	A	C	B	***	5
2	C	B	A	***	14
1	C	A	B	**	10
0	C	B	A	**	8
0	B	A	C	***	9
1	A	B	C	***	13
0	A	C	B	**	11
0	C	B	A	***	12

(IN ORDER OF POPS)

Height	fromPole	toPole	withPole	Return address	Pop order
0	A	C	B	**	1
0	C	B	A	***	2
1	A	B	C	**	3
0	B	A	C	**	4
0	A	C	B	***	5
1	B	C	A	***	6
2	A	C	B	**	7
0	C	B	A	**	8
0	B	A	C	***	9
1	C	A	B	**	10
0	A	C	B	**	11
0	C	B	A	***	12
1	A	B	C	***	13
2	C	B	A	***	14
3	A	B	C	*	15

--- CODE ON NEXT PAGE ---

```
def moveTower(height,fromPole, toPole, withPole):   #towersofhanoi.py

        if height >= 1:

                moveTower(height-1,fromPole,withPole,toPole) **

                moveDisk(fromPole,toPole)

                moveTower(height-1,withPole,toPole,fromPole) ***

def moveDisk(fp,tp):

        print("moving disk from",fp,"to",tp)

moveTower(3,"A","B","C") *
```

OUTPUT

moving disk from A to B

moving disk from A to C

moving disk from B to C

moving disk from A to B

moving disk from C to A

moving disk from C to B

moving disk from A to B

Height	fromPole	toPole	withPole	Return address
3	A	B	C	*
2	A	C	B	**
1	A	B	C	**
0	A	C	B	**
0	C	B	A	***
1	B	C	A	***
0	B	A	C	**
0	A	C	B	***
2	C	B	A	***
1	C	A	B	**
0	C	B	A	**
0	B	A	C	***
1	A	B	C	***
0	A	C	B	**
0	C	B	A	***