

## Hands-on Activity 4.1: The Tower of Hanoi Problem

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```
def TOH(n, Sour, Aux , Des):  
  
    if n==1:  
        print("Move Disk" , n," from ", Sour ," to ",Des)  
    else:  
        TOH(n-1,Sour,Des,Aux);  
        print("Move Disk", n ," from ", Sour ," to ",Des)  
        TOH(n-1,Aux,Sour,Des);  
  
n = (int(input("How many Disk:")))  
TOH(n, '1st' , '2nd' , '3rd' )
```



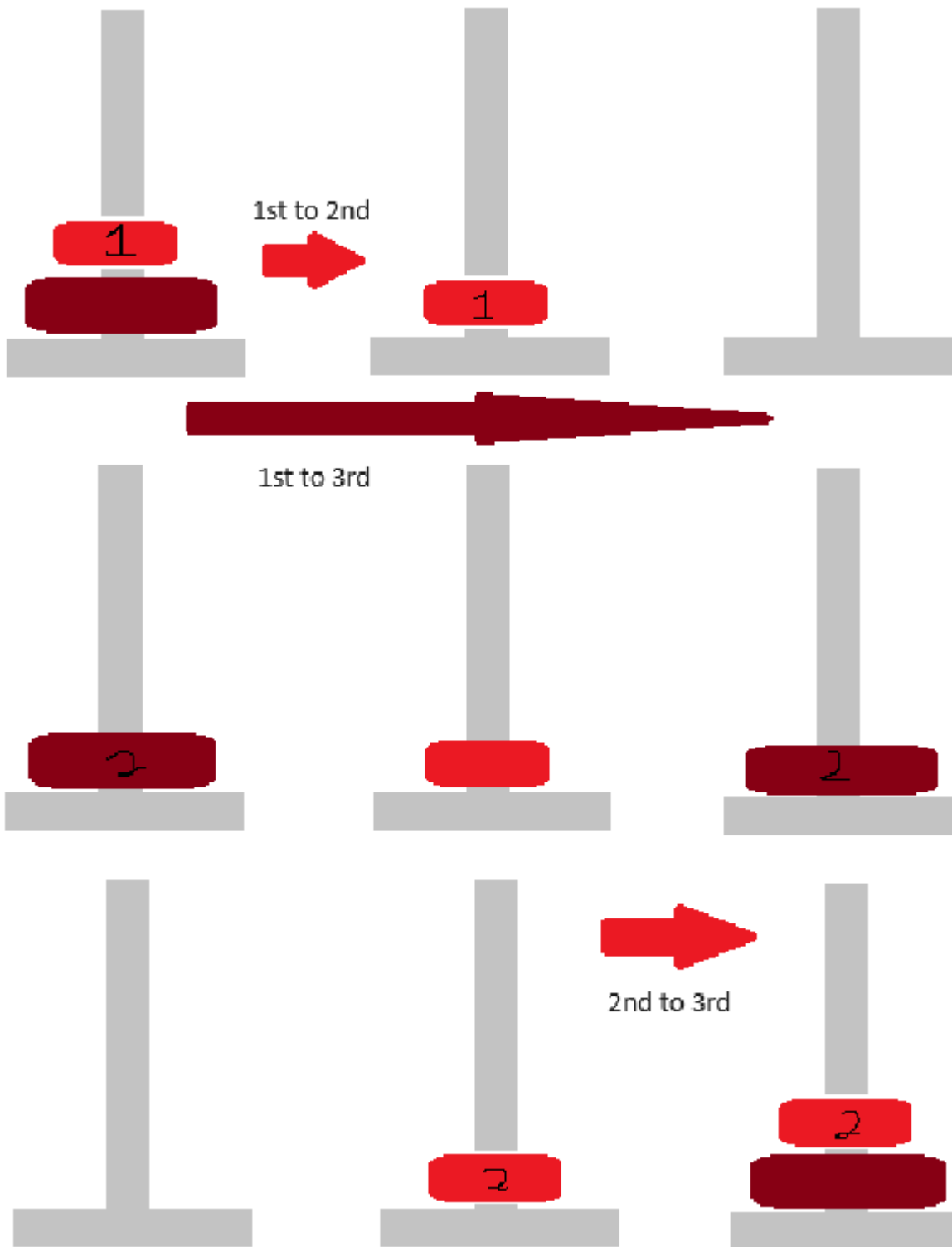
How many Disk:2

Move Disk 1 from 1st to 2nd

Move Disk 2 from 1st to 3rd

Move Disk 1 from 2nd to 3rd

Double-click (or enter) to edit



Rules:

1. One Disk at a time
2. The disk can't be move if there is an upper disk
3. Larger/Higher disk can't be put above smaller disk

As there is only 2 disk here we only need to move the disk 1 to 2nd, disk 2 to 3rd, then the disk 1 to 3rd.

Double-click (or enter) to edit

```
def TOH(n, Sour, Aux , Des):
```

```
    if n==1:
```

```
        print("Move Disk" , n," from ", Sour ," to ",Des)
```

```
    else:
```

```
        TOH(n-1,Sour,Des,Aux);
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        print("Move Disk", n ," from ", Sour ," to ",Des)
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        TOH(n-1,Aux,Sour,Des);
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```
n = (int(input("How many Disk:")))
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TOH(n, '1st' , '2nd' , '3rd' )
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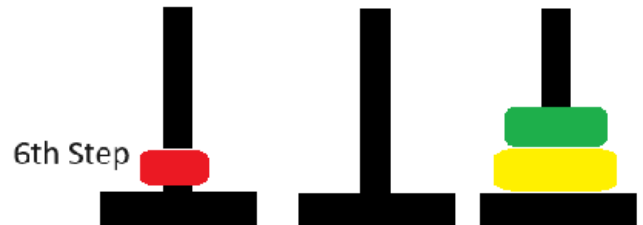
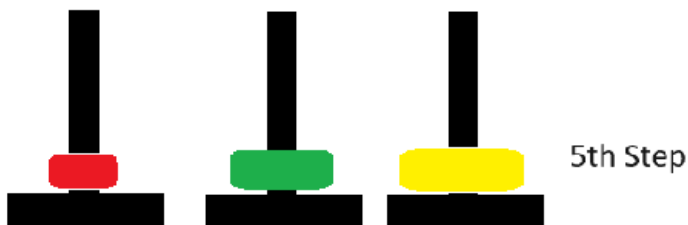
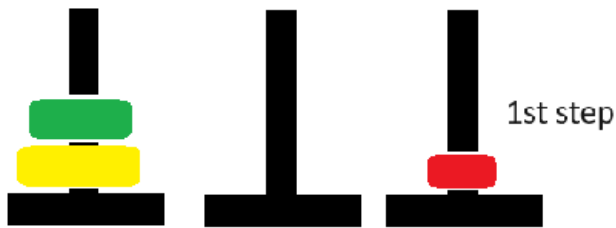


```
How many Disk:3
```

```
Move Disk 1 from 1st to 3rd
```

```
Move Disk 2 from 1st to 2nd
```

```
Move Disk 1 from 3rd to 2nd
```



1. Explain the programming paradigms/techniques (like recursion or dynamic programming) that you