

## ✓ Procedure

Implement the algorithm for the Tower of Hanoi Problem as shown above.

Write your observations for your written algorithm/solution.

**Base on my observation that it use a "if else" condition algorithm in order to solve a hanoi problem if which case it will define a certain disk and transfer it into certain place if the condition are met the next one will also do it again until it meta maximum value**

```
def TOH( n, D1, D2, D3):

    if (n==1):
        print("Move Disk", n, "from", D1, "to", D3)
    else:
        TOH(n-1,D1, D2, D3);
        print("Move Disk", n , "from", D1, "to", D3)
        TOH(n-1,D1, D2, D2);

n=3
TOH(n, 'Source', 'Auxiliary', 'Destination')
```

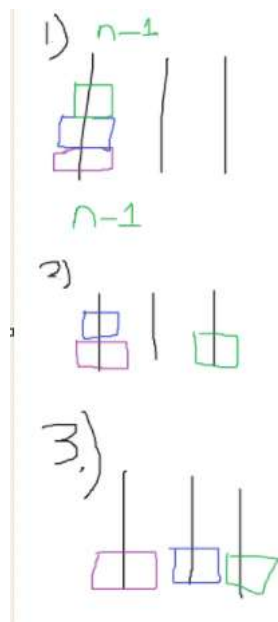
→ Move Disk 1 from Source to Destination  
Move Disk 2 from Source to Destination  
Move Disk 1 from Source to Auxiliary  
Move Disk 3 from Source to Destination  
Move Disk 1 from Source to Auxiliary  
Move Disk 2 from Source to Auxiliary  
Move Disk 1 from Source to Auxiliary

```
def solvingHanoi(n, source, auxiliary, destination):
    if n == 0:
        print("There is no amount of Disk... ")
    if n == 1:
        print(f"Moved Disk 1 from, {source} to {destination}")
    else:
        solvingHanoi(n-1, source, auxiliary, destination)
        print(f"Put the Disk {n} from {source} to {destination}")
        solvingHanoi(n-1, auxiliary, source, destination)
solving=int(input("How many Disk would you like to solve?: "))
solvingHanoi(solving, 'D1', 'D2', 'D3')
```

→ How many Disk would you like to solve?: 3  
Moved Disk 1 from, D1 to D3  
Put the Disk 2 from D1 to D3  
Moved Disk 1 from, D2 to D3  
Put the Disk 3 from D1 to D3  
Moved Disk 1 from, D2 to D3  
Put the Disk 2 from D2 to D3  
Moved Disk 1 from, D1 to D3

## ✓ Supplementary Activity

For the given problem that i used is that a recursion, recursion is more easier to understand by breaking it down into smaller things which is that it also been apply because if reducing it on the nearest value repeatedly



The explanation for this the visual that i show is that how does the recursion technique works base on my understanding is will transfer in the certain place the certain value changes but in order to work it implement a loop condition until it reach a certain goal