3. Write a program to solve towers of honai problem and execute it for different number of disks

```
def toh(n,source,temp,dest):
    global count
    if n>0:
        toh(n-1,source,dest,temp)
        print(f"Move Disk {n} {source}->{dest}")
        count+=1
        toh(n-1,temp,source,dest)


source='S'
temp='T'
dest='D'
count=0
n=int(input("Enter the number of disks:"))
print("Sequence is:")
toh(n,source,temp,dest)
print("The Number of Moves:",count)
```

Output 1

```
Enter the number of disks:4
Sequence is:
Move Disk 1 S->T
Move Disk 2 S->D
Move Disk 1 T->D
Move Disk 3 S->T
Move Disk 1 D->S
Move Disk 2 D->T
Move Disk 1 S->T
Move Disk 4 S->D
Move Disk 1 T->D
Move Disk 2 T->S
Move Disk 1 D->S
Move Disk 3 T->D
Move Disk 1 S->T
Move Disk 2 S->D
Move Disk 1 T->D
The Number of Moves: 15
```

Output 2

Enter the number of disks:3
Sequence is:
Move Disk 1 S->D
Move Disk 2 S->T
Move Disk 1 D->T
Move Disk 3 S->D
Move Disk 1 T->S
Move Disk 2 T->D
Move Disk 1 S->D
The Number of Moves: 7