# Practical 7: Tower Of Hanoi

**Q1) Demonstrate Tower of Hanoi Problem.**

**Ans:**

<u>p7_tower_of_hanoi.py</u>

```python
"""
p7_tower_of_hanoi.py
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Practical: 7
Objective: Demonstrate Tower of Hanoi Problem.
"""


def TowerOfHanoi(n, from_rod, to_rod, aux_rod): # f:A t:C x:B
    if n == 1:
        print ("Move disk 1 from rod",from_rod,"to rod",to_rod)
        return
    TowerOfHanoi(n-1, from_rod, aux_rod, to_rod)
    print ("Move disk",n,"from rod",from_rod,"to rod",to_rod)
    TowerOfHanoi(n-1, aux_rod, to_rod, from_rod)

# Driver code
n = 4 # n is number of disks
# A B C are rods
print(f"Jagrut Tower of Hanoi")
TowerOfHanoi(n, 'A', 'C', 'B')
```
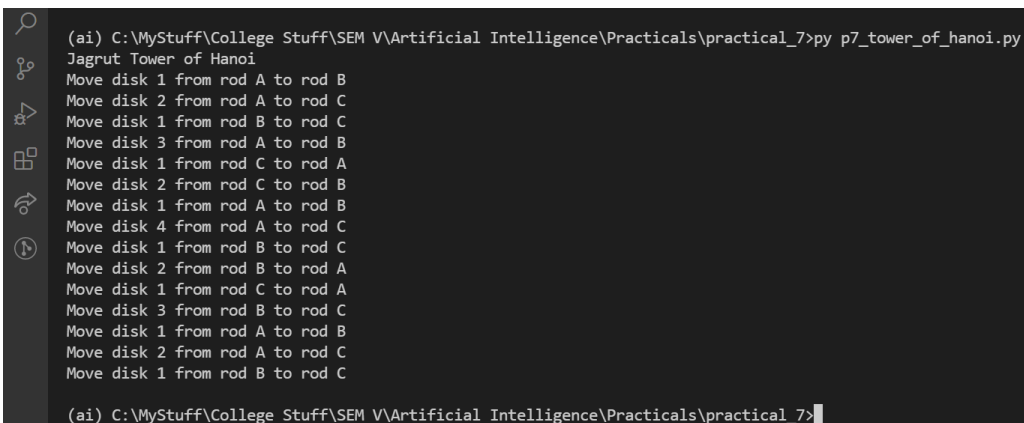
```
(ai) C:\MyStuff\College Stuff\SEM V\Artificial Intelligence\Practicals\practical_7>py p7_tower_of_hanoi.py
Jagrut Tower of Hanoi
Move disk 1 from rod A to rod B
Move disk 2 from rod A to rod C
Move disk 1 from rod B to rod C
Move disk 3 from rod A to rod B
Move disk 1 from rod C to rod A
Move disk 2 from rod C to rod B
Move disk 1 from rod A to rod B
Move disk 4 from rod A to rod C
Move disk 1 from rod B to rod C
Move disk 2 from rod B to rod A
Move disk 1 from rod C to rod A
Move disk 3 from rod B to rod C
Move disk 1 from rod A to rod B
Move disk 2 from rod A to rod C
Move disk 1 from rod B to rod C

(ai) C:\MyStuff\College Stuff\SEM V\Artificial Intelligence\Practicals\practical_7>
```