NATIONAL INSTITUTE OF TECHNOLOGY PUDUCHERRY
(An Institution of National Importance under MHRD, Govt. of India)
KARAIKAL – 609 609

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Roll Number: CS19B1009 **Name** ARUN KUMAR R

Semester: 2nd semester **Class:** B TECH, CSE

Subject Code: CS106 **Subject Name:** DATA STRUCTURES LABORATORY

1. TOWER OF HANOI

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AIM:

To implement tower of hanoi (solve) using recursion

ALGORITHM:

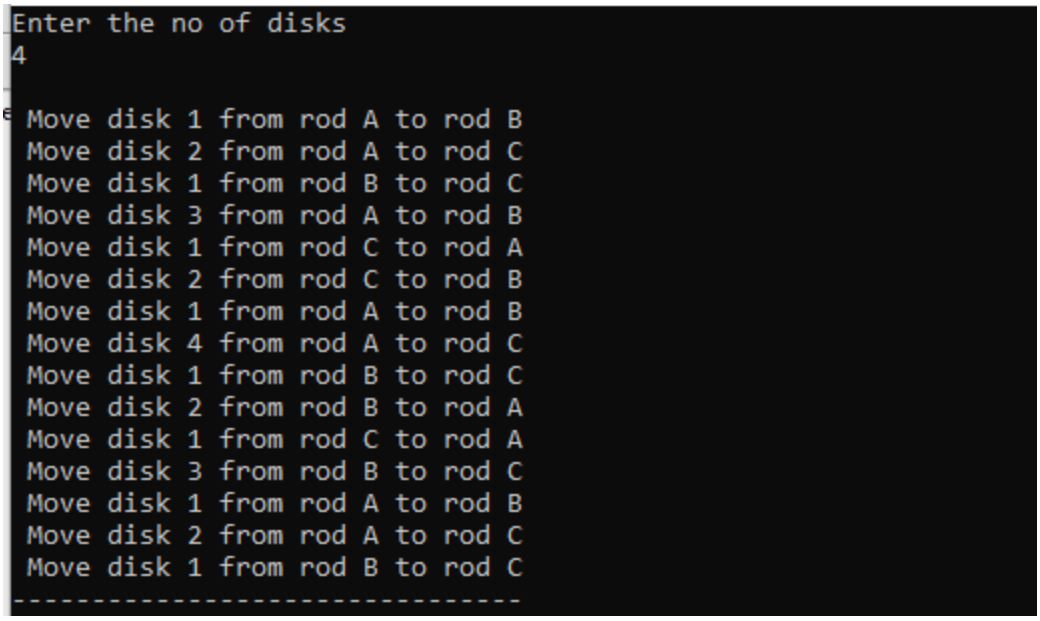
1. start the program.
2. declare the variables.
3. move n-1 disks from A rod to B rod.
4. move the last disk from A rod to C rod.
5. move n -1 disks from B rod to C rod.
6. output the result.
7. end the program.

PROGRAM:

```
#include<stdio.h>

int toh(int, char, char, char);

int main()
{
int n;
   printf("Enter the no of disks\n");
```

```
    scanf("%d",&n);
    toh(n, 'A', 'C', 'B');
    return 0;
}

int toh(int n, char frod, char trod, char arod)
{
    if (n == 1)
    {
        printf("\n Move disk 1 from rod %c to rod %c", frod, trod);
        return 1;
    }
    toh(n-1, frod, arod, trod);
    printf("\n Move disk %d from rod %c to rod %c", n, frod, trod);
    toh(n-1, arod, trod, frod);
    return 1;
}
```

OUTPUT:



RESULT:

The program was executed successfully.