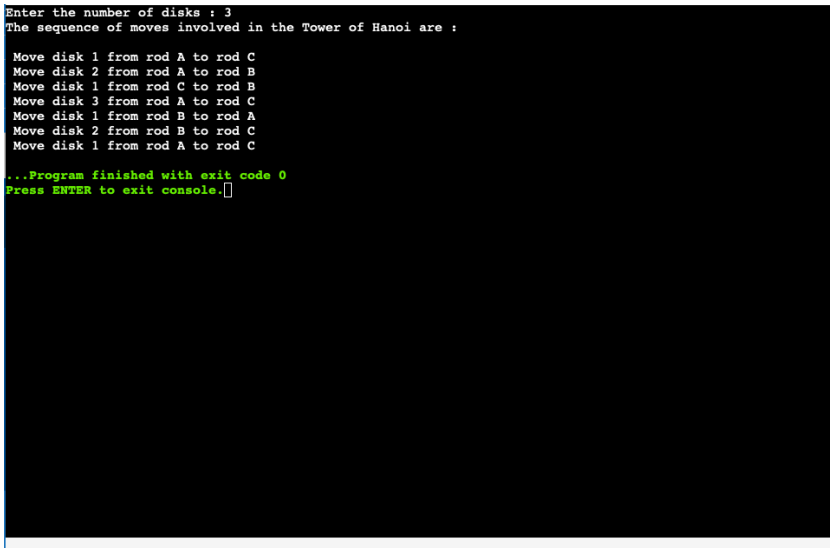
ADA -LAB-1

```
#include <stdio.h>
void towerfun(int, char, char, char);
int main()
{
   int n;// defined to store the number disc
   printf("Enter the number of disks : ");
   scanf("%d", &n);
   printf("The sequence of moves involved in the Tower of Hanoi
are :\n");
   towerfun(n, 'A', 'C', 'B'); // A, B, C are tower
   return 0;
}

void towerfun(int n, char fr, char tr, char ar)
{
   if (n == 1)
   {
       printf("\n Move disk 1 from rod %c to rod %c", fr, tr);
       return;
   }
   towerfun(n - 1, fr, ar, tr);
   printf("\n Move disk %d from rod %c to rod %c", n, fr, tr);
   towerfun(n - 1, ar, tr, fr);
}
```




```
#include <stdio.h>

int gcd_algorithm(int x, int y)

{

   if (y == 0) {

       return x;

   } else if (x >= y && y > 0) {

       return gcd_algorithm(y, (x % y));

   }

}


int main(void)

{

   int num1, num2, gcd;

   printf("\nEnter two numbers to find gcd using Euclidean
algorithm: ");
   scanf("%d%d", &num1, &num2);

   gcd = gcd_algorithm(num1, num2);

   if (gcd)

       printf("\nThe GCD of %d and %d is %d\n", num1, num2, gcd);

   else
```

```
        printf("\nInvalid input!!!\n");

    return 0;

}
```