

DSA_College\towerOfHanoi.cpp

```
1  /*
2  #include<bits/stdc++.h>
3  using namespace std ;
4
5  int cnt = 0; // represent the number of moves to reach the solution
6  long long towerOfHanoi(int n,char from, char aux, char to)
7  {
8      if(n == 1)
9      {
10         cout<<"Move "<<n<<" disk from "<<from<<" to "<<to<<endl ;
11         cnt++ ;
12         return 1 ;
13     }
14     else
15     {
16         towerOfHanoi(n-1,from,to,aux) ;
17         cout<<"Move "<<n<<" disk from "<<from<<" to "<<to<<endl ;
18         cnt++ ;
19         towerOfHanoi(n-1,aux,from,to) ;
20     }
21     return cnt ;
22 }
23 int main()
24 {
25     int n= 3 ;
26     int res = towerOfHanoi(n,'F','A','T') ;
27     cout<<res<<endl;
28     return 0 ;
29 }
30 */
31
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40
41 #include<bits/stdc++.h>
42 using namespace std ;
43
44 int cnt = 0; // represent the number of recursive calls
45 long long towerOfHanoi(int n,char from, char aux, char to)
46 {
47     if(n == 1)
48     {
49         cout<<"Move "<<n<<" disk from "<<from<<" to "<<to<<endl ;
50     }
51     else
```

```
52     {
53         cnt++ ;
54         towerOfHanoi(n-1,from,to,aux) ;
55         cout<<"Move "<<n<<" disk from "<<from<<" to "<<to<<endl ;
56         cnt++ ;
57         towerOfHanoi(n-1,aux,from,to) ;
58     }
59     return cnt ;
60 }
61 int main()
62 {
63     int n= 6 ;
64     int rc = towerOfHanoi(n,'F','A','T') ;
65     cout<<"no of recursive calls are - "<<rc<<endl;
66     return 0 ;
67 }
68
69
70
```