Assignment No. 1

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Batch – T7

Problem Statement – To Implement the Tower of Hanoi Problem

Code –

```cpp
#include <bits/stdc++.h>
using namespace std;

void solve(int n, char source, char desti, char auxi, int &count)
{
    if (n == 0)
    {
        return;
    }
    count++;
    solve(n - 1, source, auxi, desti, count);
    cout << "Move Disk " << n << " from " << source << " to " << desti << endl;
    solve(n - 1, auxi, desti, source, count);
}

int main()
{

    int n = 5;
    int count = 0;
    solve(n, 'A', 'C', 'B', count);
    cout <<"Total Steps : "<< count << endl;
}
```

Output -

```
[Running] cd "d:\Third Year\DAA\LAB\Assign 1\" && g++ tower_of_hanoi.cpp -o tower_of_hanoi && "d:\Third Year\DAA\LAB\Assign 1\"tower_of_hanoi
Move Disk 1 from A to C
Move Disk 2 from A to B
Move Disk 1 from C to B
Move Disk 3 from A to C
Move Disk 1 from B to A
Move Disk 2 from B to C
Move Disk 1 from A to C
Total Steps : 7

[Done] exited with code=0 in 3.243 seconds
```