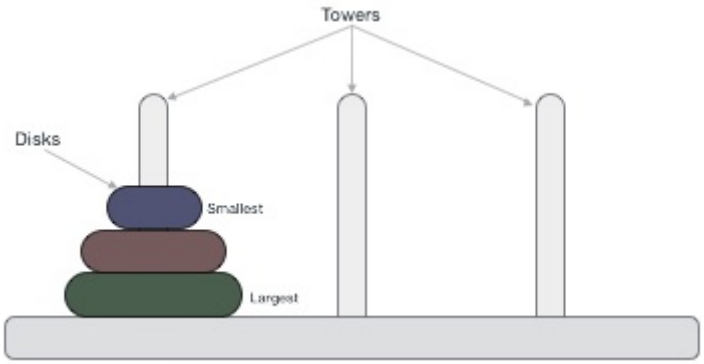
```
Ruby is killed.
Patty is killed.
Kurt is killed.
Wayne is killed.
Kile is killed.
Mike is killed.
Helen is killed.
Jay is killed.
Nick is survived.
```

17. Tower of Hanoi

The **Tower of Hanoi** is a mathematical game or puzzle. It consists of three rods and a number of disks of different sizes, which can slide onto any rod. The puzzle starts with the disks in a neat stack in ascending order of size on one rod, the smallest at the top, thus making a conical shape. Tower of Hanoi puzzle with *n* disks can be solved in minimum 2^n-1 steps. The objective of the puzzle is to move the entire stack to another rod, obeying the following simple rules:

1. Only one disk can be moved at a time.
2. Each move consists of taking the upper disk from one of the stacks and placing it on top of another stack.
3. No disk may be placed on top of a smaller disk.



The input is a positive integer that represents the number of disks you have, and the output should contain the minimum of steps and its moving processes.

Test Case

Please test your program with Input, and then check the answer with Output.

Listing 17: Tower of Hanoi

```
Input：
```

```
3

Output：
7
Move sheet from A to C
Move sheet from A to B
Move sheet from C to B
Move sheet from A to C
Move sheet from B to A
Move sheet from B to C
Move sheet from A to C
```

18. Use linked list to implement palindrome

Please make a palindrome. (word that reads the same when you reverse it). The input consist of several lines ending with EOF. Each line contains a non-empty string of upper case and lower case English letters (‘A’-‘Z’ and ‘a’-‘z’). The length of the string is less than or equal to 100,000.

Note: You must use linked lists; otherwise, no points will be given.

Test Case

Please test your program with Input, and then check the answers with Output.

Listing 18 : Use linked list to implement palindrome

```
Input：
Aawweeaa
Abba
asdfghj

Output：
aawweeaaeewwaa
abbabba
asdfghjhgfdsa
```

19. Palindrome

Given a string with length of *n*, reverse every M letters in the string using a stack. For example, given a string “cardogbug” and if *M* =3, the first three letters are reversed to “rac”, the next three letters are reversed to “god”, and the last three letters are