

1. John has a string, s consisting of n lowercase English alphabetic letters. In one operation, he can delete any pair of adjacent letters with same value. For example, string “aabcc” would become either “aab” or “bcc” after operation.

John wants to reduce s as much as possible. To do this, he will repeat the above operation as many times as it can be performed. Help John out by finding and printing s non-reducible form!

Note: If the final string is empty, print “Empty String”.

Input Format

The first line contains a single integer denoting the length of s .

The second line contains string s .

Constraints

- $1 \leq |s| \leq 100$
- s only contains lowercase English alphabetic letters (i.e., a to z).

Output Format

If the final string is empty, print “Empty String”; otherwise, print the final non-reducible string.

Test Case - 1

Input

9

aaabccddd

Output

abd

Explanation

John can perform the following sequence of operations to get the final string:

aaabccddd \rightarrow abccddd

abccddd \rightarrow abddd

abddd \rightarrow abd

Thus, we print abd.

Test Case - 2

Input

4

baab

Output

Empty String

Explanation

John can perform the following sequence of operations to get the final string:

baab \rightarrow bb

bb \rightarrow Empty String

Thus, we print Empty String.

2. Given a file containing strings separated by space, where the first string is “child” and second string is “Father”.

Write a program which finds number of grandchildren for any given string.

Example:

file.txt

luke shaw

wayne rooney

rooney ronaldo

shaw rooney

mike wayne

Input : ronaldo

Output:2

3. Write a program that reverses the order of the bits in an unsigned int value. The program should input the value from the user and call function reverseBits to print the bits in reverse order. Print the value in bits both before and after the bits are reversed to confirm that the bits are reversed properly.

Input: 8

Output: Before:1000 After:0001