

Problem A. Good String

Time limit 1000 ms

Mem limit 262144 kB

Let's call (yet again) a string **good** if its length is even, and every character in odd position of this string is different from the next character (the first character is different from the second, the third is different from the fourth, and so on). For example, the strings `good`, `string` and `xyyx` are good strings, and the strings `bad`, `aa` and `aabc` are not good. **Note that the empty string is considered good.**

You are given a string s , you have to delete minimum number of characters from this string so that it becomes good.

Input

The first line contains one integer n ($1 \leq n \leq 2 \cdot 10^5$) — the number of characters in s .

The second line contains the string s , consisting of exactly n lowercase Latin letters.

Output

In the first line, print one integer k ($0 \leq k \leq n$) — the minimum number of characters you have to delete from s to make it good.

In the second line, print the resulting string s . **If it is empty, you may leave the second line blank, or not print it at all.**

Examples

Input	Output
4 good	0 good

Input	Output
4 aabc	2 ab

Input	Output
3 aaa	3