

### A. Prefixes

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Nikolay got a string  $s$  of **even** length  $n$ , which consists only of lowercase Latin letters 'a' and 'b'. Its positions are numbered from 1 to  $n$ .

He wants to modify his string so that every its prefix of **even** length has an equal amount of letters 'a' and 'b'. To achieve that, Nikolay can perform the following operation arbitrary number of times (possibly, zero): choose some position in his string and replace the letter on this position with the other letter (i.e. replace 'a' with 'b' or replace 'b' with 'a'). Nikolay can use no letters except 'a' and 'b'.

The prefix of string  $s$  of length  $l$  ( $1 \leq l \leq n$ ) is a string  $s[1..l]$ .

For example, for the string  $s = \text{"abba"}$  there are two prefixes of the even length. The first is  $s[1..2] = \text{"ab"}$  and the second  $s[1..4] = \text{"abba"}$ . Both of them have the same number of 'a' and 'b'.

Your task is to calculate the minimum number of operations Nikolay has to perform with the string  $s$  to modify it so that every its prefix of **even** length has an equal amount of letters 'a' and 'b'.

#### Input

The first line of the input contains one **even** integer  $n$  ( $2 \leq n \leq 2 \cdot 10^5$ ) — the length of string  $s$ .

The second line of the input contains the string  $s$  of length  $n$ , which consists only of lowercase Latin letters 'a' and 'b'.

#### Output

In the first line print the minimum number of operations Nikolay has to perform with the string  $s$  to modify it so that every its prefix of **even** length has an equal amount of letters 'a' and 'b'.

In the second line print the string Nikolay obtains after applying all the operations. If there are multiple answers, you can print any of them.

#### Examples

input	Copy
4	
bbbb	
output	Copy
2	
abba	

input	Copy
6	
ababab	
output	Copy
0	
ababab	

input	Copy
2	
aa	
output	Copy

#### Codeforces Round #587 (Div. 3)

Finished

Practice



#### Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

#### Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

#### Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

#### Submit?

Language: GNU G++11 5.1.0

Choose file: 

选择文件

 未选择任何文件

Submit

#### Problem tags

strings

No tag edit access

#### Contest materials

- Announcement #1 (en) ×
- Announcement #2 (ru) ×
- Tutorial #1 (en) ×
- Tutorial #2 (ru) ×

1  
ba**Note**

In the first example Nikolay has to perform two operations. For example, he can replace the first 'b' with 'a' and the last 'b' with 'a'.

In the second example Nikolay doesn't need to do anything because each prefix of an even length of the initial string already contains an equal amount of letters 'a' and 'b'.

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