# **Two Characters**



String t always consists of two distinct alternating characters. For example, if string t's two distinct characters are x and y, then t could be xyxyx or yxyxy but not xxyy or xyyx.

You can convert some string s to string t by deleting characters from t. When you delete a character from t, you must delete t occurrences of it in t. For example, if t a abaacdabd and you delete the character t a, then the string becomes t bcdbd.

Given s, convert it to the longest possible string t. Then print the length of string t on a new line; if no string t can be formed from s, print t instead.

#### **Input Format**

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

#### **Constraints**

- $1 \le |s| \le 1000$
- s only contains lowercase English alphabetic letters (i.e., a to z).

### **Output Format**

Print a single integer denoting the maximum length of t for the given s; if it is not possible to form string t, print t instead.

#### Sample Input

10 beabeefeab

#### **Sample Output**

5

## **Explanation**

The characters present in s are a, b, e, and f. This means that t must consist of two of those characters.

If we delete e and f, the resulting string is babab. This is a valid t as there are only two distinct characters ( $extbf{a}$  and  $extbf{b}$ ), and they are alternating within the string.

If we delete  $\frac{1}{2}$  and  $\frac{1}{2}$ , the resulting string is  $\frac{1}{2}$  because there are three consecutive  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because there are three consecutive  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because there are three consecutive  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because there are three consecutive  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because there are three consecutive  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because there are three consecutive  $\frac{1}{2}$  because there are three  $\frac{1}{2}$  because the  $\frac{1}{2}$  because

If we delete only e, the resulting string is  $\frac{babfab}{bab}$ . This is not a valid string t because it contains three distinct characters.

Thus, we print the length of babab, which is 5, as our answer.