CMPUT 275 - Tangible Computing
Morning Problem: Creating Palindromes

Description

As you may know, a **palindrome** is a phrase that reads the same forwards as it does backwards, a quick example of this is the word "race car".

For this problem you will be given a string s of length n, your goal is to report the length of the largest string you can create by rearranging the letters of s such that the resulting string is a palindrome.

Input

The first line of input will contain an integer n ($1 \leq n \leq 100,000$), the length of s.
On the following line you will be given a string s (containing only lower case letters `a` - `z`) of length n.

Output

Output a single line containing the length of the largest possible palindrome created by rearranging the letters of s.

Sample Input 1

```
3
abc
```

Sample Output 1

```
1
```

Explanation

There are no pairs of letters that allow us to create a larger palindrome, all possible palindromes with this given input are "a", "b" and "c".

Sample Input 2

```
4
aefa
```

Sample Output 2

```
3
```

Explanation

Since there is a pair of the letter a, we are able to create a palindrome of length 3, one example of such a palindrome given this input is "afa".

Sample Input 3

```
6
abacbc
```

Sample Output 3

```
6
```

Explanation

In this example all letters found are in pairs, this allows us to create a palindrome containing all letters of s, one such example is the string "abccba".