Problem D

Determine Palindrome Message

Sara is a researcher who works on restoring ancient manuscripts. Recently, she found a mysterious manuscript with encrypted text. After careful study, Sara realized that the encrypted text is, in fact, a palindrome. However, the challenge is to determine if it's possible to rearrange the letters in the text to form a valid palindrome.

A palindrome is a word or phrase that reads the same forward and backward. In this case, Sara wants to figure out if she can rearrange the letters in the encrypted text to create a valid palindrome. This could help her decipher the hidden message in the ancient manuscript.

Given the encrypted text, your task is to help Sara determine if it's possible to rearrange the letters to form a valid palindrome. It's not necessary to use all the letters, but the rearrangement should allow for the creation of a valid palindrome.

Input

The first line of input contains an integer N ($1 \leq N \leq 10^5$), the size of the encrypted text. The second and last line of input contains a string of N lowercase characters. The string will have a length of up to 10^5 characters.

Output

You should print "YES" if it's possible to rearrange the letters in the text to form a palindrome, or "NO" otherwise.

Input example 1	**Output example 1**
3 aab	YES

Input example 2	**Output example 2**
3 abc	NO

Input example 3	**Output example 3**
6 aaaaaa	YES