

Problem I. Removing Pairs

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

The *pair removal* operation is removing two adjacent characters from a string. For example, given the string “abcd”, we can obtain “ab”, “ad”, and “cd” by pair removal.

You are given a string t . You can apply pair removal any number of times. Is it possible to obtain the string s ?

Input

The first line contains the string s , and the second line contains the string t ($1 \leq |s| \leq |t| \leq 10^5$). Both strings are composed of lowercase letters of English alphabet.

Output

Print “YES” if it is possible to obtain s from t using pair removal, or “NO” otherwise.

Examples

standard input	standard output
axa abc bc xdda	YES
rrr r dfg d fg rdr	NO
w u ww u	NO

Note

In the first test, one of the possible pair removal sequences is the following:

- ab~~cb~~xdda
- abc~~x~~dda
- ab~~c~~xa
- axa