The TCS Global Coding Contest



ONLINE EDITOR (D)

05 Hr **57** Min **47** Sec

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A B C D E F

String Merge

+ Problem Description

You are provided with a large string and one or more small strings. You need to find if the large string can be formed by combining all the small strings. You can interchange characters of small strings internally and you can combine small strings in any order. Print "YES" if it is possible, otherwise print "NO".

Note: All strings contain lower case alphabets only.

+ Constraints

1 <= length of large string <= 500000

1 <= length of small string <= 1000

1 <= N <= 500

+ Input

First line contains the large string Second line contains an integer N denoting total number of small strings Next N lines contain strings smaller than large string

+ Output

Print single line with YES or NO

+ Time Limit

1

+ Examples

Example 1

Input

dogisaloyalanimal

5

а

alloy

is

god

lamina

Output YES

Explanation:

Large string is "dogisaloyalanimal". There are 5 small strings - "a", "alloy", "is", "god", "lamina". We can do following operations on small strings:

- 1. Interchange characters of "alloy" to form "loyal".
- 2. Interchange characters of "god" to form "dog".
- 3. Interchange characters of "lamina" to form "animal".

So, we formed new set of small strings - "a", "loyal", "is", "dog", "animal". Now combine small strings in the below order:

"dog" + "is" + "a" + "loyal" + "animal"

We got it combined as "dogisaloyalanimal". This is same as large string provided. So, the output is "YES".

Example 2

Input

thisisgood

4

god

is

so hit

Output

NO

Explanation:

Large string is "thisisgood". There are 4 small strings - "god", "is", "so", "hit". We cannot form the large string by combining small strings even after interchanging its characters internally. So, the output is "NO".

Upload Solution [Question : D]

I, **suraj patni** confirm that the answer Took help from online sources submitted is my own. (attributions)

Choose a

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