Gaurav Kumar

The TCS Global Coding Contest

05 Hr 38 Min 34 Sec

- Guidelines
- Coding Area
- Public Testcase Submissions
- Private Testcase Submissions
- Unevaluated Submissions
- Feedback Form
- Graphs
- Zone 1 Statistics

Coding Area

A B C D E F

ONLINE EDITOR (D)

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
a
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, **gaurav kumar** confirm that the answer submitted is my own.

☐ Took help from online sources (attributions)

Choose a File ...