

international collegiate programming contest INDONESIA NATIONAL CONTEST INC 2023



# Problem E Reverse Severer

You are given a string S of length N. There are Q queries (numbered from 1 to Q) that you need to answer. For query i, determine if a string  $T_i$  of length N, can be obtained by performing the following algorithm from the initial string S.

- 1. First, split the string S into one or more substrings.
- 2. Reverse the order of the substrings.
- 3. Concatenate the substrings into a single string.

For instance, you can obtain string SEVERER from string REVERSE by splitting it into R, E, VER, and SE. After reversing the order of the substrings, your substrings will be SE, VER, E, and R. If you concatenate the substrings, then you can obtain string SEVERER.

# Input

The first line consists of an integer N ( $1 \le N \le 10000$ ).

The second line consists of a string S of length N.

The third line consists of an integer Q ( $1 \le Q \le 100$ ).

Each of the next Q lines consists of a string  $T_i$  of length N.

All strings consist of only upper-case letters.

# Output

For each query, output a single line containing a string. If string  $T_i$  can be obtained from the algorithm above, output YES. Otherwise, output NO.

# Sample Input #1

7		
REVERSE		
5		
SEVERER		
EVERSER		
REVERSE		
EVEREST		
RESERVE		





# Sample Output #1

YES	
YES	
YES	
NO	
NO	

Explanation for the sample input/output #1

For query 2, you can split the string into R and EVERSE.

For query 3, note that you can split the string into one substring REVERSE.

#### Sample Input #2

3		
INC		
6		
INC		
ICN		
NIC		
NCI		
CIN		
CNI		

# Sample Output #2

YES			
NO			
NO			
YES			
YES			
YES			

#### Sample Input #3

1		
A		
2		
A		
В		

# Sample Output #3

YES			
NO			