UCF Local Contest (Qualifying Round) — August 24, 2024

Injured Shoulder
filename: `injury`
Difficulty Level: `Easy-Medium`
Time Limit: `5 seconds`

Dr. Orooji injured his right shoulder a few months ago and could type with only one hand for a while. For some reasons, Dr. O missed the space character (blank) often and two words would be next to each other without the space (i.e., words concatenated) and the spell-checker would complain.

The Problem:

Given the words in a dictionary and a word Dr. O has typed, determine the status of the typed word.

The Input:

The first input line contains an integer, n ($2 \leq n \leq 20$), indicating the number of words in the dictionary. Each of the next n input lines contains a dictionary word. Each word starts in column 1, contains at least one lowercase letter, at most 20 lowercase letters, and no other characters. Assume that the dictionary words are unique, i.e., no duplicates.

The next input line contains an integer, m ($1 \leq m \leq 100$), indicating the number of words Dr. O has typed. Each of the next m input lines contains a typed word. Each typed word starts in column 1, contains at least one lowercase letter, at most 40 lowercase letters, and no other characters.

The Output:

For each typed word, output one line as follows:

> 1 – If the typed word is in the dictionary.
> 2 – If the typed word is a concatenation of two words in the dictionary, i.e., Dr. O missed typing the space character (blank).
> 0 (zero) – Otherwise.

Note that if a typed word is in the dictionary and it is also a concatenation of two words in the dictionary, output should be 1.

(Sample Input/Output on the next page)

Sample Input   **Sample Output**

7	1
this	1
is	2
a	1
test	1
th	2
the	0
e	2
12	0
is	0
test	1
isthis	2
the	
th	
ee	
eee	
thee	
best	
istestis	
e	
ea	