beCP
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Task 2.2: Periodic Table Memes (periodictable)

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Time limit: 1 s Memory limit: 128 MB

Lately, you've been seeing a lot of funny images on the internet that use the abbreviations of chemical elements in the periodic table to spell sentences such as "HAsTa La VISTa". This got you wondering if you could do that with more things than just the periodic table.

You started gather some collections of word fragments, and sentences you want to spell, and now you want to decide if you can post those memes and get many fake internet points. What's more, careful meme market analysis has shown that if you can post the same sentence with different constructions, you'd get more internet points, so you'd even want to count the number of ways in which you can do that. Another thing the market analysis has shown, is that you really only care about the number of possibilities, modulo $10^9 + 7$.

Input

The first line contains a single integer N, the number of "elements" you can use to build your sentence. The following N each contain a single string s_i consisting of only lower case letters. The following, and last, line contains a single string S, the sentence you wish to form.

Output

The output consists of a single line containing one integer: the number of ways you can form the sentence with the elements given, modulo $10^9 + 7$.

General limits

- $1 \leq N \leq 1000$
- $1 \leq |s_i| \leq 100$
- $1 \leq |S| \leq 1000$
- All s_i are unique

Additional constraints

Subtask	Points	Constraints
A	20	$\lvert s_i \rvert = 1$
B	20	All s_i have the same length
C	10	$N \leq 10$, $\lvert s_i \rvert \leq 3$, $\lvert S \rvert \leq 20$
D	50	No additional constraint

Scoring

For each of the subtasks, you can get either half points, or full points, depending on your solution. If you always give the correct count (modulo $10^9 + 7$) of solutions, you get all the points. If instead you always correctly indicate the existence or non-existence of a solution, by outputting either a non-zero or zero number, you'll still get half of the points. If neither of those cases applies, you do not get any points. This effectively doubles the number of subtasks you can solve, so keep in mind that just determining whether a solution exists or not can still give you a good amount of points.

Example 1

sample1.in

```
6
h
e
he
ll
lo
o
hello
```

sample1.out

```
2
```

Observe that we can build the "he" part either with "h" and "e" or with "he" directly. Then for the rest, we can only use "ll" and "o" directly, since there is no way to get the first "l" if we'd try to use "lo". This gives us a total of 2 possible ways to form "hello".

Example 2

sample2.in

```
6
h
e
he
ll
lo
o
hello
```

sample2.out

```
42
```

This is the same case as before, except we now give the answer 42, rather than 2. Recall that the scoring is such that this still can give you half the points of the subtask, since you correctly determined that *at least one* solution exists.