Sparse Arrays ☆

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There is a collection of input strings and a collection of query strings. For each query string, determine how many times it occurs in the list of input strings.

For example, given input $strings = ['ab',' ab', abc']$ and $queries = ['ab',' abc',' bc']$, we find 2 instances of 'ab', 1 of 'abc' and 0 of 'bc'. For each query, we add an element to our return array, $results = [2, 1, 0]$.

Function Description

Complete the function matchingStrings in the editor below. The function must return an array of integers representing the frequency of occurrence of each query string in strings.

matchingStrings has the following parameters:

• strings - an array of strings to search

• queries - an array of query strings

Input Format

The first line contains and integer n, the size of $strings$.
Each of the next n lines contains a string $strings[i]$.
The next line contains q, the size of $queries$.
Each of the next q lines contains a string $q[i]$.

Constraints

$1 \leq n \leq 1000$
$1 \leq q \leq 1000$
$1 \leq |strings[i]|, |queries[i]| \leq 20$.

Output Format

Return an integer array of the results of all queries in order.

Sample Input 1

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aba	baba	aba	xzxb

Array: strings

```
4
aba
baba
aba
xzxb
3
aba

xzxb
```

aba	xzxb	ab

Array: queries

```
ab
```

Sample Output 1

```
2
1
0
```

Explanation 1

Here, "aba" occurs twice, in the first and third string. The string "xzxb" occurs once in the fourth string, and "ab" does not occur at all.

Sample Input 2

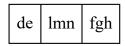| def	de	fgh

Array: strings

de	lmn	fgh

Array: queries

```
3
def
de
fgh
3
de
lmn
fgh
```

Sample Output 2

```
1
0
1
```

Sample Input 3

abcde	sdaklfj	asdjf	na	basdn	sdaklfj	asdjf	na	asdjf	na	basdn	sdaklfj	asdjf

Array: strings

```
13
abcde
sdaklfj
asdjf
na

basdn
```

sdaklfj
asdjf
na
asdjf
na
basdn
sdaklfj
asdjf
5
abcde
sdaklfj
asdjf
na
basdn

| abcde | sdaklfj | asdjf | na | basdn |

Array: queries

Sample Output 3

```
1
3
4
3
2
```

Java 8

```java
1   import java.io.*;
2   import java.math.*;
3   import java.security.*;
4   import java.text.*;
5   import java.util.*;
6   import java.util.concurrent.*;
7   import java.util.regex.*;
8   import java.util.function.Function;
9   import java.util.stream.Collectors;
10
11  public class Solution {
12
13      // Complete the matchingStrings function below.
14      static int[] matchingStrings(String[] strings, String[] queries) {
15          final Map<String, Long> dict = Arrays.stream(strings)
16                  .collect(Collectors.groupingBy(Function.identity(), Collectors.counting()
    ));
17          final int[] res = Arrays.stream(queries).mapToInt(query -> {
18              if (dict.containsKey(query)) {
19                  return dict.get(query).intValue();
20              }
21              return 0;
22          }).toArray();
23
24          return res;
```

```
25
26        }
27
28        private static final Scanner scanner = new Scanner(System.in);
```

Line: 1 Col: 1

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