

The *defaultdict* tool is a container in the collections class of Python. It's similar to the usual dictionary (*dict*) container, but the only difference is that a defaultdict will have a *default* value if that key has not been set yet. If you didn't use a defaultdict you'd have to check to see if that key exists, and if it doesn't, set it to what you want.

For example:

```
from collections import defaultdict
d = defaultdict(list)
d['python'].append("awesome")
d['something-else'].append("not relevant")
d['python'].append("language")
for i in d.items():
    print i
```

This prints:

```
('python', ['awesome', 'language'])
('something-else', ['not relevant'])
```

In this challenge, you will be given **2** integers, *n* and *m*. There are *n* words, which might repeat, in word group **A**. There are *m* words belonging to word group **B**. For each *m* words, check whether the word has appeared in group **A** or not. Print the indices of each occurrence of *m* in group **A**. If it does not appear, print **-1**.

Example

Group A contains 'a', 'b', 'a' Group B contains 'a', 'c'

For the first word in group B, 'a', it appears at positions **1** and **3** in group A. The second word, 'c', does not appear in group A, so print **-1**.

Expected output:

```
1 3
-1
```

Input Format

The first line contains integers, *n* and *m* separated by a space.
The next *n* lines contains the words belonging to group **A**.
The next *m* lines contains the words belonging to group **B**.

Constraints

- $1 \leq n \leq 10000$
- $1 \leq m \leq 100$
- $1 \leq \text{length of each word in the input} \leq 100$

Output Format

Output m lines.

The i^{th} line should contain the **1**-indexed positions of the occurrences of the i^{th} word separated by spaces.

Sample Input

STDIN	Function
5 2	group A size n = 5, group B size m = 2
a	group A contains 'a', 'a', 'b', 'a', 'b'
a	
b	
a	
b	
a	group B contains 'a', 'b'
b	

Sample Output

1 2 4
3 5

Explanation

'a' appeared **3** times in positions **1**, **2** and **4**.

'b' appeared **2** times in positions **3** and **5**.

In the sample problem, if 'c' also appeared in word group B , you would print -1 .