Concatenations (2)   P53390_en

Write a program that, given a word w and a sequence of words $s_1, \ldots, s_n$, prints all the ways to obtain w by concatenating all the given words exactly once.

Input

Input consists of a word w, followed by a natural number $n > 0$, followed by $s_1, \ldots, s_n$. The words only include lowercase letters.

Output

Print all the ways to obtain w by concatenating all the given words exactly once. If there is no solution, print a hyphen. Follow the format of the samples.

Information about the checker

You can print the solutions to this exercise in any order.

Sample input 1

```
holahola
5
ho l hol a a
```

Sample output 1

```
ho+l+a+hol+a
ho+l+a+hol+a
hol+a+ho+l+a
hol+a+ho+l+a
```

Sample input 2

```
patata
2
patata pesol
```

Sample output 2

```
-
```

Sample input 3

```
papapapapa
4
p papa pa apa
```

Sample output 3

```
p+apa+papa+pa
p+apa+pa+papa
papa+p+apa+pa
papa+pa+p+apa
pa+p+apa+papa
pa+papa+p+apa
```

Problem information

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