

Problem R: Out of Sorts

Input file: r.in

Output:

Standard Out

This problem calls for you to sort a list of words. But not so fast! Before you break out your favorite sorting algorithm and start coding you might want to note that the strings aren't to be sorted in alphabetical order, necessarily. They are to be sorted according to an order dictated by the input file. For example, given the following three words:

apple banana bug bugs

And the following order of lowercase letters:

bcdauelflmnghopqijyzkrsxtvw

The output words should be ordered as follows:

banana bug bugs apple

As you will notice 'banana', 'bug' and 'bugs' come before 'apple' because 'b' comes before 'a' in the order string. 'banana' comes before 'bug' and 'bugs' because 'a' (the second letter in 'banana') precedes 'u' (the second letter in 'bug') in the order string. 'bug' comes before 'bugs' because a word that appears as the first part of another word is considered to come before the word that it appears in.

Input/Output

Input is to be read from the file r.in and will be in the following format, beginning with the first line of the file:

< list of words to sort #1>

< order string #1>

< list of words to sort #2>

< order string #2>

...

#

Each list of words will be between 1 and 10 words long and each word will be separated by a single space. All input words and order strings will be in lowercase. A terminating '#' on its own line will indicate the end of the file.

Output should be directed to the standard output with one line of sorted words being output for every list of words and corresponding order string in the input file. Each word in the sorted line should be separated by a single space.

Example Input

acm ewu edu

bcdghijklmnopeqrstuvxyzdwa

clear color cover

abcolvedfghijqrstkmnpuvwxyz

#

Example Output

edu ewu acm

color cover clear

