F002A. Infixes P29428_en

Your task is to write a program that reads a sequence of words and prints, for each word, all the other words of the sequence contained in it.

Your program has to implement and use the function

bool *contains*(*string s1*, *string s2*);

that returns if the word |s1| contains the word |s2| under the precondition that the length of |s1| is greater or equal than the length of |s2|.

For instance, |contains ("enlightenment", "light")|, |contains ("enlightenment", "enlightenment")|, |contains ("enlightenment", "lighten")| and |contains ("enlightenment", "ten")| have to return |true|, but, however, |contains ("enlightenment", "ei")| and |contains ("enlightenment", "might")| have to return |false|.

Input

Input consists in a natural number n followed by n different words $p_1, \ldots, p_n$.

Output

The program has to print a line for each $p_1, \ldots, p_n$ in this order. Each line starts with p_i, followed by the symbol ":" and the list of all the input words contained in p_i, in the same order than the input. Notice that the list corresponding to each p_i always includes p_i, since every word contains itself.

Sample input 1

```
9
lighten
in
o
en
building
light
build
enlightenment
world
```

Sample output 1

```
lighten: lighten en light
in: in
o: o
en: en
building: in building build
light: light
build: build
enlightenment: lighten en light enlightenment
world: o world
```

Problem information

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