
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, \dots, p_n .

Output

The program has to print a line for each p_1, \dots, 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

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

Sample output

```
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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