Permutations with repetition   P12603_en

Write a program that, given n different words $s_1, \ldots, s_n$, prints all the permutations with repetitions that can be made with the words.

Input

Input consists of a natural number $n > 0$, followed by $s_1, \ldots, s_n$.

Output

Print all the permutations with repetitions that can be made with $s_1, \ldots, s_n$.

Information about the checker

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

Sample input

```
3
hola adeu hi
```

Sample output

```
(hola,hola,hola)
(hola,hola,adeu)
(hola,hola,hi)
(hola,adeu,hola)
(hola,adeu,adeu)
(hola,adeu,hi)
(hola,hi,hola)
(hola,hi,adeu)
(hola,hi,hi)
(adeu,hola,hola)
(adeu,hola,adeu)
(adeu,hola,hi)
(adeu,adeu,hola)
(adeu,adeu,adeu)
(adeu,adeu,hi)
(adeu,hi,hola)
(adeu,hi,adeu)
(adeu,hi,hi)
(hi,hola,hola)
(hi,hola,adeu)
(hi,hola,hi)
(hi,adeu,hola)
(hi,adeu,adeu)
(hi,adeu,hi)
(hi,hi,hola)
(hi,hi,adeu)
(hi,hi,hi)
```

Problem information

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