Consonants and vowels   P78898_en

Your task is to write a program that reads n consonants and n vowels, and that prints all the words that can be formed using exactly once each one of the given letters. The words have to start in consonant, and must alternate consonants and vowels.

Input

The input consists of a natural n between 1 and 5, followed by n different consonants and n different vowels. The consonants as well as the vowels are given in alphabetical order.

Output

Your program must print all the words that can be formed with the $2n$ given letters, starting in consonant and alternating consonants and vowels. The words must be written in alphabetical order, one per line. Logically, it is not necessary that the generated words have any meaning.

Sample input 1

```
3
mpt
aeo
```

Sample output 1

```
mapeto
mapote
matepo
matope
mepato
mepota
metapo
metopa
mopate
mopeta
motape
motepa
pameto
pamote
patemo
patome
pemato
pemota
petamo
petoma
pomate
pometa
potame
potema
tamepo
tamope
tapemo
tapome
temapo
temopa
tepamo
tepoma
tomape
tomepa
topame
topema
```

Sample input 2

```
2
cs
ao
```

Sample output 2

```
caso
cosa
saco
soca
```

Sample input 3

```
1
b
u
```

Sample output 3

```
bu
```

Author: Salvador Roura

Problem information

Author: Salvador Roura
Translator: Carlos Molina

Generation: 2026-01-25T12:01:08.967Z