Consonants and vowels   P49889_en

Write a program that reads *n* consonants and *n* vowels, and prints all the words that can be made up by using each letter exactly once. The words must begin with a consonant, and alternate consonants and vowels. In this exercise, we will assume that 'y' is a vowel.

Input

Input consists of a natural number *n* between 1 and 6, followed by *n* different consonants and *n* different vowels. Both consonants and vowels are given in alphabetical order.

Output

Print the words that can be made up with the 2*n* given letters, starting with a consonant and always alternating consonants and vowels. Print the words in alphabetical order, one per line.

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
y
```

Sample output 3

```
by
```

Problem information

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