Broken palindromes   P54747_en
Vuitè Concurs de Programació de la FME (2011-12-21)

(The original statement in Catalan has some jokes. This English version goes straight to the point of the problem.)

A palindrome has been broken into pieces. Put the pieces together in the right order.

Input

Input consists of several cases. Every case begins with the number of pieces n. Follow the n pieces, made up of only lowercase letters. Assume $1 \leq n \leq 8$.

Output

For every case, print the palindrome that can be made by joining all the pieces. There is always exactly one solution.

Sample input

```
8
da
ba
learro
zal
azo
rra
ela
bad
3
b
a
a
2
votemos
someto
1
pop
```

Sample output

```
dabalearrozalazorraelabad
aba
sometovotemos
pop
```

Problem information

Author : Alex Alvarez
Generation : 2024-05-02 19:27:04