

Easy Sorting

Given is a list of words and a lexicographical ordering according to the ascii alphabet. Your task is to sort the words in increasing order.

Input

The first line contains the numbers of test cases k ($k < 100$). Every test case consists of $n+1$ ($1 < n < 50000$) lines. Each line contains a string of 10 characters. The first line of each test case contains n .

Output

Output the sorted list of words.

Example

Input:

```
2
2
helloworld
worldhello
2
aaaaaaaaaa
Aaaaaaaaaa
```

Output:

```
helloworld
worldhello
Aaaaaaaaaa
aaaaaaaaaa
```