C. Digit Sorting

Time Limit: 1.0 Seconds   Memory Limit: 65536K

Several players play a game. Each player chooses a certain number, writes it down (in decimal notation, without leading zeroes) and sorts the digits of the notation in non-decreasing order, obtaining another number. The player who receives the largest number wins.

You are given the list of numbers initially chosen by the players. Output the winner's resulting number.

Input

The first line of each test case contains an integer N ($1 \leq N \leq 50$), indicating the number of the players. Then N integers followed in the second line. Each number will be between 0 and 100000, inclusive.

The input is terminated with $N = 0$.

Output

Output one line for each test case, indicating the winner's resulting number.

Sample Input

```
6
1 10 100 1000 10000 100000
3
9638 8210 331
0
```

Sample Output

```
1
3689
```

Source: TJU Team Selection Contest 2007 (1)

[Problem ID in problemset: 2857](http://acm.tju.edu.cn/toj/vcontest/showp10508_C.html)

Tianjin University Online Judge v1.2.4