

You are given the ages (in years) of all people of a country with at least 1 year of age. You know that no individual in that country lives for 100 or more years. Now, you are given a very simple task of sorting all the ages in ascending order.

Input

There are multiple test cases in the input file. Each case starts with an integer n ($0 < n \leq 2000000$), the total number of people. In the next line, there are n integers indicating the ages. Input is terminated with a case where $n = 0$. This case should not be processed.

Output

For each case, print a line with n space separated integers. These integers are the ages of that country sorted in ascending order.

Warning: Input Data is pretty big (~ 25 MB) so use faster IO.

Sample Input

```
5
3 4 2 1 5
5
2 3 2 3 1
0
```

Sample Output

```
1 2 3 4 5
1 2 2 3 3
```