

ACM U of T Tryouts C3 A - A Research Project

Time limit: 1.0s **Memory limit:** 64M

University of Toronto ACM-ICPC Tryouts 2013

The school year has just begun, so it's time for Alice to find a suitable boyfriend! Naturally, this process will first require some careful research using a convenient online academic source known as Facebook.

Alice is considering G ($1 \leq G \leq 100$) guys, and wants to estimate how well-matched she would be with each of them - in other words, how attractive each of them is. For each guy, Alice can find N ($1 \leq N \leq 100$) pictures of him on Facebook, the i -th of which has attractiveness A_i ($1 \leq A_i \leq 100$). The guy might be as ugly as his least-attractive picture (the one with the smallest attractiveness value), or as hot as his most-attractive picture.

In making her important and complex decision, Alice would like to know the potential range of attractiveness of each of the G potential guys!

Input Specification

Line 1: 1 integer, G

For each guy:

Line 1: 1 integer, N

Line 2: N integers, $A_1 \dots A_N$

Output Specification

For each guy, output 2 integers, the guy's worst-case and best-case attractiveness, respectively.

Sample Input

```
3
4
2 5 1 3
1
98
5
16 11 11 14 21
```

Sample Output

1 5
98 98
11 21

Explanation of Sample

The first guy's worst picture (his third) has attractiveness 1, while his best (his second) has attractiveness 5.

The second guy has only one picture, making his attractiveness definitely 98.

Finally, the third guy's worst-case attractiveness is 11 (with two of his pictures having this value), while his best is 21.