

2. Ranking (tabel)

1 sec / 3 sec

30 points

Some people participated in an informatics contest and each of them scored some number of points. Your task is to compile the ranking list, showing which place each of them achieved. If several participants got the same number of points, they tie for the same places in the ranking.

Input. The first line contains N , the number of participants ($1 \leq N \leq 10^5$).

Each of the following N lines contains the username S_i and the (integer) score P_i of one participant ($0 \leq P_i \leq 10^9$). The username and score are separated by a space. Each username consists of 1 to 20 lowercase letters of the Latin alphabet; the usernames contain no other characters or spaces. The usernames are distinct.

Output. The output should consist of N lines. Each line should contain the place and the username of one participant, with the place formatted as an ordinal number (see the example below). If several participants have the same score, output the range of places that they tie for, separated by a dash (the ‘-’ character, ASCII code 45). Output the participants ordered by their places. The order of lines in a group of participants that tie for the same places may be arbitrary.

Example.	Input	Output
	8	1. aadu
	geedu 28	2.-3. beedu
	aadu 57	2.-3. tseedu
	beedu 44	4. deedu
	feedu 28	5.-7. eedu
	deedu 32	5.-7. feedu
	eedu 28	5.-7. geedu
	iidu 13	8. iidu
	tseedu 44	

In this example, **beedu** and **tseedu** could also be listed in the opposite order. Also, **eedu**, **feedu** and **geedu** could be listed in any order.

Grading. In this task, each test case is graded separately. The test cases are divided into groups where the following additional conditions hold:

0. (0 points) The examples from the task statement. No points will be awarded for solving these, but the grading results will show whether your program works correctly on the evaluation server.
1. (5 points) $N = 3$ (that is, the contest had three participants).
2. (5 points) $P_i \leq 10$ (that is, the maximum possible score is 10 points).
3. (5 points) All participants have distinct scores.
4. (5 points) Participants are given in the correct (non-decreasing points) order in the input; there may be ties.
5. (5 points) $N \leq 2500$; there may be ties.
6. (5 points) No additional constraints.

You may submit several solutions. Each solution you submit may target one or more test groups (possibly all of them).