Sales Report   X56193_en

A company has the annual sales information. The sale price and the number of units sold are known for each product. The company wishes to process this information to obtain the list of products ordered by gross income. The gross income of a product is the amount generated by all sales of the product.

You MUST use the following struct definition to solve the problem:

```
struct Info{
    string code;
    int gross_income;
};
```

Exam score: 3.000000 **Automatic part:** 0.000000%

Input

The input consists of zero or more cases. Each case consists of an integer $n \geq 0$ followed by the information of n products. The information of a product consists of a string that corresponds to the product identifier and two integers that respectively represent the sale price and the number of units sold.

Output

For each case, the list ordered by gross income of the products as shown in the examples. In the case of a tie (when two products have generated the same gross income) will appear before the one that has a lower identifier. After each listing a blank line should be printed.

Sample input

```
5
X34Z21T  7 3532
Y44BB2V  3 5005
Z346K      1 50041
PR5678U  15 998
F834TR   150 10
4
ZA678FD 3 100
XFH66A4 1 200
YG4S       150 2
SS7623T  15 20
4
QT8A       50 0
QS0934B 99 0
QR9043A 45 0
4TTTTT4 27 0
```

Sample output

```
Z346K 50041
X34Z21T 24724
Y44BB2V 15015
PR5678U 14970
F834TR 1500

SS7623T 300
YG4S 300
ZA678FD 300
XFH66A4 200

4TTTTT4 0
QR9043A 0
QS0934B 0
QT8A 0
```

Problem information

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