

Employees Total Revenue

You are given a list of transactions. Each transaction includes employee id, number of products and sold price. Sort the given list of employees in descending order of total revenue.

Input

- The first line contains one integer N - the number of transactions ($1 \leq N \leq 10^5$).
- Each line in the next N lines represents a transaction, contains three integers: C_i , Q_i , and P_i , which are the employee's id, number of products, and price. All integers don't exceed 10^9 .

Output

The required sorted list. Each line in the output contains the employee's id and the total revenue.

If there are employees who have same total revenue, they should be sorted in ascending order of id.

Sample

Input	Output
4	3 500
1 20 5	1 200
2 20 10	2 200
1 10 10	
3 50 10	