Problem A. Simple Counter

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Your task is to create a program, that output how many times the maximum number exists in a given list of numbers.

Input

Number `N` , number of entries.

Next `N` lines, any integer number `K` (negative or positive).

Output

Output the maximum number in the list, and count how many times user entered it.

Examples

standard input	standard output
1 5	5 1
10 6 6 5 4 2 4 1 0 5 6	6 3
2 -1 -2	-1 1

Problem B. Map

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Each student of KBTU knows some quantity of languages. You have to find out languages which everybody knows.

Input

You have given number of students n, next n lines which consist of number of languages which student knows and name of languages.

Output

Print the common languages which every student knows.

Example

standard input	standard output
3 3 Russian English Japanese 1 English 3 English Russian Kazakh	English

Problem C. Alimzhan agay as a Data Scientist

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Alimzhan agay recently decided to become a data scientist. He has a database (a table) of transactions of bank users. the first column contains bank account id and the second amount of transferred money. Help him find number of unique bank accounts

Input

First line n - database size. Next n lines are integer account id and integer amount of money

Output

Print one integer - number of unique bank accounts

Examples

standard input	standard output
5 0 1000 1 400 1 400 2 50000 3 0	4
3 12 13000 2 33333 4 23232	3

Problem D. Random game

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

An unknown number of people are playing the game. The game has N rounds. In each round, a player rolls a die and the number drawn is added to his score. Print all players with their score in descending order of their scores. Guaranteed that the final score of any two players are not equal.

Input

First line of input contains single number N amount of round. Next N lines contains a string S , and P (1 <= P <= 1000): player name and number of dots on die. (very multifaceted die)

Output

Print all players with their score in descending order of their scores.

Guaranteed that the final score of any two players are not equal.

Example

standard input	standard output
5 azat 20 erkebulan 20 azat 2 bekzat 100 erkebulan 10	bekzat 100 erkebulan 30 azat 22

Problem E. Stack Realization

Input file:	standard input
Output file:	standard output
Time limit:	2 seconds
Memory limit:	256 megabytes

You have to realize the stack (of integers) operations. Stack operations are inserting, deleting, taking the top element, and the size of the stack.

The are 4 operations:

1 - inserting an integer

2 - get top element

3 - popping the element

4 - size of the stack

At the end, if your stack is not empty, output all of its elements;

Input

Integer `Q` - number of operations;

Next `Q` lines, read an integer `k` as an operation;

Output

Answer for all operations;

At the end, if your stack is not empty, output all of its elements;

Examples

standard input	standard output
6 1 10 1 20 1 30 2 3 4	Inserted! Inserted! Inserted! Top 30 Deleted 30 2 20 10
5 1 2 1 3 1 4 1 2 1 5	Inserted! Inserted! Inserted! Inserted! Inserted! 5 2 4 3 2
3 1 33 4 1 34	Inserted! 1 Inserted! 34 33