Final Test

2019-01-10

Task: Orders

A supermarket wants to order M products. There are N companies from which they order the products. The companies give the price for which they sell the products to the supermarket.

Write a program that solves the following subtasks:

a) Which is the most expensive product?

b) Which company provides the most products?

c) Which products are provided by only one company?

d) Which two companies provide the exact same products?

Input

The *first line* of the **standard input** contains the count of companies ($1 \leq N \leq 100$), the count of products ($1 \leq M \leq 100$), and the count of offers made by the companies ($1 \leq O \leq 10000$). The next O lines contain the identifier of the company ($1 \leq C_i \leq N$), the identifier of the product ($1 \leq P_i \leq M$) and the price for which the product is provided by the company ($1 \leq Price_i \leq 10000$).

Output

The **standard output** should contain a line containing the **# character before each subtask** solution. This # character line is followed by as many lines as is needed for the output of a subtask. If you can't solve a subtask, you should only output the line containing the # character. If the output format is not correct (less/more # characters are in the output), Biro will write "*Output format error*", even if you have some good solutions.

1. subtask: The first line should contain the identifier of the most expensive product (the price of which is not higher at any of the companies). If there is more than one solution, the output should be the smallest identifier.

2. subtask: The first line should contain the identifier of the company that provides the most products. If there is more than one solution, the output should be the smallest identifier.

3. subtask: The first line should contain the count of products that are provided only by one company. The second line should contain the identifiers of these products, in increasing order. If there is no such company, then the output should be only one line which contains the value 0.

4. subtask: The first line should contain the identifiers of the two companies that provide the exact same products. If there are no such companies, the output should be -1.

	Input (keyboard)		Output (screen)	
#	Line content	#	Line content	
1.	4 5 8	1.	#	
2.	4 1 3	2.	3	
3.	4 2 4	3.	#	
4.	4 4 7	4.	2	
5.	1 1 5	5.	#	
6.	2 1 1	6.	1	
7.	2 2 2	7.	3	
8.	2 4 6	8.	#	
9.	3 3 9	9.	2 4	

Evaluation

Based on 10 test files: **10*(2+2+3+3)=10*10=100 points**

Minimum points required to pass this exam: **40 points**

We only assess programs that aim at solving the actual problems. All the tries that just want to test the Biro system will be evaluated as 0 point (even if you have worked hard with it ☺).

Plagiarism Declaration

Please, **copy** the following Plagiarism Declaration to the beginning of your main.cpp file:

```
/*
%% This solution was submitted and prepared by %% <Name, Neptun ID>
%% for the Final Coding Test of the Programming course.
%% I declare that this solution is my own work.
%% I have not copied or used third party solutions.
%% I have not passed my solution to my classmates, neither  made it public.
%% Students' regulation of Eotvos Lorand University
%% (ELTE Regulations Vol. II. 74/C. § )
%% states that as long as a student presents another student's work
%% - or at least the significant part of it - as their own
%% performance, it will count as a disciplinary fault.
%% The most serious consequence of a disciplinary fault
%% can be dismissal of the student from the University.
*/
```