# Car rental service

An entrepreneur has a car rental company. He registered the car rentals for the given month.

Write a program that answers the following subtasks:

1. How many days were his cars rented in total?
2. Give the car which was rented for the most days in the month.
3. Which day was the most cars rented?
4. List the days on which more cars were rented than on any days in the month before that day.
5. Give for each car for how many days they were rented.

## Input

The first line of the *standard input* contains the count of car rentals ($1 \leq N \leq 1000$). The next N lines contain the data of one car rental each: the plate number of the car (6 character long string), the first day of the rental, then the last day of the rental ($1 \leq F_i \leq L_i \leq 30$).

## 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**: You should write out how many days the cars were rented in total.

**2. subtask**: You should write out the plate number of the car which was rented for the most count of days during the month. If there is more than one solution, the output could be any of them.

**3. subtask**: You should write out the day on which the most cars were rented. If there is more than one solution, you should write out the first one.

**4. subtask**: You should list the days in increasing order on which more cars were rented than on any of the days before that. If there was no such day, the output should be 0.

**5. subtask**: There should be as many lines as many cars were rented. A line should contain the plate number of the car, then the count of times the given car was rented, and the sum of days for how many days the given car was rented. The cars can be written out in arbitrary order.

## Example

| *Input* | *Output* |
|---|---|
| 8<br>AAA111 2 7<br>CCC123 1 9<br>AAA111 9 11<br>BBB111 1 3<br>BBB111 4 8<br>AAA111 20 25<br>CCC123 10 13<br>DDD111 1 20 | #<br>56<br>#<br>DDD111<br>#<br>2<br>#<br>2<br>#<br>AAA111 3 15<br>CCC123 2 13<br>BBB111 2 8<br>DDD111 1 20 |

## Limits

Time limit: 0.1 second

Memory limit: 32 MiB

## Evaluation

**Total points**: 10*(1+2+2+2+3)=10*10=100 points