## Logs Aggregator

You are given a sequence of access logs in format **<IP> <user> <duration>**. For example:

* 192.168.0.11 peter 33
* 10.10.17.33 alex 12
* 10.10.17.35 peter 30
* 10.10.17.34 peter 120
* 10.10.17.34 peter 120
* 212.50.118.81 alex 46
* 212.50.118.81 alex 4

Write a program to aggregate the logs data and print **for each user** the **total duration** of his sessions and a **list of unique IP addresses** in format "**<user>: <duration> [<IP1>, <IP2>, …]**". Order the **users alphabetically**. Order the **IPs alphabetically**. In our example, the output should be the following:

* alex: 62 [10.10.17.33, 212.50.118.81]
* peter: 303 [10.10.17.34, 10.10.17.35, 192.168.0.11]

### Input

The input comes from the console. At the first line a number **n** stays which says how many log lines will follow. Each of the next n lines holds a log information in format **<IP> <user> <duration>**. The input data will always be valid and in the format described. There is no need to check it explicitly.

### Output

Print **one line for each user** (order users alphabetically). For each user print its sum of durations and all of his sessions' IPs, ordered alphabetically in format **<user>: <duration> [<IP1>, <IP2>, …]**. Remove any duplicated values in the IP addresses and order them alphabetically (like we order strings).

### Constraints

* The **count** of the order lines **n** is in the range [1…1000].
* The **<IP>** is a standard IP address in format **a.b.c.d** where **a**, **b**, **c** and **d** are integers in the range [0…255].
* The **<user>** consists of only of **Latin characters**, with length of [1…20].
* The **<duration>** is an integer number in the range [1…1000].
* Time limit: 0.3 sec. Memory limit: 16 MB.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 7  192.168.0.11 peter 33  10.10.17.33 alex 12  10.10.17.35 peter 30  10.10.17.34 peter 120  10.10.17.34 peter 120  212.50.118.81 alex 46  212.50.118.81 alex 4 | alex: 62 [10.10.17.33, 212.50.118.81]  peter: 303 [10.10.17.34, 10.10.17.35, 192.168.0.11] |
| 2  84.238.140.178 nakov 25  84.238.140.178 nakov 35 | nakov: 60 [84.238.140.178] |