# Highscore

Doctor Teminite and his pet - Panda Eyes have created the **Highscore** – a catalogue, holding the high score results of players and their game results. The game is in the form of duels, between 2 players, in which each player tries to score as much as he can.

You will be receiving several lines of input containing information about a duel between 2 players in the following format: “**{player1Score} {player1Name}<->{player2Name} {player2Score}”**. See the examples for more info.

The **winner** of a **duel**, naturally, is the **one** with the **higher score**, and the **loser** – the one with the **lower score**. The **winner** should **add** the **difference of the two scores** to his **total score**, **while the loser** should **subtract** the difference from **his**.

Each player has total (**high**) score, which is the summed up score of all his duels. You must **store every player** and his **total score**, but also, you must **store** **every duel** he has had, with **information** about the **opponent** and **the score** **the player** has **gained**, or **lost**, in the duel with his **opponent**.

When you receive the command “**osu!**” you must **end** the input sequence. When that happens, you must print all the players, **ordered** in **descending** order by their **total score**. **For each** player print his **name**, his **score**, and **all** of the **duels** he has had, with **information about** the **opponent** and the **score** he **gained /** **lost**.

### Input

* The input comes in the form of input lines containing info about a duel between two players in the **format**, **specified above**.
* The input sequence ends when you receive the command “**osu!**”.

### Output

* As output you must print all players, ordered in the way specified above.
* For each player print his name, score and all of his duels in the following format:
* “**{playerName} – ({playerScore})**
* **\* {opponent1Name} <-> {gained/lost score}**
* **\* {opponent2Name} <-> {gained/lost score}**”
* The **prefix** for the duels is an asterisk (**\***) and **3 spaces**.

### Constrains

* The **scores** of the players will be valid integers in **range [0, 1.000.000.000]**.
* The **names** of the players will consist **only** of **English Alphabet letters** and **digits**.
* There will be **NO** invalid input lines in the input sequence.
* Data, which has **NO specified** order of printing, must be printed **in order of input**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 1000 Ivan<->Petyo 4000  2000 Ivan<->Pesho 10000  osu! | Pesho - (8000)  \* Ivan <-> 8000  Petyo - (3000)  \* Ivan <-> 3000  Ivan - (-11000)  \* Petyo <-> -3000  \* Pesho <-> -8000 |
| **Input** | **Output** |
| 36365074 Cookiezi<->Rafis 17057080  36365074 Cookiezi<->AyachiNene 34317137  36365074 Cookiezi<->waaiiru 32394596  36365074 Cookiezi<->AyachiNene 34317137  36365074 Cookiezi<->Chiyo 33680371  34317137 AyachiNene<->Chiyo 33680371  osu! | Cookiezi - (30059049)  \* Rafis <-> 19307994  \* AyachiNene <-> 2047937  \* waaiiru <-> 3970478  \* AyachiNene <-> 2047937  \* Chiyo <-> 2684703  Chiyo - (-3321469)  \* Cookiezi <-> -2684703  \* AyachiNene <-> -636766  AyachiNene - (-3459108)  \* Cookiezi <-> -2047937  \* Cookiezi <-> -2047937  \* Chiyo <-> 636766  waaiiru - (-3970478)  \* Cookiezi <-> -3970478  Rafis - (-19307994)  \* Cookiezi <-> -19307994 |