Problem 4 – Arena Tier

Pesho is a pro gladiator, he is struggling to become master of the Arena. // TODO some more story

You will receive **several input lines** in one of the following formats:

```
"{gladiator} -> {technique} -> {skill}"
"{gladiator} vs {gladiator}"
```

The gladiator and technique are strings, the given skill will be an integer number. You need to keep track of every gladiator.

When you receive a gladiator and his technique and skill, add him to the gladiator pool, if he isn't present, else add his technique or update his skill, only if the current technique skill is lower than the new value.

If you receive "{gladiator} vs {gladiator}" and both gladiators exist in the tier, they duel with the following rules:

Compare their techniques, if they got at least one in common, the gladiator with better total skill points wins and the other is demoted from the tier -> remove him.

If they don't have techniques in common, the duel isn't happening and both continue in the Season.

You should end your program when you receive the command "Ave Cesar". At that point you should print the gladiators, ordered by total skill in desecending order, then ordered by name in ascending order. Foreach gladiator print their technique and skill, ordered desecending, then ordered by technique name in ascending order

Input / Constraints

You will receive input on several lines.

- The input comes in the form of commands in one of the formats specified above.
- Gladiator and technique will always be one word string, containing no whitespaces.
- Skill will be an **integer** in the **range** [0, 1000].
- There will be **no invalid** input lines.
- The programm ends when you receive the command "Ave Cesar".

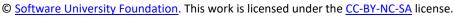
Output

The output format for each gladiator is:

```
"{gladiator}: {totalSkill} skill"
"- {technique} <!> {skill}"
```

Scroll down to see examples.



















Examples

Input	Output	Comments
Pesho -> BattleCry -> 400 Gosho -> PowerPunch -> 300 Stamat -> Duck -> 200 Stamat -> Tiger -> 250	Stamat: 450 skill - Tiger 250 - Duck 200 Pesho: 400 skill	We order the gladiators by total skill points descending, then by name. We print every technique along its skill ordered descending by skill, then by technique name.
Ave Cesar	- BattleCry 400 Gosho: 300 skill - PowerPunch 300	
Input	Output	
Pesho -> Duck -> 400 Julius -> Shield -> 150 Gladius -> Heal -> 200 Gladius -> Support -> 250	Gladius: 700 skill - Support 250 - Shield 250 - Heal 200	Gladius and Pesho don`t have common technique, so the duel isn`t valid. Gladius wins vs Julius /common technique: "Shield". Julius is demoted.
Gladius -> Shield -> 250 Pesho vs Gladius Gladius vs Julius	Pesho: 400 skill - Duck 400	Gosho doesn`t exist so the duel isn`t valid. We print every gladiator left in



