## MOBA Challenger

Pesho is a pro MOBA player, he is struggling to become master of the Challenger tier. So he watches carefully the statistics in the tier.

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

"{player} -> {position} -> {skill}"

"{player} vs {player}"

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

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

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

Compare their positions, **if they got at least one in common**, the player with better **total skill points** wins and the other is **demoted** from the tier -> remove him. If they have same total skill points, **the duel is tie** and they both continue in the Season.

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

You should end your program when you receive the command **"Season end"**. At that point you should print the players, **ordered by total skill in desecending order, then ordered by player name in ascending order**. **Foreach** player print their position and skill, **ordered desecending by skill, then ordered by position name in ascending order.**

### Input / Constraints

* The input comes in the form of commands in one of the formats specified above
* Player and position **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 program ends when you receive the command "Season end"

### Output

* The output format for each player is:

"{player}: {totalSkill} skill"

"- {position} <::> {skill}"

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| Pesho -> Adc -> 400  Gosho -> Jungle -> 300  Stamat -> Mid -> 200  Stamat -> Support -> 250  Season end | Stamat: 450 skill  - Support <::> 250  - Mid <::> 200  Pesho: 400 skill  - Adc <::> 400  Gosho: 300 skill  - Jungle <::> 300 | We order the players by total skill points descending, then by name. We print every position along its skill ordered descending by skill, then by position name. |
| Pesho -> Adc -> 400  Bush -> Tank -> 150  Faker -> Mid -> 200  Faker -> Support -> 250  Faker -> Tank -> 250  Pesho vs Faker  Faker vs Bush  Faker vs Hide  Season end | Faker: 700 skill  - Support <::> 250  - Tank <::> 250  - Mid <::> 200  Pesho: 400 skill  - Adc <::> 400 | Faker and Pesho don't have common position, so the duel isn't valid.  Faker wins vs Bush /common position: "Tank". Bush is demoted.  Hide doesn't exist so the duel isn't valid.  We print every player left in the tier. |