Problem 1 – Concert

Mandy was hired to accept the group applications for the upcoming concert. She thought that it would be easy but now she is in trouble. She needs a programmer to make an application that will help her to safe the concert. She needs you.

You will read commands until you receive **"start of concert"** command.

There are **two types** of commands:

- "**Add; {bandName}; {member 1}, {member 2}, {member 3}"** - applies a band and a **list of members** to the concert. All members must be **unique** so don't add duplicates. If you receive the **same band** twice add only those members that **aren't present** in the list.
- **"Play; {bandName}; {time}"** – the band with the given name plays an **amount of time** on the stage. If you receive a **band** that has **already applied** in the concert, just **increase** the band **time.**

If in both commands the band **does not exist**, add it.

At the end you have to print the **total time** and the bands ordered by the **time** on stage in **descending** order, then by **band name** in **ascending** order.

Also the **final input line** will be "**{bandName}**" and you have to print **all members** for this band in **insertion order**.

Input / Constraints

- The **time** of the bands – **integer** in range **[0 – 2^{31} - 1]**
- There will always be at least one **member** in the group
- The bands will always have **time** on stage
- The final input line will always contain an **existing** band name
- Input will always be valid and in the range specified. You don't need to check it

Output

```
Total time: {totalTime}
{firstBandName} -> {firstBandTime}
{secondBandName} -> {secondBandTime}
{thirdBandName} -> {thirdBandTime}
…
{bandName}
=> {firstMemberName}
=> {secondMemberName}
=> {thirdMemberName}
…
```

Examples

Input	Output

Play; The Beatles; 2584 Add; The Beatles; John Lennon, Paul McCartney, George Harrison, Ringo Starr Add; Eagles; Glenn Frey, Don Henley, Bernie Leadon, Randy Meisner Play; Eagles; 1869 Add; The Rolling Stones; Brian Jones, Mick Jagger, Keith Richards Add; The Rolling Stones; Brian Jones, Mick Jagger, Keith Richards, Bill Wyman, Charlie Watts, Ian Stewart Play; The Rolling Stones; 4239 start of concert The Rolling Stones	Total time: 8692 The Rolling Stones -> 4239 The Beatles -> 2584 Eagles -> 1869 The Rolling Stones => Brian Jones => Mick Jagger => Keith Richards => Bill Wyman => Charlie Watts => Ian Stewart
Add; The Beatles; John Lennon, Paul McCartney Add; The Beatles; Paul McCartney, George Harrison Add; The Beatles; George Harrison, Ringo Starr Play; The Beatles; 3698 Play; The Beatles; 3828 start of concert The Beatles	Total time: 7526 The Beatles -> 7526 The Beatles => John Lennon => Paul McCartney => George Harrison => Ringo Starr