Problem 3 – Handball Statistics

The international handball federation has a job opening at their software development department. They have decided to create a mobile app for their fans and thus are looking for a new developer to join their team. As a huge fan of handball and a great developer, you are extremely motivated to get that spot, because while working for the IHF, you will feel closer to your favorite teams. You have decided to show your skills and motivation by creating a small program, which will help you stand out from the other candidates.

Write a program that aggregates information about wins for each team, as well as who their opponents were.

You will keep receiving data in the following format until the word 'stop' is received:

```
<team1> | <team2> | <team1 points>:<team2 points> | <team2 points>:<team1 points>
```

Once you have all of the information, you need to start processing it. Team's names may contain spaces.

You must store each team's name and its opponents' names. You must also store the wins for every team. The wins are determined by comparing which team has more points, and if both teams have the same amount of points, the overall winner is the one who had more points on away soil. (see example)

Note: There will be no games with a score such as 2:2 | 2:2, where the winner must be decided by a penalty shootout. All pairs will be unique.

Input

• You will receive several lines in the following format:

```
<team1> | <team2> | <team1 points>:<team2 points> | <team2 points>:<team1 points>
```

- The input ends with the command 'stop'
- o There is no invalid input

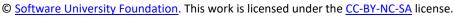
Output

- Print the information for each team in the following format:
 - <team name>
 - Wins: <total wins>
 - Opponents: <opponent_1, opponent_2, ... opponent_N>
 - The teams must be ordered by total wins in descending order. If two teams have the same number of wins, keep in alphabetical order by team name.
 - The **opponents** must be printed in **alphabetical order**.

Constraints

- There are no more than 50 lines of input.
- The team names will consist of several words containing only English alphabet letters.
- The points are integers in range of [0 ... 10]. Examples



















Examples

Input	Output
Denmark Belgium 0:0 1:1 Belgium Austria 2:0 0:2 Latvia Monaco 2:0 0:0 Bulgaria Italy 2:1 3:2 stop	Belgium - Wins: 1 - Opponents: Austria, Denmark Bulgaria - Wins: 1 - Opponents: Italy Denmark - Wins: 1 - Opponents: Belgium Latvia - Wins: 1 - Opponents: Monaco Austria - Wins: 0 - Opponents: Belgium Italy - Wins: 0 - Opponents: Bulgaria Monaco - Wins: 0 - Opponents: Latvia

Explanation:

In the first input line 'Denmark | Belgium | 0:0 | 1:1' Denmark have scored 1 point in total, Belgium have also scored 1 point in total. However, Denmark is the overall winner because they have scored their point on away soil. This means that **Denmark** has **1 win** and its **opponent** is **Belgium**.

On the second input line 'Belgium | Austria | 2:0 | 0:2' Belgium has 4 points and Austria 0 points. Thus, Belgium has 1 win now and its opponents are Denmark (from the first input line) and Austria.

On the third input line 'Latvia | Monaco | 2:0 | 0:0' happens the same as in the second input line. Input line 4 is similar to the first input.

Scroll down for more examples.



















Input	Output
Brazil Germany 1:1 7:0 stop	Germany - Wins: 1 - Opponents: Brazil Brazil - Wins: 0 - Opponents: Germany

Input	Output
Montenegro Cyprus 0:0 1:1 Montenegro Bosnia 0:0 1:1 Montenegro South Africa 0:0 1:1 stop	Montenegro - Wins: 3 - Opponents: Bosnia, Cyprus, South Africa Bosnia - Wins: 0 - Opponents: Montenegro Cyprus - Wins: 0 - Opponents: Montenegro South Africa - Wins: 0 - Opponents: Montenegro















