

AoTa Tournament

Attack on the Ancient (AoTa) is an action real-time strategy game which is very popular among teenagers and adults. The objective of the game is to destroy enemies' building called "The Ancient". The game is played by two teams, fighting each other.

Each month, AoTa teams around the world will compete in the World AoTa Tournament. The final round consists of 8 strong teams, and they will play each other in a round-robin tournament, i.e. each team will play against every other teams. In each match, the two teams will fight to win 2 out of 3 battles. Thus, the score between two teams can only be 2 - 0, 2 - 1, 1 - 2, or 0 - 2; the team who has the score of 2 wins the match.

Given the record of all matches, your task is to determine the rank list. The rank list should be sorted by the number of wins (more wins ranked higher). In the case there is tie, sort them in lexicographical order of the teams' name.

Input

The first 8 lines contains the teams' name. Each team name consists of between 1 and 25 characters, inclusive, and it can only contain alphabetical characters (either lowercase or uppercase) and underscore ('_'). The next 28 lines contains the result of each match with the following format:

`<first team's name> <first team's score> - <second team's score> <second team's name>`

You may safely assume that there are no two teams with the same name, and each pair of teams only appear once in the match record.

Output

Output the rank list of the given tournament. Each line should has a format of:

`<team name> <number of wins>`

See the example for clarity.

Examples

input	Example #1
Water Confidential Noob	

Fanatic
Wicked_Intellectual
Visual_Gaming
Born_to_Win
Simplicity
Water 2 - 1 Fanatic
Water 2 - 1 Born_to_Win
Confidential 0 - 2 Noob
Water 0 - 2 Wicked_Intellectual
Water 2 - 0 Simplicity
Confidential 2 - 1 Wicked_Intellectual
Confidential 0 - 2 Visual_Gaming
Noob 2 - 0 Visual_Gaming
Visual_Gaming 2 - 0 Simplicity
Confidential 2 - 0 Born_to_Win
Water 2 - 0 Visual_Gaming
Confidential 2 - 0 Simplicity
Noob 0 - 2 Fanatic
Noob 0 - 2 Wicked_Intellectual
Fanatic 0 - 2 Visual_Gaming
Wicked_Intellectual 2 - 1 Born_to_Win
Fanatic 2 - 1 Born_to_Win
Noob 0 - 2 Born_to_Win
Water 2 - 0 Confidential
Confidential 2 - 0 Fanatic
Water 1 - 2 Noob
Noob 2 - 1 Simplicity
Fanatic 2 - 0 Wicked_Intellectual
Fanatic 1 - 2 Simplicity
Wicked_Intellectual 2 - 0 Simplicity
Wicked_Intellectual 2 - 0 Visual_Gaming
Visual_Gaming 2 - 0 Born_to_Win
Born_to_Win 2 - 1 Simplicity

output

Water 5
Wicked_Intellectual 5
Confidential 4
Noob 4
Visual_Gaming 4
Fanatic 3
Born_to_Win 2
Simplicity 1

End of Problem