
Basketball league**X96980_en**

We have information on the games played so far in a particular basketball league. For each game, we know the home team along with its score, and the visitor team along with its score. This information of each game is stored in a struct as follows:

```
struct Game {
    string home;           // home team
    int shome;             // home team's score
    string visitor;        // visitor team
    int svisitor;          // visitor team's score
};
```

From this information we want to know, for a given team, the difference between the total amount of points scored as a home team and the total amount of points scored as a visitor team. To that end, your program **MUST** implement the following function:

```
int scoring_ability(const vector<Game>& v, const string& team);
```

where given a vector `v` having the information of the games played so far in our league, returns the difference between the total amount of points scored by `team` as a home and as a visitor team. In case that `team` hasn't played any game yet, its scoring ability will be 0.

Use the following structure adding your code **ONLY** where indicated:

```
#include <iostream>
#include <vector>
using namespace std;
```

```
struct Game {
    string home;           // home team
    int shome;             // home team's score
    string visitor;        // visitor team
    int svisitor;          // visitor team's score
};
```

```
int scoring_ability(const vector<Game>& v, const string& team) {
    // your code
}
```

```
// Pre: n is a natural; the input has available the information of n games
// Post: returns a vector with n correctly initialized games
vector<Game> read_games(int n) {
    // your code
}
```

```
int main() {
    // your code
}
```

Exam score: 3.500000 **Automatic part:** 100.000000%

Input

The input starts with a natural number n , followed by the information of n games. Each game starts with the name of home team along with its scored, followed by the name of the visitor team along with its score. The input finishes with a sequence S of team names.

Output

For each team in S , you have to write its name along with the difference between the total amount of points scored as a home team and as a visitor team.

Sample input

```
8
valencia 78 ferriol 63
stadria 60 salamanca 63
zaragoza 58 bizkaia 63
girona 64 guipuzcua 67
extremadura 55 lugo 67
girona 74 laseu 60
valencia 70 salamanca 77
salamanca 66 girona 68

salamanca
girona
extremadura
zamora
ferriol
```

Sample output

```
salamanca -74
girona 70
extremadura 55
zamora 0
ferriol -63
```

Problem information

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