

---

## Soccer table

P86236\_en

Olimpiada Informática Española — Final 2007 (2007)

---

You are a sports journalist that is in charge of the soccer matches in your newspaper. The editor has asked you for printing all the results of the played matches to date. However, your lack of organization is about to play a dirty trick on you: you do not find the file where you have stored all the results! You only know the number of points that every team has won (0 for a lost, 1 for a tie, and 3 for a won match), and the played matches to date. Write a program that indicates the result of each one of the played games.

### Input

For each case consists of two natural numbers,  $M \leq 10$  and  $N \leq 20$ , representing the number of teams in the league and the number of played matches, respectively. Then,  $M$  lines come with the names of the teams and the number of points that they have. Finally,  $N$  lines come, each one of them contains the number of two of the previous team, indicating that the two team have played a match between them. The input may contain various cases, separated by a line in white. A line with the number  $-1$  indicates the end of the input.

### Output

For each test data of the input, your program must print the result of all the matches in a line, separated by spaces. If the local team has won, it must print "1": if the visiting team has won, print "2"; if there was a tie, print "X". We assure you that each case only admits a solution.

### Scoring

- **Test1:** 45 Points  
Tests with no more than 20 cases with  $M \leq 6$  y  $N \leq 10$ , as the ones in the instance 1.
- **Test2:** 55 Points  
Tests with no more than 20 cases with  $M \leq 10$  y  $N \leq 20$ , as the ones in the instance 2.

### Sample input 1

```
2 1
Barcelona 1
Madrid 1
Barcelona Madrid

2 1
Barcelona 3
Madrid 0
Madrid Barcelona

2 1
Madrid 3
Barcelona 0
```

```
Madrid Barcelona
4 4
Barcelona 4
Madrid 4
Sevilla 2
Getafe 0
Barcelona Getafe
Madrid Sevilla
Sevilla Barcelona
Getafe Madrid

6 9
Barcelona 6
Valencia 4
```

Madrid 4  
Deportivo 4  
Sevilla 3  
Betis 3  
Barcelona Deportivo  
Valencia Deportivo  
Valencia Barcelona  
Betis Sevilla  
Madrid Deportivo  
Sevilla Madrid  
Betis Deportivo  
Madrid Betis  
Betis Valencia

6 10  
Madrid 8  
Barcelona 8  
Valencia 4  
Sevilla 4  
Deportivo 2  
Betis 0  
Madrid Deportivo  
Barcelona Sevilla  
Betis Madrid  
Betis Sevilla  
Barcelona Deportivo  
Betis Barcelona  
Madrid Barcelona  
Sevilla Deportivo  
Deportivo Valencia  
Madrid Valencia

-1

## Sample input 2

10 18  
Deportivo 11  
Betis 9  
Sevilla 6  
AtlMadrid 6  
Barcelona 5  
AthBilbao 4  
Madrid 2  
Espanyol 2  
Valencia 1  
RealSociedad 1  
Deportivo RealSociedad  
Barcelona AtlMadrid  
AthBilbao Espanyol  
AtlMadrid Madrid  
Deportivo Madrid  
Betis Deportivo  
RealSociedad Espanyol  
Valencia Deportivo  
Deportivo Barcelona  
Madrid Barcelona  
Espanyol Sevilla  
Sevilla AtlMadrid  
Madrid Betis  
Valencia AthBilbao  
Betis AthBilbao  
Valencia AtlMadrid  
RealSociedad Betis  
Barcelona Betis

-1

## Sample output 1

X  
2  
1  
1 X X 2  
1 1 2 2 2 2 X X X  
1 1 2 2 X 2 X X 2 X

## Sample output 2

1 1 X 1 1 X X X 1 X 2 1 X 2 1 2 2 X

**Problem information**

Author : Anders Jonsson

Translator : Carlos Molina

Generation : 2014-01-29 13:04:46

© *Jutge.org*, 2006–2014.

<http://www.jutge.org>