

4311 Can I take it?

Given a list of courses, which contain the name of the course, the points awarded by taking the course and the points needed before you can take the course, follow by a list of people trying to take courses. Determine whether a person can take a course or not, based on the points previously earned by each person.

Input

The input consists of: The number of runs. Follow by a list of courses, consisting of course name, the points awarded by the course and the points needed to take the course. Follow by a list of persons, each line with the person name, his points and the name of the course which the person desired to take. There is a blank line before the second list and a blank line after each run.

Output

The list of the people with 'Accepted' or 'Refused' classification and the new credits after the course has been taken.

The outputs of two consecutive runs will be separated by a blank line.

Sample Input

```
1
POO 10 0
ALGORITHMS 10 0
DATA STRUCTURES 10 0
CVP 10 30
LINEAR ALGEBRA 10 30

Javier Jimenez 10 CVP
Arturo America 0 POO
Carlos Calzada 10 ALGORITHMS
Carlos Calzada 20 POO
Carlos Calzada 10 DATA STRUCTURES
Felipe Wong 0 ALGORITHMS
Gonzalo Alvarez 50 CVP
Maria Perez 30 CVP
Alma Garcia 20 LINEAR ALGEBRA
```

Sample Output

```
Refused Javier Jimenez 10
Accepted Arturo America 10
Accepted Carlos Calzada 20
Accepted Carlos Calzada 30
Accepted Carlos Calzada 20
Accepted Felipe Wong 10
Accepted Gonzalo Alvarez 60
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Accepted Maria Perez 40
Refused Alma Garcia 20