

Problem C: Good Groupings

Filename: groupings

Time limit: 2 seconds

After an eventful first week of competitive programming, the campers finally arrive at Universal to spend their Saturday. Of course, everyone would love to run off on their own, but to ensure the safety of the campers, everyone must split up into groups. There were a few rules in place to determine which groups were allowed (and therefore, good). A group is good if it follows both of the following:

1. The group contains more than two people.
2. At least one adult is in the group.

To ensure everyone spends as much time in the park as possible, the staff of the camp have called on you to write a program that does the thinking for them!

Problem

Given a list of adults and some group suggestions, determine if each suggestion produces a good group.

Input

Input will begin with a single integer **c** representing the number of test cases. The first line of each test case will contain 2 integers **n** and **q**, representing the number of adults present at the trip and the number of group suggestions, respectively.

The next **n** lines will each contain a string **a**, representing the name of an adult. Each string will consist of only lowercase letters.

There are **q** lines that follow, each of which represents a group suggestion. Each of the **q** lines begins with an integer **m**, followed by **m** strings **s_i**, representing the number of people in the group suggestion and each person in the group suggestion. Each of these strings will consist of only lowercase letters.

Output

For each group suggestion, on a line by itself, print “Good” if the group is good, otherwise print “Not good”.

Input Bounds and Corresponding Credit

50 Points
<ul style="list-style-type: none">• $1 \leq c \leq 30$• $1 \leq n, m, q \leq 100$• $1 \leq a , s \leq 15$

Samples

Input	Output
2	Good
2 3 justin brygida	Not good
3 justin jacob tomas	Not good
2 brygida brian	Good
3 jonah reid ben	Not good
3 2 nick sara junior	
3 nick sara junior	
3 justin brygida jack	