

Coding Arena



A B C D E

Problem : Online Communities - Connectivity

In a social network, online communities refer to the group of people with an interest towards the same topic.

People connect with each other in a social network. A connection between Person **I** and Person **J** is represented as **C I J**. When two persons belonging to different communities connect, the net effect is merger of both communities which **I** and **J** belonged to.

Your task is to find out whether two persons are in a same group or not.

Input Format:

Input will consist of three parts, viz.

1. The total number of people on the social network (**N**)
2. Queries
 - a. **C I J**, connect **I** and **J**
 - b. **Q K L**, query the community to find out if **K** and **L** belong to the same group

-1 will represents the end of input.

Output Format:

For each query **Q**, print "Yes" if **K** and **L** are in a same group else print "No".

Constraints:

$$1 \leq N \leq 10^6$$

$$1 \leq K, L \leq N$$

$$1 \leq I, J \leq N$$

Sample Input and Output

SNo.	Input	Output
1	5 C 1 2 Q 1 2 C 2 3 C 3 4 Q 1 2 Q 1 3 Q 3 2 Q 1 5 -1	Yes Yes Yes Yes No

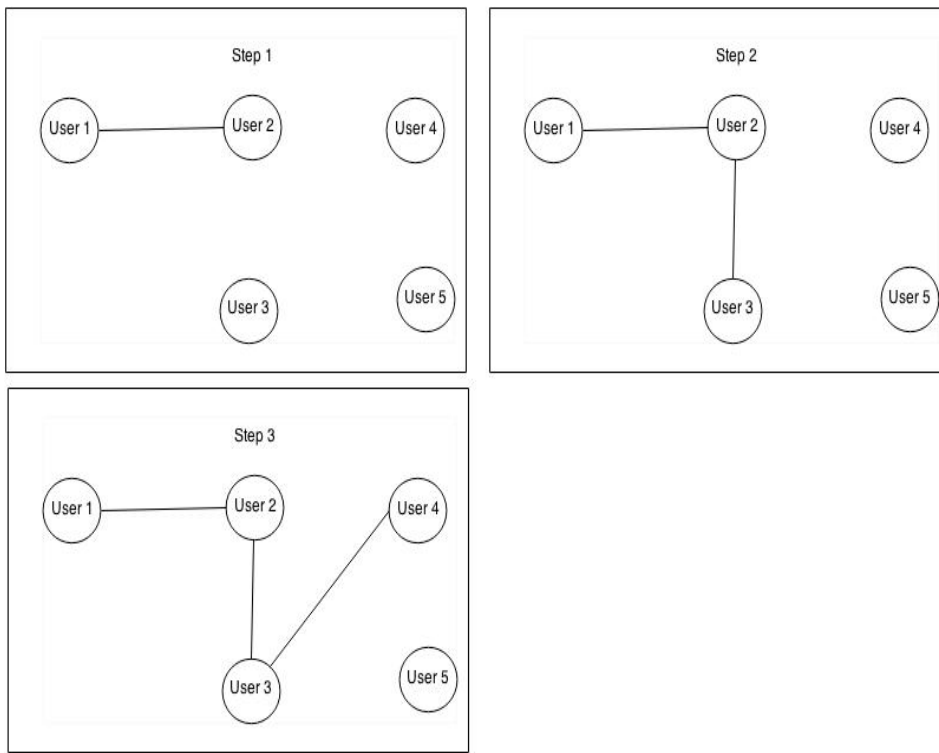
Explanation:

Step-i defines the i-th request to join the group. Now, in the given example, at first, user 2 will make a request to connect with user 1. Next, user 3 will connect with user 2 followed by user 4 with user 3. After all these steps, the modified network is illustrated by figure Fig 1.

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So after step 1, user 1 and user 2 are in a same group.

After step 2, user 2, user 3 and user 1 are in a same group.
And finally after step 3 user 1, 2, 3, 4 are in a same group.

In the given example there are 5 queries:

1st query was asked after step 1: At this point 1 and 2 are connected and are in a same group.
Remaining queries were asked step 3: At this point 1 and 2 are in a same group, 1 and 3 are in a same group, 3 and 2 are in a same group but 5 not in a same group as of 1.

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from `<conio.h>` / `<process.h>` as these files do not exist in gcc

Note:

For C and C++, return type of `main()` function should be `int`.

Submit Answer

☐ I, **BASANT BHALA** confirm that the answer submitted is my own.

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