

Problem: The Suspicious Backpack



Final-year students from the Police Academy were handed a challenging team project as part of their training. A suspicious backpack was found in a huge shopping centre and they must identify the person who put it there. To make things harder for them, the camera surveillance system had been switched off. Thus, police trainees could only interview witnesses and have heard of many *suspects* who had been at the gallery where the backpack was left. In the sequel, assume that every suspect has been at the gallery exactly once.

After all the interviews were over, students put together the information they collected, which is of the following two types:

- *Preceding conjecture*: A suspect X was at the gallery before another suspect Y . More precisely, X left the gallery before Y arrived.
- *Concurrent conjecture*: At some moment in time, two different suspects, X and Y , were both at the gallery.

Before proceeding with the investigation, the students want to know if anyone lied. In other words, they want to find out whether the set of all gathered conjectures is *inconsistent*, in the sense that the described scenario is impossible.

Let us look at two examples with four suspects: Anne, Bob, Cora, and Dan. In both examples, the students have learned that Anne was at the gallery before Bob, that Cora was at the gallery before Dan, and that Bob and Cora were both at the gallery at some moment.

- First, suppose they have also learned that Bob and Dan were at the gallery at the same time. All this is possible (the set of conjectures is consistent). For a proof, consider the following sequence of events which is compatible with all conjectures: Anne arrived, Anne left, Bob arrived, Cora arrived, Cora left, Dan arrived, Bob left, Dan left.
- Now suppose that, instead of Bob and Dan, it is Anne and Dan who were at the gallery at the same time. In this case, someone must have lied (the set of conjectures is inconsistent). As every suspect has been at the gallery only once, “Anne before Bob” and “Bob and Cora at some moment” imply that Anne left before Cora left. Since Cora left before Dan arrived, Anne and Dan could not have been simultaneously at the gallery.

Task

Write a program that, given a set of suspects, a set of preceding conjectures and a set of concurrent conjectures, finds out whether the set of all conjectures is inconsistent.

Input

The first line has three integers: S , which is the number of suspects, P , which is the number of preceding conjectures, and C , which is the number of concurrent conjectures. Suspects are identified by integers, ranging from 0 to $S - 1$.

Each of the following P lines specifies a different preceding conjecture. It has two distinct integers, x and y , which indicate that suspect x was at the gallery before suspect y .

Each of the following C lines specifies a different concurrent conjecture. It has two distinct integers, x and y , which indicate that, at some moment, suspects x and y were both at the gallery.

Constraints

- $2 \leq S \leq 20\,000$ Number of suspects
- $1 \leq P \leq 50\,000$ Number of preceding conjectures
- $1 \leq C \leq 50\,000$ Number of concurrent conjectures
- $0 \leq x, y < S$ Suspects

Output

The output has one line with: **Inconsistent conjectures**, if the set of all conjectures is inconsistent; **Consistent conjectures**, otherwise.

Sample Input 1

```
5 3 2
0 1
2 3
2 4
1 2
1 3
```

Sample Output 1

```
Consistent conjectures
```

Sample Input 2

```
5 3 2
0 1
2 3
2 4
1 2
0 3
```

Sample Output 2

Inconsistent conjectures

Sample Input 3

```
6 6 2
0 1
0 2
0 3
1 2
1 3
2 3
4 0
5 3
```

Sample Output 3

Consistent conjectures