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B. Only One Bag II

Time Limit: 1.0 Seconds   Memory Limit: 65536K

Bags! Bags! One of the benefits of ACMer is we can obtain new bags for free. But because some reasons that we don't know, we are only given one bag this time. So we decide use the bag one by one.

But it is hard to decide the sequence. One may want to use the bag before else. For example, A wants to use the bag before B, and B wants to use the bag before C.

Now here is the question, give you the number of people, and the conditions they require. Please give out one sequence we can have.

If there are more than one sequence, we will let the person whose number is smaller use the bag first.

Input

The first line of input is a integer t (t≤10), means there are t test case.

For each test case, there are two integers in the first line, n(n≤100) and m(m≤100). n means there are n people in the team. m means that there are m conditions. Then m lines follow, each line contains two integer, x_i(1≤x_i≤n) and y_i(1≤y_i≤n, y_i!=x_i), which means the x_i person must use the bag before the y_i person.

Output

For each test case, there is only one line.

There are n integers in this line, one space after each integer, which means the sequence we can have.

If we don't have a legal sequence, please output "Low IQ".

Sample Input

```
3
3 0
3 3
2 3
3 1
2 1
3 3
1 2
2 3
3 1
```

Sample Output

```
1 2 3
2 3 1
Low IQ
```

Hint:
For the first test, there are 6 kinds of legal sequence:
1,2,3; 1,3,2; 2,1,3; 2,3,1; 3,1,2; 3,2,1; We choose the smallest one: 1,2,3
For the second test, there is only one kind of sequence:
2,3,1
For the third test, we cannot find any kind of sequence.

Source: TJU Team Selection 2013

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