Technical Difficulties

Lea is on vacation and this time, she takes a city tour. She has already planned all the things that she wants to visit. Unfortunately, the public transport provider is not very reliable. Every day there are technical difficulties. In fact, exactly one connection is not usable on each day.

Lea is worried that this might make her trip impossible. For her plan to work, it must be possible to go from every station to all other stations. So from now on, every morning she looks up which connection is not working that day. But she still does not know whether this connection was needed or not! Can you provide her with a list of connections that, if not usable, make it impossible to reach every station from every other station?

Input

The first line of the input contains an integer t. t test cases follow.

Each test case starts with two integers n and m, the number of stations and connections in the public transportation network. m lines follow, describing the connections. The i-th line consists of two integers u_i and v_i, the two stations connected by the i-th connection. Connections are undirected.

Output

For each test case, print a line containing "Case #i: x" where i is its number, starting at 1, and x is a sorted, space-separated list of the indices of connections that make Lea's trip impossible if they are not usable. Each line of the output should end with a line break.

Constraints

- $1 \le t \le 20$.
- $1 \le n \le m + 1 \le 10000$.
- $1 \le u_i, v_i \le n$ for all $1 \le i \le m$.
- The public transportation network will be connected.
- There is at most one connection between each pair of stations.
- No station is connected to itself.

Sample Input 1

```
7
4 4
1 2
2 3
3 4
2 4

4 3
1 2
2 3
3 4

3 3
1 2
2 3
3 1

5 5
1 2
1 3
1 4
2 3
4 5

4 5
1 2
1 3
1 4
2 4
3 4

7 9
1 4
1 7
2 7
3 4
4 5
4 6
4 7
5 6
6 7

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

Sample Output 1

```
Case #1: 1
Case #2: 1 2 3
Case #3:
Case #4: 3 5
Case #5:
Case #6: 3 4
Case #7: 2 5 6
```