

## EC\_P - Critical Edges

[https://www.spoj.com/problems/EC\\_P](https://www.spoj.com/problems/EC_P)

Given a connected graph, you must find all the edges that are critical, in other words you must find the edges which when removed divide the graph.

### Input

The first line contains a  $NC$  ( $1 \leq NC \leq 200$ ), the number of test cases integer. Then follow  $NC$  test cases.

Each case begins with two integers  $N$  ( $1 \leq N \leq 700$ ) and  $M$  ( $N - 1 \leq M \leq \frac{N * (N - 1)}{2}$ ),

the number of nodes and the number of edges respectively. Then follow  $M$  lines, each with a pair of integers  $a$   $b$  ( $1 \leq a, b \leq N$ ) indicate that between the node  $a$  and the node  $b$  there is an edge.

### Output

For each test case print the list of ways to protect the following format:

Caso #n

t

$x_1$   $y_1$

$x_2$   $y_2$

...

$x_t$   $y_t$

Where  $n$  is the case number (starting from 1),  $t$  is the total of critical edges, list elements  $x_i$   $y_i$  indicates, for each line, there is a critical edge between the node  $x_i$  and node  $y_i$  ( $1 \leq x_i \leq y_i \leq N$ ). In addition, the list should be sorted in no-decreasing order first by  $x_i$  and then by  $y_i$ . Also  $x_i < y_i$  must hold.

If there isn't any critical edge print: "Sin bloqueos" (quotes for clarity).

### Example:

| Input | Output       |
|-------|--------------|
| 3     | Caso #1      |
| 5 4   | 4            |
| 1 2   | 1 2          |
| 4 2   | 2 3          |
| 2 3   | 2 4          |
| 4 5   | 4 5          |
| 5 5   | Caso #2      |
| 1 2   | 2            |
| 1 3   | 3 4          |
| 3 2   | 4 5          |
| 3 4   | Caso #3      |
| 5 4   | Sin bloqueos |
| 4 6   |              |
| 1 3   |              |
| 1 4   |              |
| 2 1   |              |
| 3 2   |              |
| 4 2   |              |
| 4 3   |              |

[github.com/andy489](https://github.com/andy489)