1201 – A Perfect Murder

"Yes, I am the murderer. No doubt" I had to confess it in front of all. But wait, why I am confessing? Nobody wants to go to jail, neither do I. As you have suspected there is something fishy. So, let me explain a bit.

The murder was happened in 19th June, at 11:30 pm this year (2009) according to the medical report. So, I was asking the judge "Can you find the time 19th June 11:30 pm in Bangladesh?" The judge informed other reporters to find the time. But alas! There was no time - "2009, 19th June, 11:30 pm". So, the judge got a bit confused about my confession. So, I began to tell them, "The time the murder was happened, is not a valid time according to you. So, how can you claim that I am the murderer?"

And what happened next, you all know. I am in the streets again with a clean sheet.

But now I have planned to kill again. I have a list of **N** mosquitoes which are to be killed. But there is a small problem. If I kill a mosquito, all of his friends will be informed, so they will be prepared for my attack, thus they will be impossible to kill. But there is a surprising fact. That is if I denote them as a node and their friendship relations as edges, the graph becomes acyclic.

Now I am planning when and how to kill them (how to get rid of the law!) and you have to write a program that will help me to find the maximum number of mosquito I can kill. Don't worry too much, if anything goes wrong I will not mention your name, trust me!

Input

Input starts with an integer **T (≤ 50)**, denoting the number of test cases.

Each case starts with a blank line and two integers **N (1 ≤ N ≤ 1000)** denoting the number of mosquito I want to kill and **M** denoting the number of friendship configurations. Each of the next **M** lines contains two integers **a** and **b** denoting that a^{th} and b^{th} mosquitoes are friends. You can assume that **(1 ≤ a, b ≤ N, a ≠ b)** and each friendship relation is given only once. As I have already mentioned, you will not find any cycle in the relations.

Output

For each case, print the case number and the maximum number of mosquitoes I can kill considering the conditions described above.

Sample Input	Output for Sample Input
3 4 3 1 2 1 3 1 4 3 2 1 2 2 3 5 4 1 2 1 3 2 4 2 5	Case 1: 3 Case 2: 2 Case 3: 3