



PROBLEM F

FABULOUS DAGy

Little poopi had something strange that was called *DAGy*. poopi liked *DAGy* so much, but when he showed *DAGy* to other children they scared and ran away! *DAGy* is not a pet or a toy; it is a special kind of graph! *DAGy* is made up of a directed acyclic graph plus one additional directed edge. With this additional edge a cycle forms that goes through every vertex in the graph.

Once when poopi was playing with *DAGy*, it fell out of his hands and became totally deformed. He cried and cried. He denied new graphs because he wanted his own *DAGy*.

It is said that computer programmers are supermen, because they can solve problems that nobody else is able to even approach. You, the computer programmer! Help little poopi and dispose his *DAGy* again!

Input (Standard Input)

In the first line there is an integer T ($T \leq 40$), the number of tests. You are given N and M ($1 \leq N \leq 400$) in the first line of each test, which are the number of vertices and the number of edges respectively. Next M pairs of integers u, v ($0 \leq u, v < N$) meaning that there is an edge from vertex u to vertex v . There is at most one edge between each pair of vertices. It is guaranteed that each input graph is a directed acyclic graph with one additional edge between two distinct vertices of graph.

Output (Standard Output)

DAGy can be put back in order if you find the maximal cycle that goes through every vertex. If you found such a cycle print "Yeah, I'm superman" in a single line. Otherwise print "Your *DAGy* was initially defected!" (Quotes for clarity) You are superman trying to help little poopi anyway!

Sample Input and Output

Sample Input	Sample Output
2	Yeah, I'm superman
3 3	Your DAGy was initially defected!
0 1	
1 2	
2 0	
4 5	
0 1	
1 2	
2 0	
0 3	
3 2	