Problem A. AK the Problems

Input file:	stdin
Output file:	stdout
Time limit:	2 seconds
Memory limit:	256 MB

Suzukaze , a Codefalser who has the **master** title, is now competing in a contest on Codefalses. He has solved all the problems except the last one and there are only ten minutes left. This is a crucial contest to **Suzukaze** so he is asking for your help. The problem statement follows:

Two players are given a forest(undirected acyclic graph) and decide to play a game on it. The first player plays first and they take alternating turns. In each turn, the current player can either 1) delete an edge or 2) delete a vertex and the edges on it. Whoever is unable to make a move, loses. Determine who wins if they both play optimally.

If **Suzukaze** solves this last problem and AK the problemset, he will achieve a new title - **grandmaster** . However, if he fails on this problem, he will lose all the ratings and stop competing in any contests. Can you help him solve this problem?

Input

The first line contains two integers n and m ($1 \le n \le 10^5, 0 \le m \le n-1$), the number of vertices in the forest and the number of edges in the forest. The vertices in the forest are labeled from 1 to n.

In the following m lines, each of the lines contains 2 integers u, v ($1 \le u, v \le n; u \ne v$), which means that there is an undirected edge connecting vertex u and vertex v.

It's guaranteed that the input data is a forest.

Output

If the first player will win the game, output "Suzukaze becomes a grandmaster!"(without quotes). Otherwise, output "Suzukaze loses all his ratings!"(without quotes).

Examples

stdin	stdout
8 6 1 2 2 3 4 5 5 6 6 7 7 8	Suzukaze loses all his ratings!

stdin	stdout
2 1 1 2	Suzukaze becomes a grandmaster!