Problem H: Cyber Security War

Filename: `war`
Time limit: `1 second`

Arup is running his cryptography class, CIS 3362 and has a great idea for a project. He wants to split the class into two teams and pit them against each other in a cyber-security contest. Unfortunately, several pairs of students are sworn enemies, so he can't put them on the same team. Since this is a team contest, he also requires that each team have at least two people. Help Arup determine whether or not he can split up his class into two teams.

Input

The first line of input will contain two space separated integers: s ($4 \leq s \leq 100$) and e ($0 \leq e \leq 2500$), representing the number of students in the class and the number of pairs of students who are enemies in the class, respectively. The students in the class are numbered from 0 to s-1. The following e lines will contain a pair of distinct space-separated integers representing two students in the class that are sworn enemies, who you may not place on the same team. Each pair listed will be unique.

Output
Output "YES" on a line by itself it there exists a way to split the class into two teams with each team having at least two people and "NO" otherwise.

Samples

Input	Output
4 5 0 1 0 2 1 2 1 3 0 3	NO
4 4 0 2 0 3 1 2 1 3	YES