Problem B

In a league, every team plays one match agains every other team. The winner of the match gets one point; there are no draws. The team (or the teams) that at the end have the largest number of points get the trophy. Some of the matches have already been played, and you are interested whether your favourite team can possibly win the trophy.

Input and output

The input consists of several instances. The first line of each instance contains integers $n \leq 50$ and $m \leq \binom{n}{2}$, the number of teams and the number of matches that were aleady played. The teams are numbered from 1 to n. Each of the next m lines contains two integers a and b, indicating that the team a won the match with the team b. The matches are between different pairs of teams.

For each instance, output YES if the team number 1 can win the trophy, NO otherwise.

Example

Input:

```
3 1
2 1

4 2
2 1
3 1
```

Output:

```
YES
NO
```