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Points: 100 (partial)
Time limit: 1.0s
Memory limit: 256M

Author:
admin

Problem type

Allowed languages
C, C++

Problem Statement

You're a marathon runner getting ready for IIIT's big race. There are different starting points (nodes) scattered across the city, connected by different paths (edges), on which you can run in either direction. Since Hyderabad is a large city, not all the starting points may be reachable from every other point.

You're curious: Can you start from any point, run without repeating any path, and end up back where you started?

Your task is to find out if there's a starting point that lets you complete the marathon without doubling back. If there is, say YES. If not, say NO. Time to hit the pavement and see if you can circle back to where you began!

Input Format

The first line of input contains two integers n and m denoting the number of nodes and edges respectively.

The following m lines have two integers u and v each, denoting an edge between these nodes.

Constraints

$1 \leq n \leq 100,000$

$1 \leq m \leq min(n(n-1) \ / \ 2, 200,000)$

$1 \leq u, v \leq n$

Output Format

If it is possible for you to end up back where you started as described above, output YES. Otherwise, output NO.

Sample Test Case 0:

Input:

```
5 4
1 2
5 3
4 5
4 3
```

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Output:

```
YES
```

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Explanation:

You can start at 5 and go to 3. Then from 3 you can go to 4 and then from 4 you can get back to 5.

Sample Test Case 1:

Input:

```
6 4
3 1
2 4
5 6
5 4
```

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Output:

```
NO
```

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No matter where you start from, you cannot again reach that point again.

Clarifications

Request clarification

No clarifications have been made at this time.