

Contest Duration: 2025-05-03(Sat) 08:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250503T2100&p1=248>) - 2025-05-03(Sat) 09:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250503T2240&p1=248>) (local time) (100 minutes)

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C - Cycle Graph?

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Time Limit: 2 sec / Memory Limit: 1024 MB

Score : 300 points

Problem Statement

You are given a simple undirected graph with N vertices and M edges. The vertices are numbered $1, 2, \dots, N$ and the edges are numbered $1, 2, \dots, M$. Edge i connects vertices A_i and B_i .

Determine whether this graph is a cycle graph.

▶ Definition of simple undirected graph

▶ Definition of cycle graph

Constraints

- $3 \leq N \leq 2 \times 10^5$
- $0 \leq M \leq 2 \times 10^5$
- $1 \leq A_i, B_i \leq N$
- The given graph is simple.
- All input values are integers.

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Input

The input is given from Standard Input in the following format:

```
 $N$   $M$   
 $A_1$   $B_1$   
 $\vdots$   
 $A_M$   $B_M$ 
```

Output

Output Yes if the given graph is a cycle graph; otherwise, print No.

Sample Input 1

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

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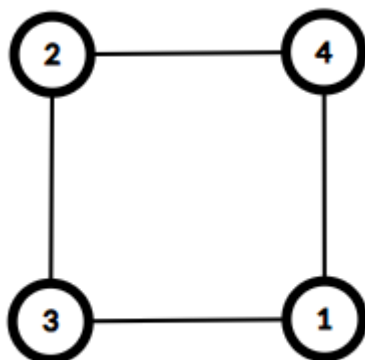
Sample Output 1

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```
Yes
```

[Copy](#)

The given graph is as follows, and this is a cycle graph.



Sample Input 2

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

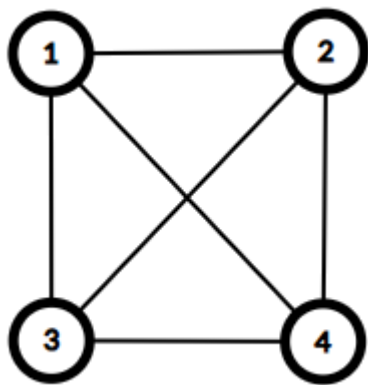
Sample Output 2

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No

[Copy](#)

The given graph is as follows, and this is not a cycle graph.



Language

Python (CPython 3.11.4)

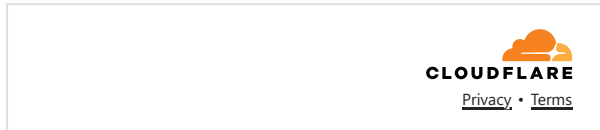
Source Code

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1

* at most 512 KiB

* Your source code will be saved as `Main.extension`.



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