ADAlab Online Judge

🏠 Home　　▦ Problems　　🏆 Contests　　⌁ Status　　📊 Rankb101109107 ▾

ℹ About ▾

☰ Submissions

📊 Rankings

🏠 View Contest

directed cycles.

Given a **directed** graph $G = (V, E)$, note that:

- For any two vertices u, v in V, there may not exists path from u to v.
- G doesn't have multiple edges and self-loops.

V is a set of n vertices, denoted by $1, 2, ..., n$.

E is a set of m edges, and each edge is represented by two ordered vertices u, v, which denotes an edge from vertex u to vertex v.

Please answer if graph G is a *directed acyclic graph* (DAG) or not.

Input

The first line contains two integers n and m — the size of V and the size of E.

Each of the following m lines contains two integers u_i and v_i, being an edge in E.

Restrictions

- $2 \le n \le 10^5$
- $1 \le m \le min(\frac{n(n-1)}{2}, 2 \times 10^5)$
- $1 \le u_i, v_i \le n, u_i \ne v_i$ for $1 \le i \le m$

Output

Output one line.

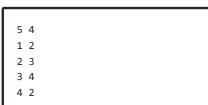If graph G is DAG, output "YES". Otherwise, output "NO".

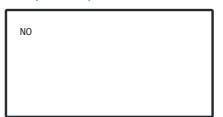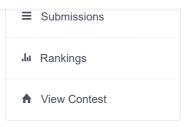ℹ **Information**

ID	1
Time Limit	1000MS
Memory Limit	256MB
IO Mode	Standard IO
Created By	ta_david
Level	Hidden
Score	100
Tags	Show

☁ **Statistic**　　Details

🟩 AC　🟥 WA

WA: 20
21.05%

AC: 75
78.95%

Sample Input 1 📋

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

Sample Output 1

```
YES
```

Sample Input 2 📋

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

Sample Output 2

```
NO
```

ADAlab Online Judge

Home   **Problems**   **Contests**   **Status**   **Rank** t101109107 ▼

ℹ️ About ∨

☁️

```
1
```

✅ You have solved the problem

⚠️ Contest has ended

🐞 Submit for Sample Test   ✏️ Submit

Sample Test Input

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

Sample Test Output
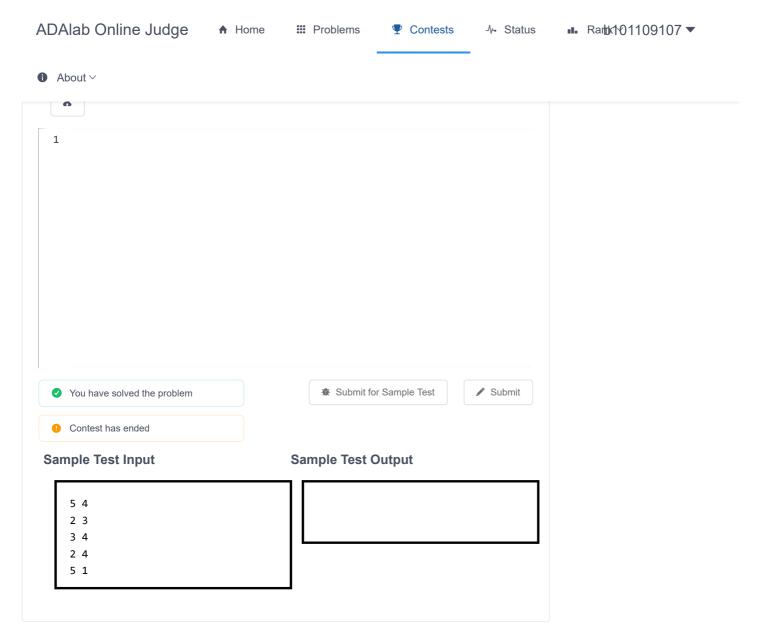
ADAlab Online Judge
Powered by OnlineJudge   Version: 20220706-3ff68