Problem L. Path Graph?

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

You are given a simple undirected graph with N vertices and M edges. The vertices are numbered $1, 2, \ldots, N$, and the edges are numbered $1, 2, \ldots, M$.
Edge i $(i = 1, 2, \ldots, M)$ connects vertices u_i and v_i.

Determine if this graph is a path graph.

▶ What is a simple undirected graph?

▶ What is a path graph?

Constraints

- $2 \leq N \leq 2 \times 10^5$
- $0 \leq M \leq 2 \times 10^5$
- $1 \leq u_i, v_i \leq N$ $(i = 1, 2, \ldots, M)$
- All values in the input are integers.
- The graph given in the input is simple.

Input

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

$$
\begin{array}{l}
N \ M \\
u_1 \ v_1 \\
u_2 \ v_2 \\
\vdots \\
u_M \ v_M
\end{array}
$$

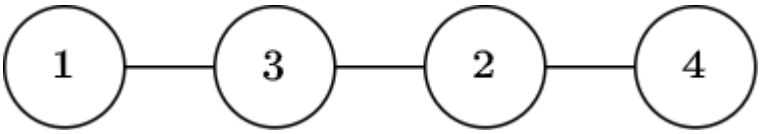
Output

Print `Yes` if the given graph is a path graph; print `No` otherwise.

Sample 1

Input	Output
4 3 1 3 4 2 3 2	Yes

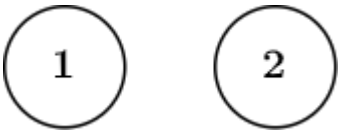
Illustrated below is the given graph, which is a path graph.



Sample 2

Input	Output
2 0	No

Illustrated below is the given graph, which is not a path graph.



Sample 3

Input	Output
5 5 1 2 2 3 3 4 4 5 5 1	No

Illustrated below is the given graph, which is not a path graph.