

Cycle Detection

Problem Statement

Raghav likes to travel with his car. There are N cities and M bidirectional roads connecting them in the state where he lives. Raghav dislikes taking U turns. He picks a city of his choice and starts his ride. Assume that his car has infinite fuel.

Print "YES" if Raghav can keep on travelling or "NO" if he has to stop his car in some city. (without quotes)

i.e

Given an undirected graph, find out if there is a cycle. Print "YES" if there is a cycle, else print "NO". (without quotes)

Input

N M

u_1 v_1

u_2 v_2

.

.

u_M v_M

N - no of cities

M - no of bidirectional roads

M lines denoting the edges in the format of $(u\ v)$ denoting that the i th edge is between city u_i and city v_i

Output

YES - if Raghav can keep on travelling

NO - if Raghav stops his car in some city

Constraints

$1 \leq N, M \leq 10^5$;

$1 \leq u_i, v_i \leq N$

There won't be multiple edges and self loops.

There might be more than one component in the graph.

Sample Input 0

3 3

1 2

2 3

3 1

Sample Output 0

YES

Sample Input 1

3 2

1 2

2 3

Sample Output 1

NO

Explanation of Sample Test Cases:

Test case 0 : There is a cycle $1 \rightarrow 2 \rightarrow 3 \rightarrow 1$ in the graph. So, the answer is YES.

Test case 1 : There is not any cycle in the graph.