E1. Guard Duty (easy)

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

The Rebel fleet is afraid that the Empire might want to strike back again. Princess Heidi needs to know if it is possible to assign R Rebel spaceships to guard B bases so that every base has exactly one guardian and each spaceship has exactly one assigned base (in other words, the assignment is a perfect matching). Since she knows how reckless her pilots are, she wants to be sure that any two (straight) paths – from a base to its assigned spaceship – do not intersect in the galaxy plane (that is, in 2D), and so there is no risk of collision.

Input

The first line contains two space-separated integers $R, B (1 \leq R, B \leq 10)$. For $1 \leq i \leq R$, the $i + 1$-th line contains two space-separated integers x_i and y_i ($|x_i|, |y_i| \leq 10000$) denoting the coordinates of the i-th Rebel spaceship. The following B lines have the same format, denoting the position of bases. It is guaranteed that no two points coincide and that no three points are on the same line.

Output

If it is possible to connect Rebel spaceships and bases so as satisfy the constraint, output `Yes`, otherwise output `No` (without quote).

Examples

input
3 3 0 0 2 0 3 1 -2 1 0 3 2 2
output
Yes

input
2 1 1 0 2 2 3 1
output
No

Note

For the first example, one possible way is to connect the Rebels and bases in order.

For the second example, there is no perfect matching between Rebels and bases.