Security - Bijective Functions

Problem Statement

Now that we know about one-to-one functions, let's talks about onto functions and bijective functions.

A function $f : X \to Y$ is onto iff each element in the codomain Y is the image of at least one element in the domain X. That is,

$Im(f) = Y$

If the function f is both one-to-one and onto then f is a bijection from X to Y or, equivalently, $f : X \to Y$ is a bijective function.

In this task, you'll be given an integer n and a function $f : X \to X$ where $X = \{1, 2, 3, \ldots, n\}$ and you have to tell if it is a bijective function or not.

Constraints

$1 \leq n \leq 20$

Input Format

There are 2 lines in the input. The first line contains a single positive integer n. The second line contains n space separated integers, the values of $f(1),\ f(2),\ f(3),\ \ldots,\ f(n)$ respectively.

Output Format

Output, in a single line, "YES" if f is bijective, "NO" otherwise.

Sample Input

```
3
1 2 3
```

Sample Output

```
YES
```

Explanation

This is basically the function $f(x) = x$.