

## Problem B. Love Triangle

**Time limit** 1000 ms

**Mem limit** 262144 kB

As you could know there are no male planes nor female planes. However, each plane on Earth likes some other plane. There are  $n$  planes on Earth, numbered from 1 to  $n$ , and the plane with number  $i$  likes the plane with number  $f_i$ , where  $1 \leq f_i \leq n$  and  $f_i \neq i$ .

We call a love triangle a situation in which plane  $A$  likes plane  $B$ , plane  $B$  likes plane  $C$  and plane  $C$  likes plane  $A$ . Find out if there is any love triangle on Earth.

### Input

The first line contains a single integer  $n$  ( $2 \leq n \leq 5000$ ) — the number of planes.

The second line contains  $n$  integers  $f_1, f_2, \dots, f_n$  ( $1 \leq f_i \leq n, f_i \neq i$ ), meaning that the  $i$ -th plane likes the  $f_i$ -th.

### Output

Output «YES» if there is a love triangle consisting of planes on Earth. Otherwise, output «NO».

You can output any letter in lower case or in upper case.

### Sample 1

Input	Output
5 2 4 5 1 3	YES

### Sample 2

Input	Output
5 5 5 5 5 1	NO

### Note

In first example plane 2 likes plane 4, plane 4 likes plane 1, plane 1 likes plane 2 and that is a love triangle.

In second example there are no love triangles.