



(/en/),  
v1.1.0

## CSD Testing System

(/en/)

# Is the matrix directed?

Cost: 2 | Solved: 74

**Memory limit:** 256 MBs

**Time limit:** 1 s

**Input:** input.txt

**Output:** output.txt

### Task:

You are given a binary matrix **A** of  $n \times n$  elements. Let's call a matrix non-directed if for any  $i$  and  $j$  ( $i, j \leq n$ ) the condition  $A[i][j] = A[j][i]$  is true. If it's false, then a matrix is directed.

You have to write a program that will check whether or not the matrix is directed.

### Input:

The first line contains a natural number  $n$  – the quantity of matrix rows ( $n \leq 1000$ ).

The next  $n$  lines contain  $n$  numbers – the values of matrix elements.

### Output:

Write "YES" if the matrix is directed, else write "NO".

### Example:

Input	Output
3 1 1 0 1 0 0 0 0 1	NO

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4  0 1 1 0  1 0 0 0  1 0 1 0  1 0 0 1	YES
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