

Using the  $N \times N$  matrix of zeros and ones, determine whether this matrix can be the adjacency matrix of a simple undirected graph.

The first line contains the number  $N$  ( $1 \leq N \leq 100$ ), then the matrix is  $N$  rows of  $N$  numbers, each of which is 0 or 1.

Print **YES** if the following matrix can be the adjacency matrix of a simple undirected graph, otherwise print **NO**.

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**Sample input 1:**

```
3
0 1 1
1 0 1
1 1 0
```

**Sample output 1:**

YES

**Sample input 2:**

```
3
0 1 0
1 0 1
1 1 0
```

**Sample output 2:**

NO

**Sample input 3:**

```
3
0 1 0
1 1 1
0 1 0
```

**Sample output 3:**

NO