

## TASK DESCRIPTION

### Problem Title:

Man and the poorly constructed bridges

### Problem Description:

A deserted city has N number of pillars, connected via poorly constructed bridges such that once a bridge is crossed it breaks down and can not be used again. In the city no other way of movement from one place to another exists. In order to move, a person has to use these bridges only. A distant traveller, unaware of the condition of the bridges arrive at the doorstep of the city. Seeing not a single person, he is hesitating to enter into the city, but being curious, he also has a urge to see if he could find a single person or not. Assuming, city starts from pillar 1, tell if the man would be able to return back to the same place from where he started his journey?

**Note :** All pillars are named as pillar 1, pillar 2, and so on. A bridge breaks down once it is completely crossed.

### Input Format:

First line contains the number of pillars present in the city.

Each of the next N lines contain to which other pillars, that pillar is connected. eg. 1st line contains values 1 0 1 1 0 => means that pillar 1 is connected to pillar 1, pillar 3 and pillar 4 and not connected to pillar 2 and pillar 5. Assuming, a pillar will always be connected to itself.

**NOTE :** 0 means that pillars are not connected to each other. 1 means that pillars are connected to each other.

### Example :

7

```
1 1 0 0 0 0 0
1 1 1 1 0 0 0
0 1 1 0 0 0 0
0 1 0 1 1 0 0
0 0 0 0 1 1 0
0 0 0 1 1 1 1
1 0 0 0 0 1 1
```

### Explanation:

7 => number of pillars in the park

1 1 0 0 0 0 0 => pillar 1 is connected to pillar 1 and pillar 2 only

1 1 1 1 0 0 0 => pillar 2 is connected to pillar 1, pillar 2, pillar 3, pillar 4 only

0 1 1 0 0 0 0 => pillar 3 is connected to pillar 2 and pillar 3 only

0 1 0 1 1 0 0 => pillar 4 is connected to pillar 2, pillar 4 and pillar 5 only

0 0 0 0 1 1 0 => pillar 5 is connected to 5 and pillar 6 only

0 0 0 1 1 1 1 => pillar 6 is connected to pillar 4, pillar 5, pillar 6, pillar 7 only

1 0 0 0 0 1 1 => pillar 7 is connected to pillar 1, pillar 6 and pillar 7 only

### Output Format:

0

1

### Explanation:

1 => yes, he will be able to return back to the same place from where he started

0 => no, he will not be able to return back to the same place from where he started

**Constraints:**

Pillars are connected via bridges only

Bridge will break down once it has been crossed completely. As a result, a bridge can not be used more than once.

The entry to the city is from pillar 1 only.

**Sample Input:**

```
7
1 1 0 0 0 0
1 1 1 1 0 0
0 1 1 0 0 0
0 1 0 1 1 0
0 0 0 1 1 0
0 0 0 1 1 1
1 0 0 0 1 1
```

**Sample Output:**

```
1
```

**Test Cases:****Test Name: Test 1****Input:**

```
7
1 1 0 0 0 0
1 1 1 1 0 0
0 1 1 0 0 0
0 1 0 1 1 0
0 0 0 1 1 0
0 0 0 1 1 1
0 0 0 0 1 1
```

**Output:**

```
0
```

**Test Name: Test 2****Input:**

```
7
1 1 1 0 0 0
1 1 1 0 0 0
0 1 1 0 0 0
0 1 0 1 0 0
0 0 0 1 1 0
0 0 0 1 1 0
0 0 0 0 1 1
```

**Output:**

```
0
```

**Test Name: Test 3**

**Input:**

18

```
11000000000000000000
11100000000000000000
01100000000000000000
01011100000000000000
00011000000000000000
00010101000000000000
00000011000000000000
00000011100000000000
00000001100000000000
00000000011100000000
00000000011000000000
00000000010100000000
0000000000001010000
0000000000000110000
0000000000000111100
0000000000000001110
0000000000000000111
0000000000000000011
```

**Output:**

0

**Test Name: Test 4**

**Input:**

18

```
11000000000010000000
11100000000000000000
01100000000000000000
01011100000000000000
00011000000000000000
00010101000000000000
00000011000000000000
00000011100000000000
00000001100000000000
00000000011100000000
00000000011000000000
10000000010100000000
0000000000001010000
0000000000000110000
0000000000000111100
0000000000000001110
0000000000000000111
0000000000000000011
```

**Output:**

1

**Test Name: Test 5**

**Input:**

18

```
11000000000000000001
11100000000000000000
01100000000000000000
01011100000000000000
00011000000000000000
00010101000000000000
00000011000000000000
00000011100000000000
00000001100000000000
00000000011100000000
00000000011000000000
00000000010100000000
0000000000001010000
0000000000000110000
0000000000000111100
0000000000000001110
0000000000000001111
1000000000000000011
```

**Output:**

0

**Test Name: Test 6**

**Input:**

18

```
11000000000000000001
11100000000000000000
01100000000000000000
01011100000000000000
00011000000000000000
00010101000000000000
00000011000000000000
00000011100000000000
00000001100000000000
00000000111000000000
00000000011100000000
00000000011000000000
00000000010101000000
0000000000001010000
0000000000001011000
0000000000000111100
0000000000000001110
0000000000000001111
1000000000000000011
```

**Output:**

1