Present

It has been a long held tradition, in the family firm of *Widget, Whatsit & Doodah* (est. 1862), to give every employee a present on the anniversary of the day the firm's first doodah went on sale. Despite Mr Widget senior's best efforts to choose appropriate presents, some swapping usually takes place. This year, Mr Widget junior has privately agreed with the employees to reassign the presents on the next day (the anniversary of the recall of the firm's first doodah).

There are n employees, the ith of whom is initially given present i. Each employee has their own personal preference list for the presents. The reassignment will only work if it is not possible for any subset of the employees (of any size from 1 to n) to have ended up in a better position if they had privately reassigned their **original** presents amongst themselves. A better position is one where no employee receives a present which is lower on their preference list, and at least one employee receives a better present.

For example, suppose employee 1's preference list is 3 2 1 (i.e. present 3 in preference to 2, and both in preference to 1), employee 2's list is 1 2 3, and employee 3's list is 1 3 2. The reassignment of present 2 to employee 1, present 1 to employee 2 and present 3 to employee 3 fails, as employees 1 and 3 would have been in a better position if they had independently swapped their original presents (i.e. employee 1 getting present 3, and employee 3 getting present 1). The reassignment of present 3 to employee 1, present 2 to employee 2 and present 1 to employee 3 works; this is the only valid reassignment for these preference lists.

Write a program to find a valid reassignment of presents. The first line of the input will be an integer n ($1 \leq n \leq 100$) giving the number of employees. This will be followed by n lines, the ith of which will contain the preference list of employee i; each list containing n integers (in which each number from 1 to n occurs exactly once). You should output n lines, the ith containing the present to be reassigned to the ith employee.

Sample Input

```
3
3 2 1
1 2 3
1 3 2
```

Sample Output

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3
2
1
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