Cavity Map

Problem Statement

You are given a square map of size $n \times n$. Each cell of the map has a value denoting its depth. We will call a cell of the map a *cavity* if and only if this cell is not on the border of the map and each cell adjacent to it has *strictly smaller depth*. Two cells are adjacent if they have a common side (edge).

You need to find all the cavities on the map and depict them with the uppercase character **X**.

shashank21j's code

```
n = input()
data = []
res = [[[0] for i in range(n)] for i in range(n)]
print res
for i in range(n):
    data.append(list(raw_input()))
for i in range(1,n-1):
    for j in range(1,n-1):
        t = data[i][j]
        if t>data[i-1][j] and t>data[i][j-1] and t>data[i+1][j] and t>data[i][j+1]:
            res[i][j] = 'X'
for i in range(n):
    for j in range(n):
        if res[i][j] =='X':
            data[i][j] = 'X'
for i in data:
    print "".join(i)
```

Input Format

The first line contains an integer, n, denoting the size of the map. Each of the following n lines contains n positive digits without spaces. Each digit (1-9) denotes the depth of the appropriate area.

Constraints

$1 \le n \le 100$

Output Format

Output n lines, denoting the resulting map. Each cavity should be replaced with character `X`.

Sample Input

```
4
1112
1912
1892
1234
```

Sample Output

```
1112
1X12
18X2
1234
```