

---

## Min-Max Matrix

P45836\_en

---

Given a square matrix  $M$  of  $n \times n$  (with  $n \geq 1$ ) of integers, its matrix `minMax` is the matrix  $mM$  of  $n \times 2$  such that for all  $i$  (with  $0 \leq i < n$ ),  $mM[i][0]$  is the minimum element of the  $i$ -th row of  $M$  and  $mM[i][1]$  is the maximum element of the  $i$ -th column of  $M$ .

For instance, if  $M = [[1, 2, 3], [3, 1, 2], [2, 3, 1]]$ ,  $mM = [[1, 3], [1, 3], [1, 3]]$

Implement the `min_Max(M)` function that given the square matrix  $M$  returns its `minMax` matrix.

You can use the `min()` and `max()` functions of Python, that given a list, they return their minimum and maximum element respectively.

### Sample session

```
>>> min_Max([[1, 2, 3], [3, 1, 2], [2, 3, 1]])
[[1, 3], [1, 3], [1, 3]]
>>> min_Max([[100]])
[[100, 100]]
>>> min_Max([[2, 2], [2, 2]])
[[2, 2], [2, 2]]
>>> min_Max([[17, 4], [1, 1]])
[[4, 17], [1, 4]]
>>> min_Max([[5, 1, 2, 1, -2], [1, 21, -1, -2, 8], [2, 3, 1, 6, 6], [1, 2, 3, 4, 5]])
[[-2, 5], [-2, 21], [1, 3], [1, 6]]
```

### Problem information

Author : Professors Informàtica EEBE

Generation : 2024-05-08 12:16:46

© Jutge.org, 2006–2024.

<https://jutge.org>