
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 : 2019-06-27 15:02:06

© Jutge.org, 2006–2019.

<https://jutge.org>