**48. Rotate Image**

Medium

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You are given an *n* x *n* 2D matrix representing an image, rotate the image by 90 degrees (clockwise).

You have to rotate the image [**in-place**](https://en.wikipedia.org/wiki/In-place_algorithm), which means you have to modify the input 2D matrix directly. **DO NOT** allocate another 2D matrix and do the rotation.

**Example 1:**

手机屏幕的截图

中度可信度描述已自动生成

**Input:** matrix = [[1,2,3],[4,5,6],[7,8,9]]

**Output:** [[7,4,1],[8,5,2],[9,6,3]]

**Example 2:**

手机屏幕截图

低可信度描述已自动生成

**Input:** matrix = [[5,1,9,11],[2,4,8,10],[13,3,6,7],[15,14,12,16]]

**Output:** [[15,13,2,5],[14,3,4,1],[12,6,8,9],[16,7,10,11]]

**Example 3:**

**Input:** matrix = [[1]]

**Output:** [[1]]

**Example 4:**

**Input:** matrix = [[1,2],[3,4]]

**Output:** [[3,1],[4,2]]

**Constraints:**

* matrix.length == n
* matrix[i].length == n
* 1 <= n <= 20
* -1000 <= matrix[i][j] <= 1000