**48. Rotate Image**

Medium

1876171FavoriteShare

You are given an *n* x *n* 2D matrix representing an image.

Rotate the image by 90 degrees (clockwise).

**Note:**

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:**

Given **input matrix** =

[

[1,2,3],

[4,5,6],

[7,8,9]

],

rotate the input matrix **in-place** such that it becomes:

[

[7,4,1],

[8,5,2],

[9,6,3]

]

1. Zip

Zip: <http://www.runoob.com/python/python-func-zip.html>

打包函数，打包对象必须是support iteration

\*：<https://codeyarns.com/2012/04/26/unpack-operator-in-python/>

In Python, the \* (asterisk) character is not only used for multiplication and replication, but also for **unpacking**. 把对象变成可迭代

Map: <http://www.runoob.com/python/python-func-map.html>

映射函数。

Deep copy: 因为需要modify matrix in-place，所以不能仅仅m=， 还需要m[:]=

