Problem #48: Rotate Image. (Medium)

<https://leetcode.com/problems/rotate-image/description/>

**My Solution:**

For clockwise rotation, take transpose and then reverse the row.

1. Let n be the length of matrix, i.e., number of rows. The number of columns will be n as ti is a square matrix.
2. Transpose the matrix. For this, all entries below the main diagonal are swapped with the entries above the diagonal. Also row number becomes column number and column number becomes row number.
3. Reverse each row,

class Solution:

def rotate(self, matrix: List[List[int]]) -> None:

"""

Do not return anything, modify matrix in-place instead.

"""

n = len(matrix)

# Transpose the matrix

for i in range(n):

for j in range(n):

if i < j:

matrix[i][j],matrix[j][i] = matrix[j][i], matrix[i][j]

# Reverse each row

for i in range(n):

matrix[i] = matrix[i][::-1]

**Note:** For anti-clockwise rotation, reverse the row and then take the transpose.