Problem 867: Transpose Matrix

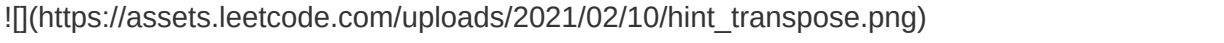
Problem Information

Difficulty: Easy
Acceptance Rate: 75.24%
Paid Only: No
Tags: Array, Matrix, Simulation

Problem Description

Given a 2D integer array `matrix`, return _the**transpose** of_ `matrix`.

The **transpose** of a matrix is the matrix flipped over its main diagonal, switching the matrix's row and column indices.



Example 1:

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

Example 2:

Input: matrix = [[1,2,3],[4,5,6]] **Output:** [[1,4],[2,5],[3,6]]

Constraints:

* `m == matrix.length` * `n == matrix[i].length` * `1 <= m, n <= 1000` * `1 <= m * n <= 105` * `-109 <= matrix[i][j] <= 109`

Code Snippets

C++:

```
class Solution {
public:
vector<vector<int>> transpose(vector<vector<int>>& matrix) {

}
};
```

Java:

```
class Solution {
public int[][] transpose(int[][] matrix) {

}
}
```

Python3:

```
class Solution:
def transpose(self, matrix: List[List[int]]) -> List[List[int]]:
```