

832. Flipping an Image

Solved

Easy

Topics

Companies

Given an $n \times n$ binary matrix `image`, flip the image **horizontally**, then invert it, and return *the resulting image*.

To flip an image horizontally means that each row of the image is reversed.

- For example, flipping `[1,1,0]` horizontally results in `[0,1,1]`.

To invert an image means that each `0` is replaced by `1`, and each `1` is replaced by `0`.

- For example, inverting `[0,1,1]` results in `[1,0,0]`.

Example 1:

Input: `image = [[1,1,0],[1,0,1],[0,0,0]]`

Output: `[[1,0,0],[0,1,0],[1,1,1]]`

Explanation: First reverse each row: `[[0,1,1],[1,0,1],[0,0,0]]`.
Then, invert the image: `[[1,0,0],[0,1,0],[1,1,1]]`

Example 2:

Input: `image = [[1,1,0,0],[1,0,0,1],[0,1,1,1],[1,0,1,0]]`

Output: `[[1,1,0,0],[0,1,1,0],[0,0,0,1],[1,0,1,0]]`

Explanation: First reverse each row: `[[0,0,1,1],[1,0,0,1],[1,1,1,0],[0,1,0,1]]`.
Then invert the image: `[[1,1,0,0],[0,1,1,0],[0,0,0,1],[1,0,1,0]]`

Description | Accepted | Editorial | Solutions | Submissions

← All Submissions

Accepted

Zhukovliya submitted at Jun 29, 2024 21:51

Editorial Solution

Runtime

103 ms | Beats 79.36%

Analyze Complexity

Memory

46.87 MB | Beat: 32.11%

Code | C#

```
public class Solution {
    public int[][] FlipAndInvertImage(int[][] image) {
        int n = image.Length;

        for (int i = 0; i < n; i++) {
            int left = 0, right = n - 1;
```

Code

```
1 public class Solution {
2     public int[][] FlipAndInvertImage(int[][] image) {
3         int n = image.Length;
4
5         for (int i = 0; i < n; i++) {
6             int left = 0, right = n - 1;
7
8             // Переворачиваем строку и одновременно инвертируем значения
9             while (left <= right) {
10                 // Инвертируем и меняем местами элементы
11                 int temp = image[i][left] ^ 1;
```

Testcase Test Result

Accepted Runtime: 101 ms

Case 1 Case 2

Input

image =

```
[[1,1,0],[1,0,1],[0,0,0]]
```

Output

```
[[1,0,0],[0,1,0],[1,1,1]]
```

Expected

Код:

```
public class Solution
{
    public int[][] FlipAndInvertImage(int[][] image)
    {
        int n = image.Length;
```

```

for (int i = 0; i < n; i++)
{
    int left = 0, right = n - 1;

    // Переворачиваем строку и одновременно инвертируем значения
    while (left <= right)
    {
        // Инвертируем и меняем местами элементы
        int temp = image[i][left] ^ 1;
        image[i][left] = image[i][right] ^ 1;
        image[i][right] = temp;

        left++;
        right--;
    }
}

return image;
}
}

```