

## Problem Challenge 1

We'll cover the following

- Problem Statement (hard)
- Try it yourself

### Problem Statement (hard) #

Given a binary matrix representing an image, we want to flip the image horizontally, then invert it.

To flip an image horizontally means that each row of the image is reversed. For example, flipping  $[0, 1, 1]$  horizontally results in  $[1, 1, 0]$ .

To invert an image means that each 0 is replaced by 1, and each 1 is replaced by 0. For example, inverting  $[1, 1, 0]$  results in  $[0, 0, 1]$ .

Example 1:

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

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

Example 2:

```
Input: [
  [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:  $[[1,1,0,0], [0,1,1,0], [0,0,0,1], [1,0,1,0]]$

### Try it yourself #

Try solving this question here:

Java Python3 JS C++

```
1 class Solution {
2     public static int[][] flipAndInvertImage(int[][] arr) {
3         //TODO: Write your code here
4         return arr;
5     }
6
7     public static void print(int[][] arr) {
8         for(int i=0; i < arr.length; i++) {
9             for (int j=0; j < arr[i].length; j++) {
10                 System.out.print(arr[i][j] + " ");
11             }
12             System.out.println();
13         }
14     }
15
16     public static void main(String[] args) {
17         int[][] arr = {{1, 0, 1}, {1, 1, 1}, {0, 1, 1}};
18         print(arr);
19     }
20 }
```

```
18     print(flipAndInvertImage(arr));
19
20     int[][] arr2 = {{1,1,0,0},{1,0,0,1},{0,1,1,1},{1,0,1,0}};
21     print(flipAndInvertImage(arr2));
22 }
23 }
```

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Complement of Base 10 Number (me...

Solution Review: Problem Challenge 1

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