Problem 1861: Rotating the Box

Problem Information

Difficulty: Medium
Acceptance Rate: 79.21%
Paid Only: No
Tags: Array, Two Pointers, Matrix

Problem Description

You are given an `m x n` matrix of characters `boxGrid` representing a side- view of a box. Each cell of the box is one of the following:

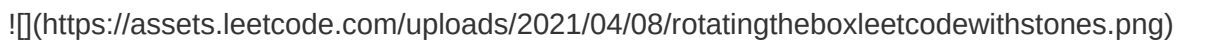
* A stone `'#'` * A stationary obstacle `'*'` * Empty `'.'`

The box is rotated **90 degrees clockwise** , causing some of the stones to fall due to gravity. Each stone falls down until it lands on an obstacle, another stone, or the bottom of the box. Gravity **does not** affect the obstacles' positions, and the inertia from the box's rotation **does not** affect the stones' horizontal positions.

It is **guaranteed** that each stone in `boxGrid` rests on an obstacle, another stone, or the bottom of the box.

Return _an_`n x m` _matrix representing the box after the rotation described above_.

Example 1:

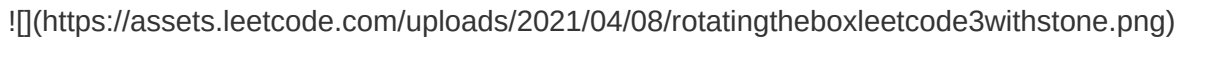


Input: boxGrid = [["#",".","#"]] **Output:** [["."], ["#"], ["#"]]

Example 2:

Input: boxGrid = [["#",".","*","."], ["#","#","*","."]] **Output:** [["#","."], ["#","#"], ["*","*"], [".","."]]

Example 3:



Input: boxGrid = [["#","#","*",".","*","."], ["#","#","#","*",".","."], ["#","#","#",".","#","."]] **Output:** [[".","#","#"], [".","#","#"], ["#","#","*"], ["#","*","."], ["#",".","*"], ["#",".","."]]

Constraints:

* `m == boxGrid.length` * `n == boxGrid[i].length` * `1 <= m, n <= 500` * `boxGrid[i][j]` is either `'#'`, `'*'`, or `'.'`.

Code Snippets

C++:

```
class Solution {
public:
vector<vector<char>> rotateTheBox(vector<vector<char>>& boxGrid) {

}
};
```

Java:

```
class Solution {
public char[][] rotateTheBox(char[][] boxGrid) {

}
}
```

Python3:

```
class Solution:
def rotateTheBox(self, boxGrid: List[List[str]]) -> List[List[str]]:
```