

# 073. Set Matrix Zeroes

## 073 Set Matrix Zeroes

- array

### Description

Given a  $m \times n$  matrix, if an element is 0, set its entire row and column to 0. Do it in place.

[click to show follow up.](#)

#### Follow up:

Did you use extra space?

A straight forward solution using  $O(mn)$  space is probably a bad idea.

A simple improvement uses  $O(m + n)$  space, but still not the best solution.

Could you devise a constant space solution?

### 1. Thought line

### 2. Hash Table+array

```
1 class Solution {
2 public:
3     void setZeroes(vector<vector<int>>& matrix) {
4         set<int> zeroRow, zeroCol;
5         if (matrix.empty()) return;
6         for (int i = 0; i<=matrix.size()-1; ++i)
7             for (int j = 0; j<=matrix[i].size()-1; ++j)
8                 if (matrix[i][j]==0){
9                     zeroRow.insert(i), zeroCol.insert(j);
10                }
11        for (int i=0; i<=matrix.size()-1; ++i)
12            for (int j = 0; j<=matrix[i].size()-1; ++j)
13                if (zeroRow.find(i)!=zeroRow.end() || zeroCol.find(j)!=zeroCol.end())
14                    matrix[i][j]=0;
15    }
16 };
```