Set Matrix Zeroes
(leet code problem 1)

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```c
void setZeroes(int** matrix, int matrixSize, int* matrixColSize) {
    int m = matrixSize;
    int n = *matrixColSize;
    int firstRowZero = 0;
    int firstColZero = 0;

    // Check if the first row has any zeros
    for (int j = 0; j < n; j++) {
        if (matrix[0][j] == 0) {
            firstRowZero = 1;
            break;
        }
    }
    // Check if the first column has any zeros
    for (int i = 0; i < m; i++) {
        if (matrix[i][0] == 0) {
            firstColZero = 1;
            break;
        }
    }
    // Use the first row and column as markers to store zero information
    for (int i = 1; i < m; i++) {
        for (int j = 1; j < n; j++) {
            if (matrix[i][j] == 0) {
                matrix[i][0] = 0;
                matrix[0][j] = 0;
            }
        }
    }
    // Set rows to zero except for the first row
    for (int i = 1; i < m; i++) {
        if (matrix[i][0] == 0) {
            for (int j = 1; j < n; j++) {
                matrix[i][j] = 0;
            }
        }
    }
```

```c
    // Set columns to zero except for the first column
    for (int j = 1; j < n; j++) {
    if (matrix[0][j] == 0) {
    for (int i = 1; i < m; i++) {
    matrix[i][j] = 0;
 }
}
}
// Set the first row to zero if necessary
if (firstRowZero) {
for (int j = 0; j < n; j++) {
 matrix[0][j] = 0;
 }
    }
    // Set the first column to zero if necessary
    if (firstColZero) {
      for (int i = 0; i < m; i++) {
       matrix[i][0] = 0;
 }
 }
}
```