Day – 1 : Arrays – I

Problem 1 – Set Matrix Zeros

```
def zeroMatrix(matrix, n, m):
    # int row[n] = {0}; --> matrix[..][0]
    # int col[m] = {0}; --> matrix[0][..]

    col0 = 1
    for i in range(n):
        for j in range(m):
            if matrix[i][j] == 0:
                # mark i-th row:
                matrix[i][0] = 0

                # mark j-th column:
                if j != 0:
                    matrix[0][j] = 0
                else:
                    col0 = 0

    for i in range(1, n):
        for j in range(1, m):
            if matrix[i][j] != 0:
                # check for col & row:
                if matrix[i][0] == 0 or matrix[0][j] == 0:
                    matrix[i][j] = 0


if matrix[0][0] == 0:
```

```
        for j in range(m):
            matrix[0][j] = 0
    if col0 == 0:
        for i in range(n):
            matrix[i][0] = 0

    return matrix


matrix = [[1, 1, 1], [1, 0, 1], [1, 1, 1]]
n = len(matrix)
m = len(matrix[0])
ans = zeroMatrix(matrix, n, m)

print("The Final matrix is:")
for row in ans:
        for ele in row:
            print(ele, end=" ")
        print()
```