

Day – 1 : Arrays – I

Problem 1 – Set Matrix Zeros

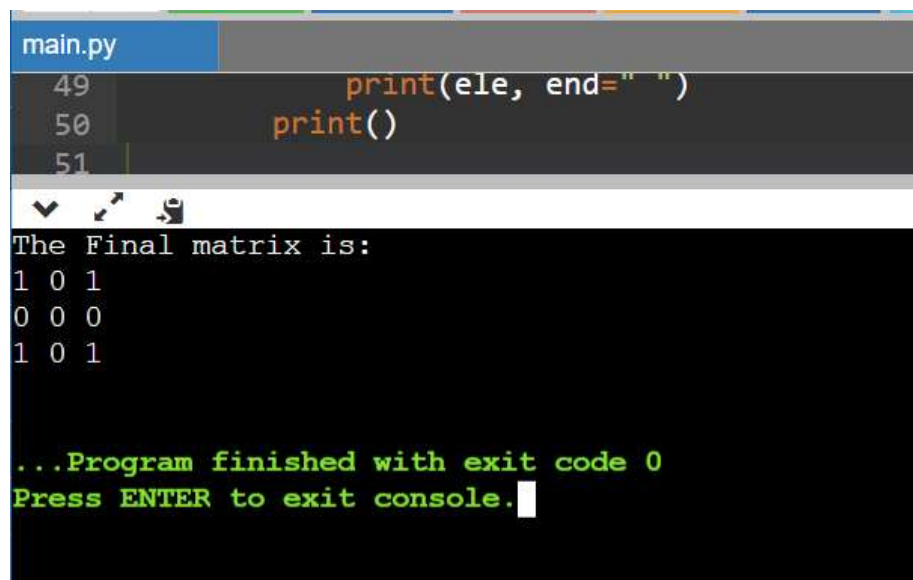
```
def zeroMatrix(matrix, n, m):  
    # int row[n] = {0}; --> matrix[..][0]  
    # int col[m] = {0}; --> matrix[0][..]  
  
    col0 = 1  
    for i in range(n):  
        for j in range(m):  
            if matrix[i][j] == 0:  
                # mark i-th row:  
                matrix[i][0] = 0  
  
                # 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()
```

A screenshot of a Python IDE window titled 'main.py'. The code editor shows lines 49, 50, and 51 with the following code:

```
49         print(ele, end=" ")
50     print()
51
```

Below the code editor is a console window. It displays the output of the program:

```
The Final matrix is:
1 0 1
0 0 0
1 0 1

...Program finished with exit code 0
Press ENTER to exit console.
```