Given a square matrin, turn it by 90 degrees in anti-clock wise direction without uying any extra space

Example:

```
1  2  3
4  5  6
7  8  9
```

Output:

```
3  6  9
2  5  8
1  4  7
```

Programme:

N = 4

```
def rotatematrin (mat):
    for n in range(0, int(N/2)):
        for y in range (x, N-x-1):
            temp = mat[x][y]
            mat[x][y] = mat[y][N-1-x]
```

$$mat[y][N-1-x] = mat[N-1-x][N-1-y]$$

$$mat[N-1-x][N-1-y] = mat[N-1-y][x]$$

$$mat[N-1-y][x] = temp$$

```
def displaymatrix(mat):
    for i in range(0, N):
        for j in range(0, N):
            print (mat[i][j], end = " ")
        print ("")
```

Complexity Analysis:

time Complexity : $O(n*n)$

Space Complexity : $O(1)$