PW SKILLS

Input

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$$

Rotation of 2D Matrix

$$\begin{bmatrix} 7 & 4 & 1 \\ 8 & 5 & 2 \\ 9 & 6 & 3 \end{bmatrix}$$

Output

Rotation of matrix 90° in clockwise direction

i=0 (2 & 4) (3 & 7)
J=0 J=1 J=2

i=1

J=1 J=2
(6 & 8)

i=2
J=2

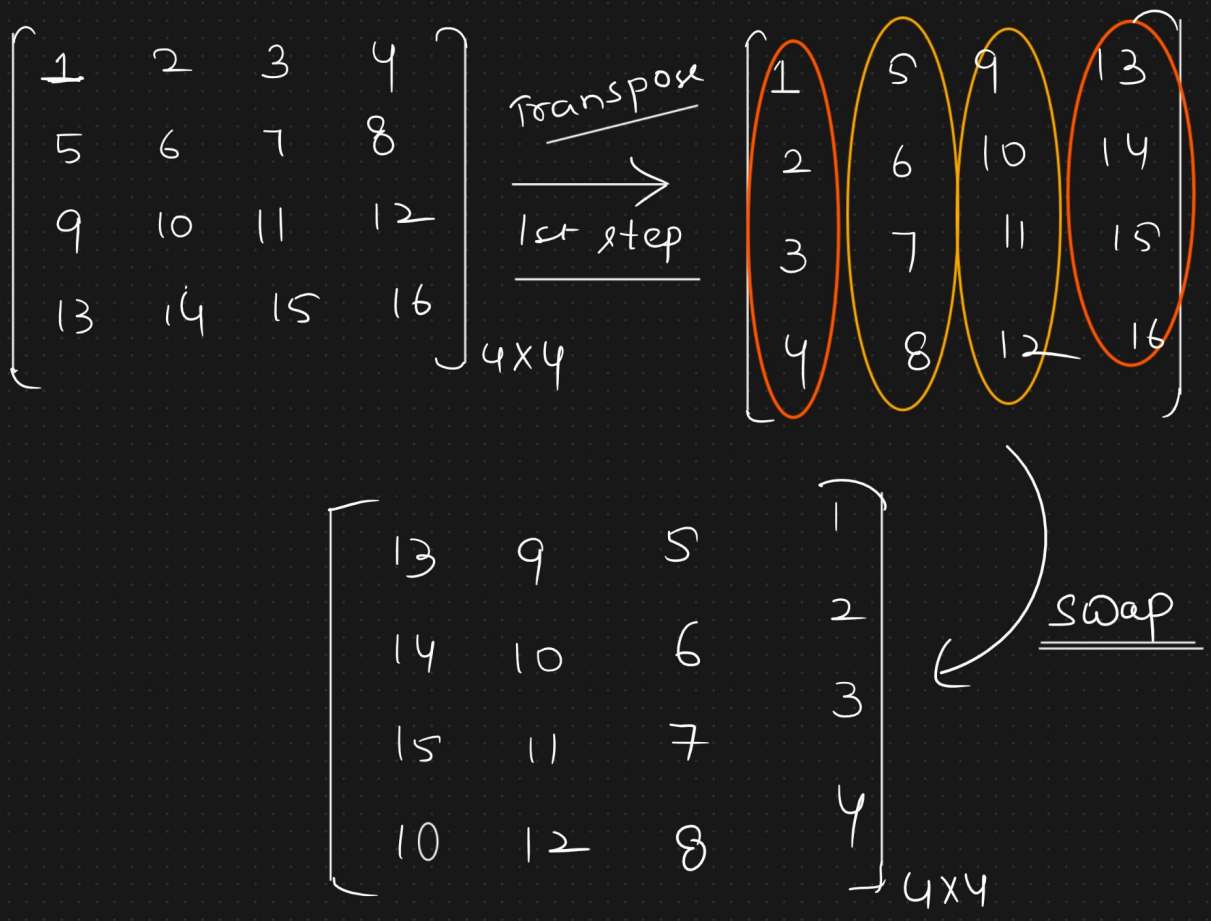
1) Transpose of 2D Matrix

$$\begin{bmatrix} 1 & 4 & 7 \\ 2 & 5 & 8 \\ 3 & 6 & 9 \end{bmatrix}$$

Rows ⟷ columns

2) Swap b/w columns

$$\begin{bmatrix} 7 & 4 & 1 \\ 8 & 5 & 2 \\ 9 & 6 & 3 \end{bmatrix}$$


1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
4X4
Transpose
1st step
1 5 9 13
2 6 10 14
3 7 11 15
4 8 12 16
13 9 5 1
14 10 6 2
15 11 7 3
10 12 8 4
4X4
Swap