

Transpose matrix

Space = $O(1)$

	0	1	2
0	1	2	3
1	4	5	6
2	7	8	9

Input

	0	1	2
0	1	4	7
1	2	5	8
2	3	6	9

Output

$i \rightarrow j$
 \leftarrow

00	01	02
10	11	12
20	21	22

00	01	02
10	11	12
20	21	22

for (i = 0 ; i < n ; i++) { $\rightarrow n$
for (j = 0 ; j < n ; j++) { $\rightarrow n$ $\cdot O(n^2)$

output[i][j] = input[i][j]
}
}

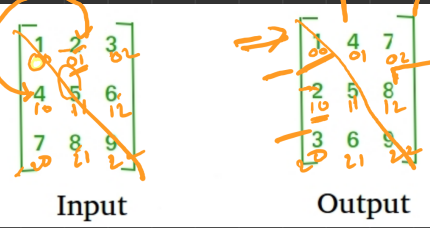
Space = $O(n^2)$
= $O(1)$

vector

arr

is $i=j$

```
for (i = 0; i < row - 1; i++) {  
    for (j = i + 1; j < col; j++) {  
        swap(input[i][j], input[j][i])  
    }  
}
```



Input	Output
1	1
2	4
3	7
4	2
5	5
6	8
7	3
8	6
9	9

4x3

16x4

