

## Spiral matrix

For a given matrix

$m \times n = 4 \times 4$

0	1	2	3	4
5	6	7	8	
9	10	11	12	
13	14	15	16	

$m-1$   $n-1$

1, 2, 3, 4, 8, 12, 16, 15, 14, 13, 9,

5, 6, 7, 11, 10

Top, Right, Bottom, left

```
while (srow < erow && scol < ecol) {
```

srow = 0 scol = 0

erow = 0 ecol = 0

Top: for (j = scol to ecol)  
matrix[srow][j]

Right: for (i = srow to erow)  
matrix[i][ecol]

srow++

erow--

Bottom: for (j = ecol - 1 to scol)  
matrix[erow][j]

Left: for (i = erow - 1 to srow)  
matrix[i][scol]

scol++

ecol--

Corner case :

```
if (srow == erow) {
```

Bottom →

break;

```
}  
if (scol == ecol) {
```

Left →

break;

```
}
```