

Max Sum Column

0	1	2
2	1	2
1	4	5
2	7	8
2	15	18

Sum = 12 + 15 + 18
CS = 0

```

sumCol (mat [][ ]) {
    int sum = 0;
    for (i = 0 to mat[0].length) {
        int curSum = 0;
        for (j = 0 to mat.length) {
            curSum += mat[j][i];
        }
        if (sum < curSum) {
            sum = curSum;
        }
    }
    return sum;
}
    
```

```

int n = 5;
n = n + 10;
n = 10;
curSum = curSum +
    mat[j][i];
    
```

Diagonal Sum :-

0	1	2
0	1	4
1	1	7
2	3	8
3		1

$$PD = 1 + 5 + 1 = 7$$

$$SD = 2 + 5 + 3 = 10$$

```

diagonalSum (mat [][ ]) {
    int i = 0; int pd = 0;
    int j = 0; int sd = 0;
    while (i < mat.length &&
           j < mat[0].length) {
        pd += mat[i][j];
        i++;
        j++;
    }
    i = 0; j = mat[0].length - 1;
    while (i < mat.length &&
           j >= 0) {
        sd += mat[i][j];
        i++;
        j--;
    }
    }
    
```

00	01	02
10	11	12
20	21	22

$$i = 0 + 1 = 1 + 1 = 2$$

$$j = 2 - 1 = 1 - 1 = 0$$

```

i = 0, j = mat[0].length - 1;
while (i < mat.length &&
       j >= 0) {
    sd += mat[i][j];
    i++;
    j--;
}
    
```

```

cout (pd);
cout (sd);
    
```

0	1
1	2
3	4

Matrix Diagonal Sum :-

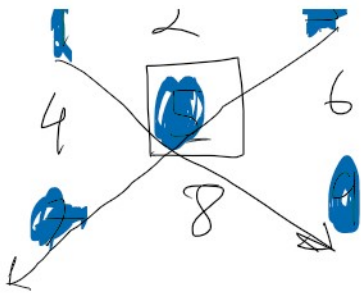
<https://leetcode.com/problems/matrix-diagonal-sum/>



$$SD = 15$$

$$PD = 15$$

$$\begin{array}{r}
 1 \\
 4 \\
 \hline
 5
 \end{array}$$



$$SD = 10$$

$$PD = 15$$

$$Sum = 15 + 15 = 30$$

$$Sum = Sum - x$$

$$3, 3$$

$$3/2 = 1$$

$$3/2 = 1$$

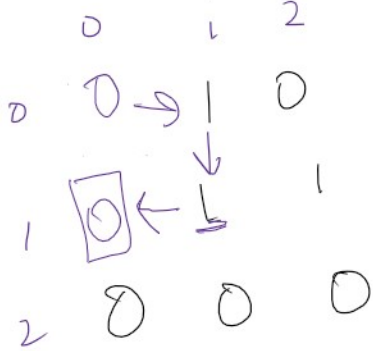
$$if (row \% 2 == 1) \{$$

$$Sum = mat[row/2][col/2]$$

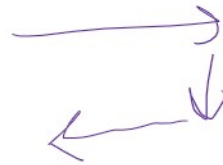
$$\}$$

Exit point of a Matrix :-

<https://practice.geeksforgeeks.org/problems/exit-point-in-a-matrix0905/1>



0 \Rightarrow Same direction
1 \Rightarrow move to Right



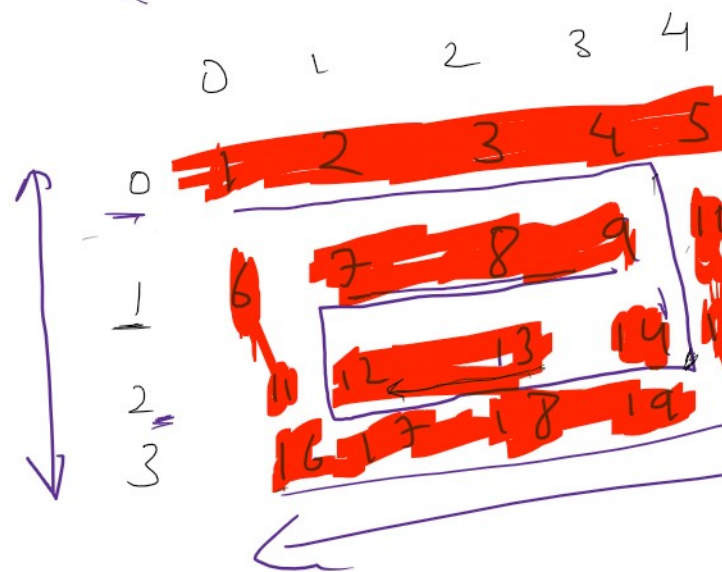
Spiral Method

$$left = 0$$

$$right = 4$$

$$top = 0$$

$$bottom = 3$$



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