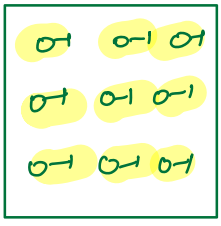
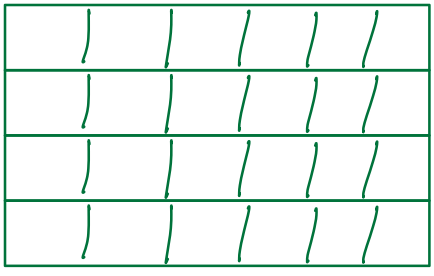
1D Array



Matrix

Seats

Chess



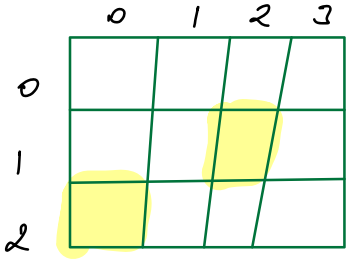
2D Array

Matrix

Syntax

```
int A[] = new int[size];
int A[][] = new int[rows][cols];
```

Example

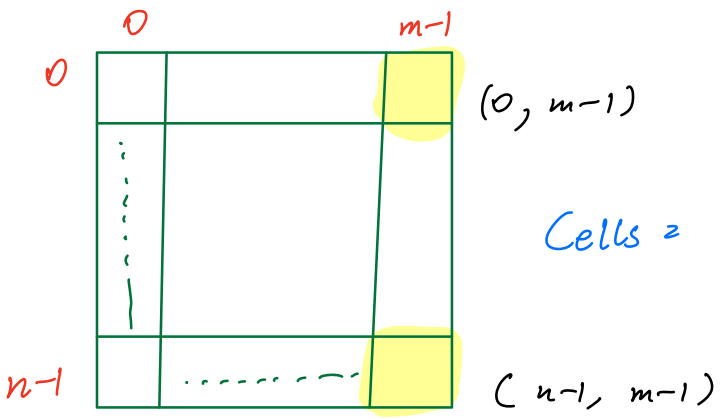



```
int mat[][] = new int[3][4];
```

mat[1][2]

mat[2][0]

Total cells = rows x cols = 3 x 4 = 12



Iterate over all elements of 1st row of matrix

n → rows

m → cols

[0][0] [0][1] [0][2] ... [0][m-2] [0][m-1]

```
for( int col=0; col<m; col++){
    SOP( mat[0][col]);
}
```

Iterate over all elements of 1st col of matrix

[0][0]
[1][0]
[2][0]
:
[n-2][0]

```
for( int row=0; row<n; row++){
    SOP( mat[row][0]);
}
```

[n-1][0]

Iterate over all elements of matrix
row-wise

1 3 -2
7 8 0

```
for(int row=0; row<n; row++){
    for(int col=0; col<m; col++){
        Sop(mat[row][col]);
    }
    Soplnc();
}
```

Iterate over all elements of matrix
col-wise

1 3 -2
7 8 0

Output

1 7
3 8
-2 0

```
for (int col = 0; col < m; col++) {
    for( int row = 0; row < n; row++) {
        SOP( mat[row][col]);
    }
    SOPln();
}
```

Break - 10pm