$$\frac{10}{000} = \frac{2000}{3}$$

$$\frac{10}{000} = \frac{2000}{3}$$

$$\frac{2000}{3} = \frac{3}{3}$$

$$\frac{2000}{3} = \frac$$

declare

How to access indices

length of now: - avor. length, length of col: - avor [0]. length

House

for (int i=0; i< avar. Jength; i+)

cots

for (intj=0; j< avar. Jength; j++)

print(avar[i][j]+"");

3

Sysodn();

$$T_{\circ}(=0(m*n))$$
 linear

```
code
```

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
   int m = scn.nextInt(); // row size
    int n = scn.nextInt(); // col size
    int[][] arr = new int[m][n];
   for (int i = 0; i < m; i++) {
        for (int j = 0; j < n; j++) {
            arr[i][j] = scn.nextInt();
    }
   printMatrix(arr);
}
public static void printMatrix(int[][] arr) {
   int row = arr.length;
   int col = arr[0].length;
 for (int i = 0; i < row; i++) {
        for (int j = 0; j < col; j++) { _____
            System.out.print( arr[i][j] + " ");
        System.out.println();
```

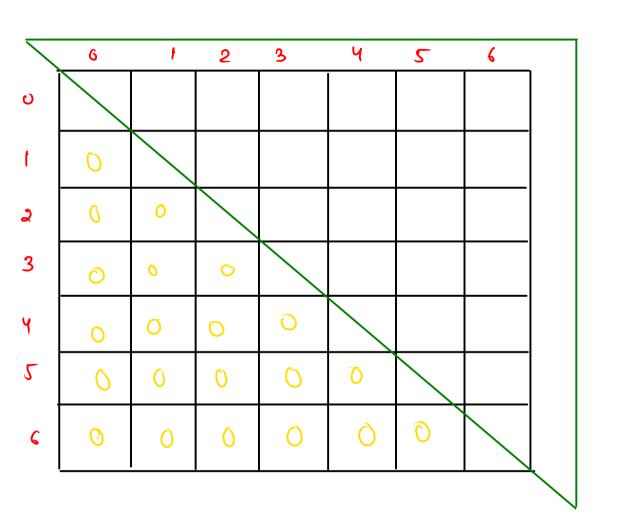
Print Alternate Row

0100	T 0	1	2	3		
now 1st 0	1	2	3	4	>	$\underbrace{i=0}_{j=0}, j=0\rightarrow 3$
now 2nd 1	5	6	7	8		$\tilde{c} = 2$, $j = 0 \rightarrow 3$
now 3rd 2	9	10	11	12		<u> </u>
now 4th 3	13	14	15	16		$\tilde{c}=4, j=0\rightarrow 3$
now 5th 4	17	18	19	20	→	

```
code
```

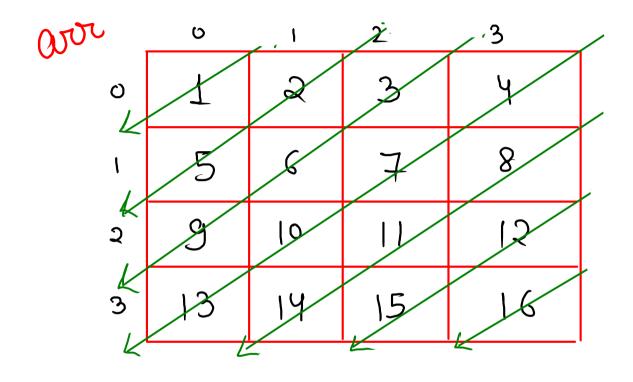
```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int m = scn.nextInt(); // row size
    int n = scn.nextInt(); // col size
    int[][] arr = new int[m][n];
    for (int i = 0; i < m; i++) {
        for (int j = 0; j < n; j++) {
             arr[i][j] = scn.nextInt();
    printMatrix(arr);
}
public static void printMatrix(int[][] arr) {
    int row = arr.length;
    int col = arr[0].length;
   for (int i = 0; i < row; i += 2) { // rows
      for (int j = 0; j < col; j++) { // cols
    System.out.print( arr[i][j] + " ");</pre>
     }
System.out.println();
```

Print Upper triangular matrix 1



```
public static void printUpperTriangularMatrix(int[][] arr) {
    int row = arr.length;
    int col = arr[0].length;
    for (int i = 0; i < row; i++) {
        .for (int j = 0; j < col; j++) {
            if ( j >= i ) {
                System.out.print(arr[i][j] + " ");
            } else {
                System.out.print("0 ");
                                                                  70w = 4
Col = 4
        System.out.println();
                    Q
      0
                                    8
                                     12
      2
                   ()
      3
```

Print the matrix left-diagonal wise



condition inc/dec initialize 2 0 2 13 15 for (int i=0, j=2; j>=0; i++, j--)

(i = 0, j = 0,1,2,3; j > = 0; i++,j--)2 2 15 13,0 for (int gap = 0; gap < ovn[1].len; gap ++) {

for (int i=0, j= gap; j>=0; i++, j--) {

Syso(avn[i][j] + "");

```
public static void leftDiagonal(int[][] arr, int n) {
      for (int gap = 0; gap < n; gap++) \{
         for (int i = 0, j = gap; j >= 0; i++, j--) {
    System.out.print(arr[i][j] + " ");
                                                                              gap = 1, \frac{\hat{c} = 0, j = 1}{\hat{c} = 1, j = 0}
                                                                                          i=2, j=-1 K
                                                                              g c p = 2, \tilde{i} = 0, \tilde{j} = 2
                                                          8
                                                                                        i=toj=1
                                                                                         \dot{c}=2, \dot{s}=0
                                                                                         i=3, i=-1 K
             Q
                                                                              gap = 3, i= 0, j=3
                                                                                      i=1,j=2
                                14
                                           15
                                                                                      c=2, j=L
                                                                                      i=3, j=0
```

x (=4) j=+

L, 2, 5, 3, 6, 9, 4, 7, 10, 13