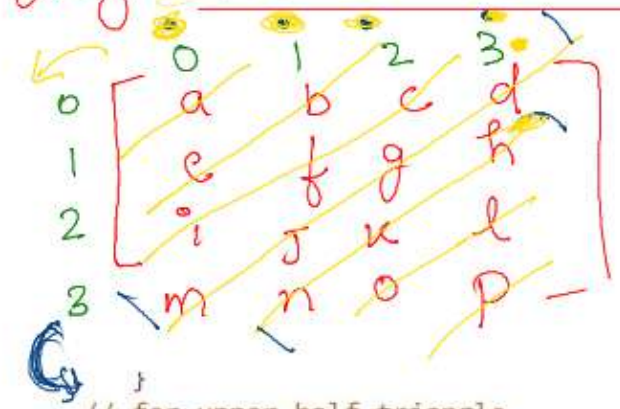
Diagonal traversal in a matrix



a (0,0)
b (0,1) e (1,0)
c (0,2) f (1,1) i (2,0)
d (0,3) g (1,2) j (2,1) m (3,0)
h (1,3) k (2,2) n (3,1)
l (2,3) o (3,2)
p (3,3)

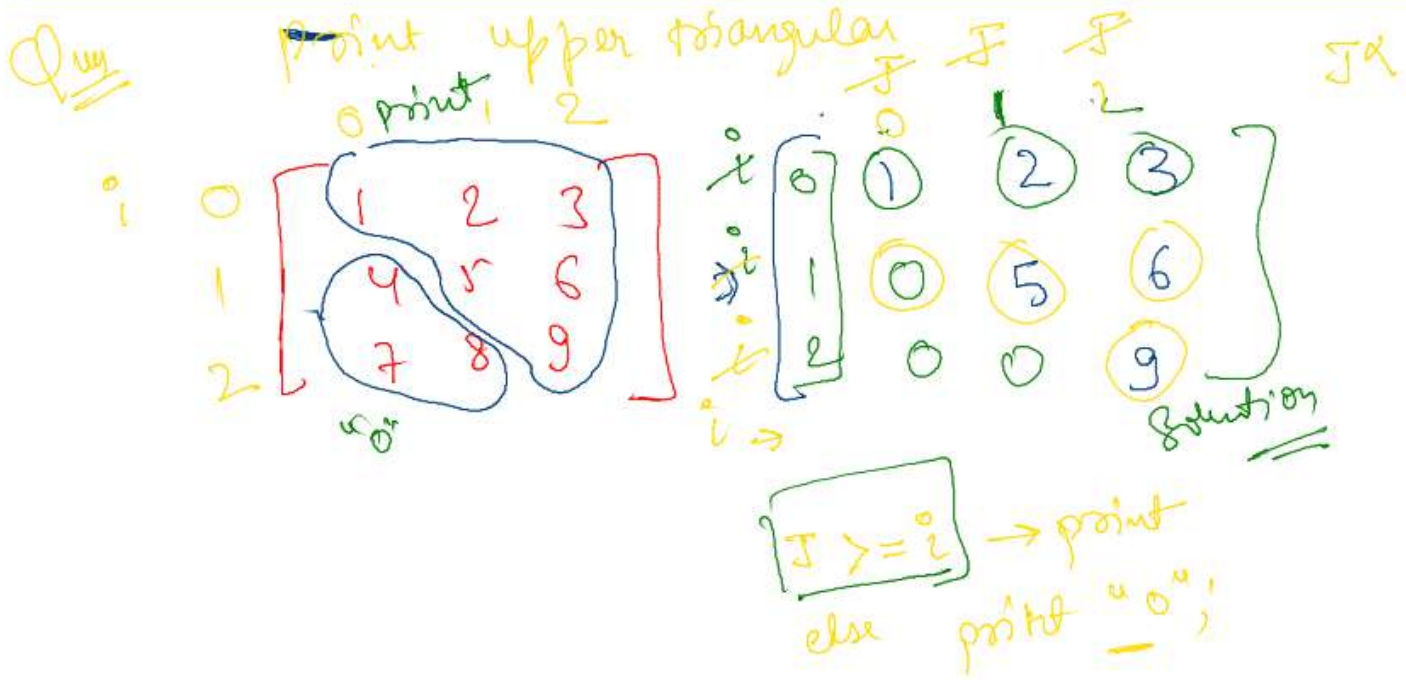
(i,j)

k<n
4<4

k = 0 1 2 3 4
i =
j =

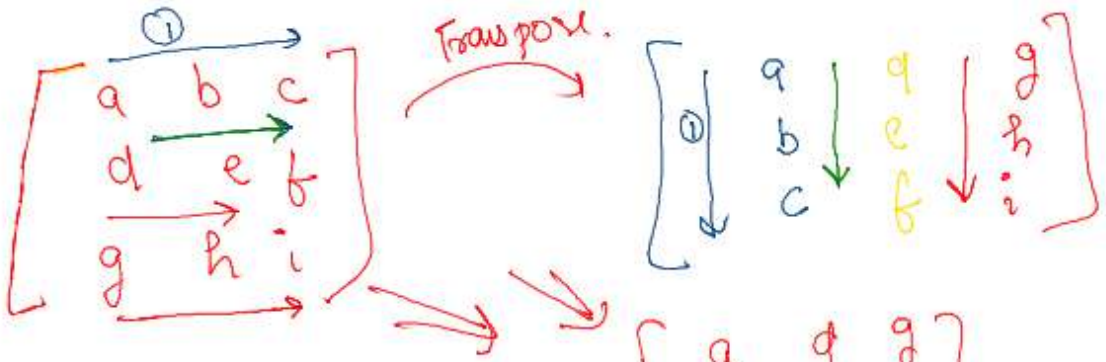
a
b e
c f i
d g j m

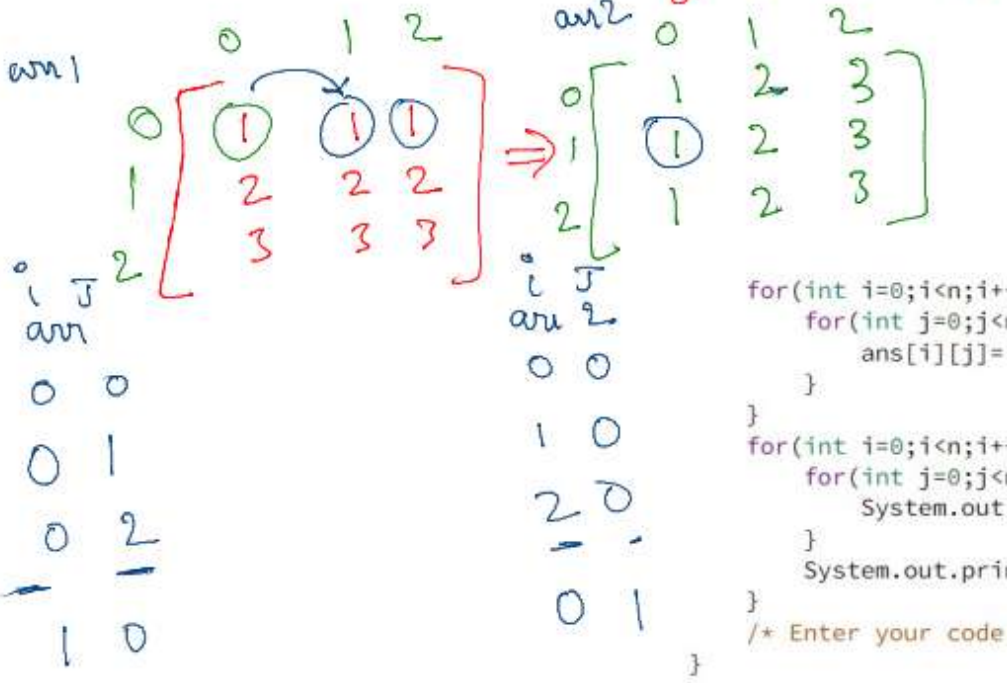
```
    }
// for upper half triangle
    for(int k=0;k<n;k++){
        int i=0;
        int j=k;
        while(j>=0){
            System.out.print(arr[i][j]+" ");
            i++;
            j--;
        }
    }
    //lower half triangle
    for(int k=1;k<n;k++){
        int i = k;
        int j = arr.length-1;
        while(i<n){
            System.out.print(arr[i][j]+" ");
            i++;
            j--;
        }
    }

    /* Enter your code here. Read input from STDIN
```




```
        for(int i=0;i<n;i++){
            for(int j =0;j<m;j++){
                if(j>=i){
                    System.out.print(arr[i][j]+" ");
                }else{
                    System.out.print("0"+" ");
                }
            }
            System.out.println();
        }
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your cl
}
```

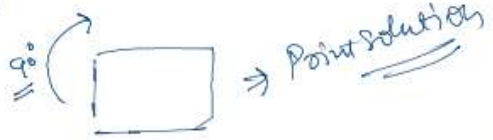
Ques Transpose of Matrix:->



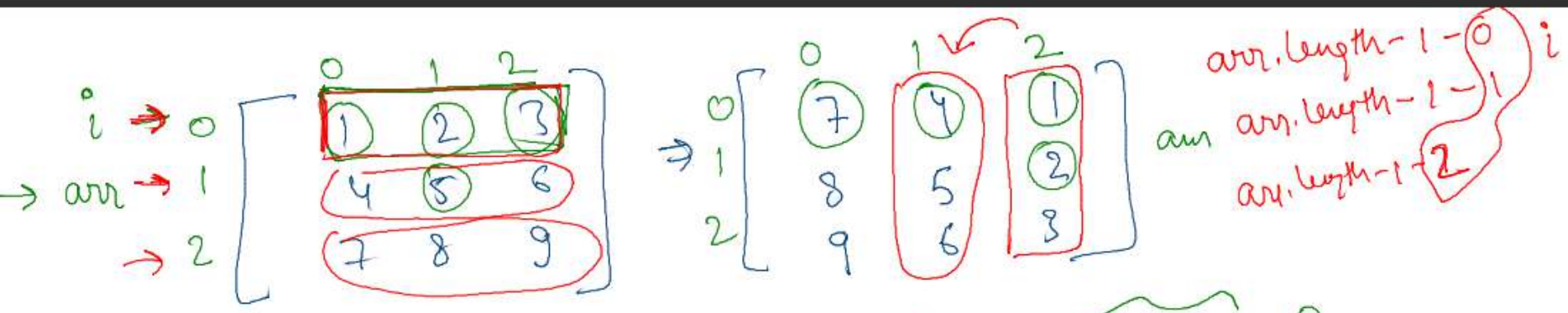


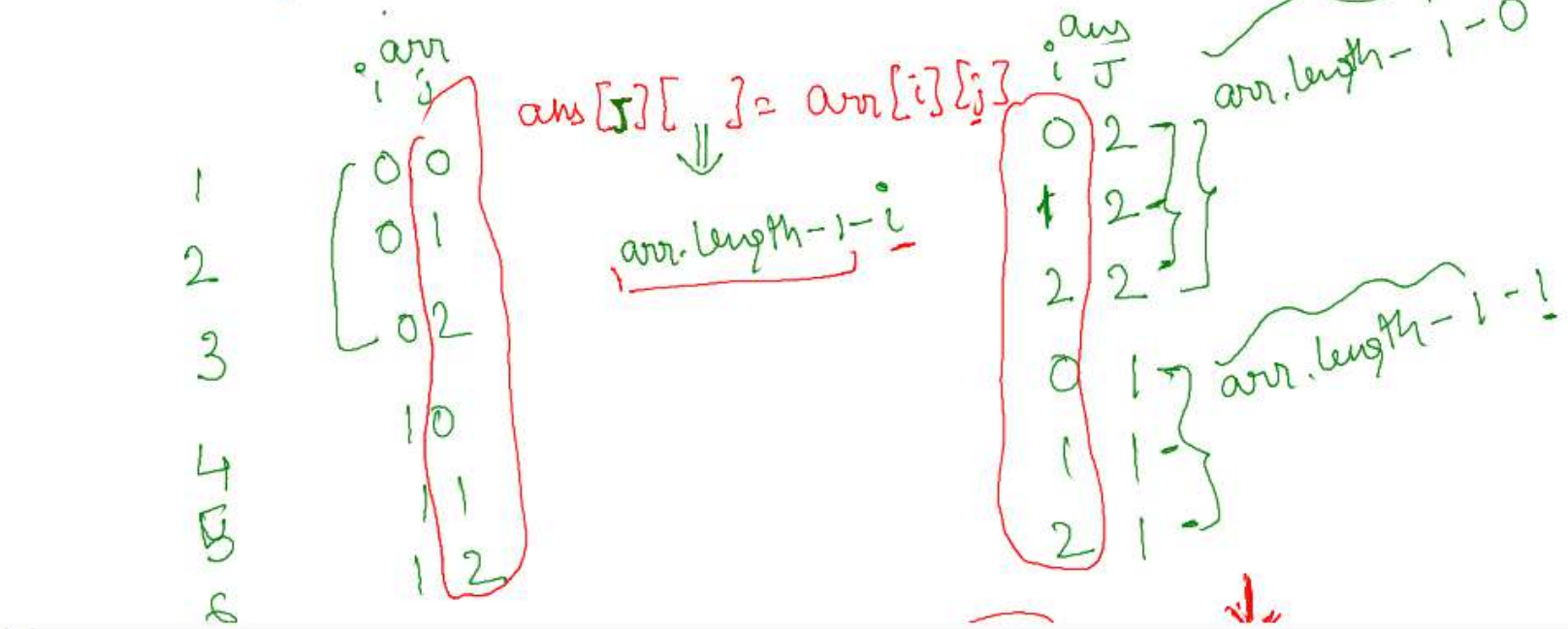
```
for(int i=0;i<n;i++){
    for(int j=0;j<n;j++){
        ans[i][j]= arr[j][i];
    }
}
for(int i=0;i<n;i++){
    for(int j=0;j<n;j++){
        System.out.print(ans[i][j]+" ");
    }
    System.out.println();
}
/* Enter your code here. Read input from STDIN. Print
}
```

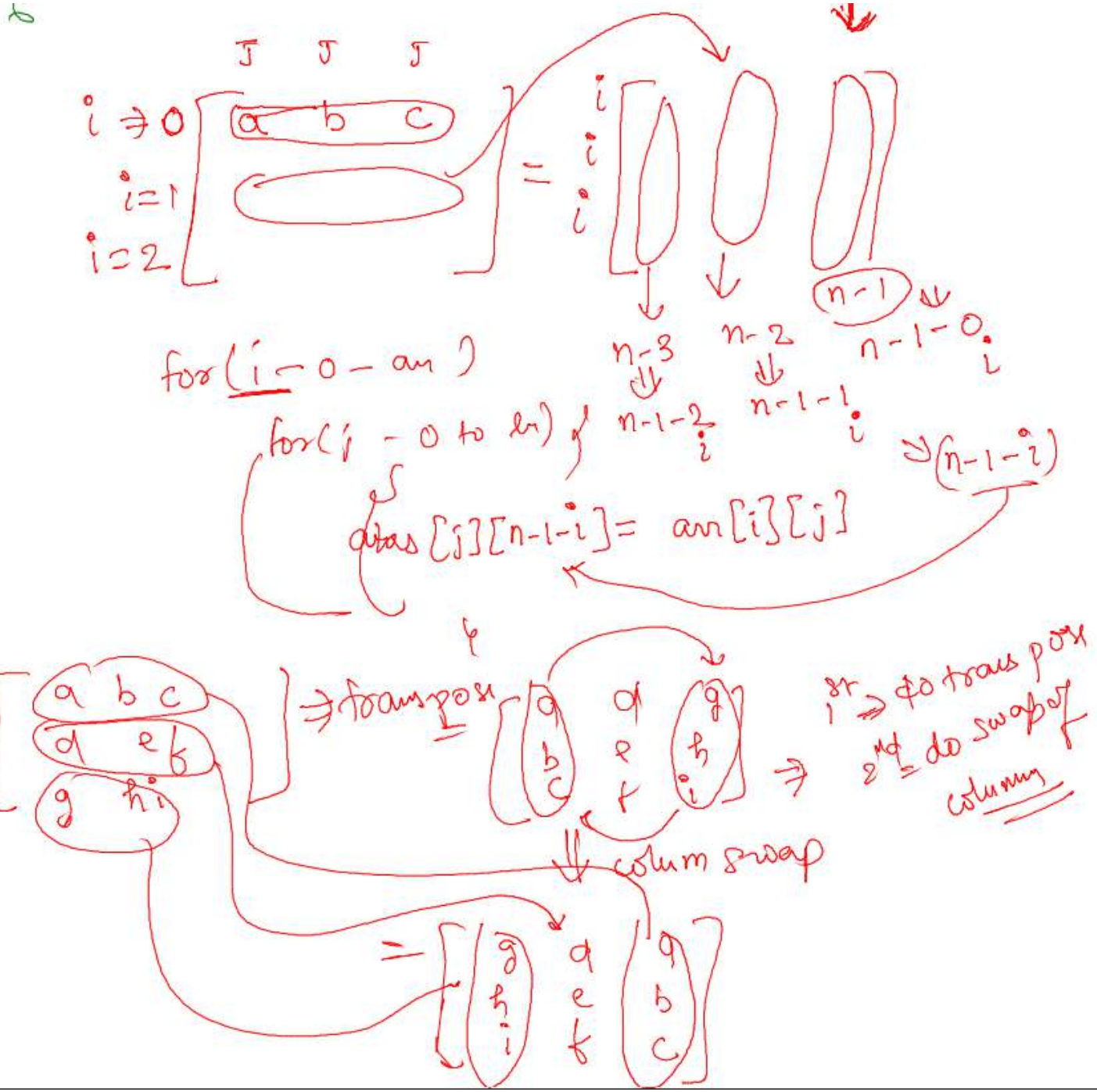
Q4 Array ko rotate



$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix} \Rightarrow \begin{bmatrix} 7 & 4 & 1 \\ 8 & 5 & 2 \\ 9 & 6 & 3 \end{bmatrix}$$






i ⇒ 0
i=1
i=2
a b c
=
n-1
n-3
n-2
n-1-0
n-1-2
n-1-1
for(i-0-an)
for(j - 0 to n)
(n-1-i)
atas[j][n-1-i] = an[i][j]
transpose
a b c
d e f
g h i
=
column swap
i ⇒ do transpose
j ⇒ do swap of column