

Shift Matrix Row-Wise

Problem

Submissions

Leaderboard

Discussions

Given a $n \times n$ matrix and an integer k . Shift the matrix elements row-wise by k . Print the final matrix such that all elements of the row are tab separated and are in one line.

Sample Input 0

```
3 0 5
2 7 5
2 3 3
2
```

$n = 3$

Sample Output 0

```
9 0 5
5 2 7
3 2 3
```

Left -> Right

(0)

(1) → (0)

0	5	9
2	7	5
2	3	3

$k = 2$

(0, 1) ↓ 0

$0 \rightarrow k-1$ 2
 $k-2-1=1$
 $k' = n-1$

reverse

9	0	5
5	2	7
3	2	3

→ reverse $(0, \frac{n}{2})$
→ reverse $(0, k-1)$
→ reverse $(k-1, n)$

(0, 1)
(0)

(0, 1)
 $k-1, n$



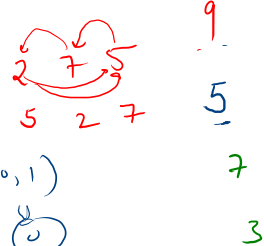
5 2 7

2 3 3

3 2 3

(0) 0 5

9	0	
5	2	
3	2	



9 0 5
(0) (1) (2)

if any

Given a ~~boolean~~ matrix `mat[M][N]` of size `M X N`, modify it such that if a matrix cell `mat[i][j]` is 1 (or true) then make all the cells of `i`th row and `j`th column as 1.

Input Format

1. First line contains `m` and `n` denoting the size of first matrix

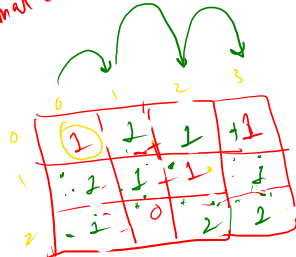
Sample Input 0

```
3 4
1 0 0 1
0 0 1 0
0 0 0 0
```

Sample Output 0

```
1 1 1 1
1 1 1 1
1 0 1 1
```

$m=3$
 $n=4$
 $mat[0][0]=1$
 $mat[0][3]=1$



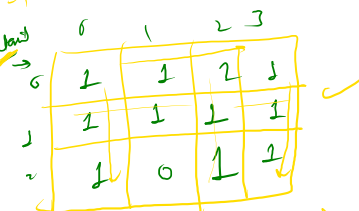
for (i...)
 $mat[0][3]=1$
 $mat[1][2]=1$

print

if ($arr[i][j] == 1$)
 $arr[i][j] = -1$

→ Matrix → traverse
 ↳ Col → 1
 ↳ i → row = -1 except all having 1
 ↳ j → col = -1 — X —

→ Matrix traverse
 x if ($arr[i][j] == -1$)
 $arr[i][j] = 1$



result[3][4]

for (i → 1 →)
 for (j → 1 →)
 if ($arr[i][j] == -1$)
 $arr[i][j] = 1$

```
public static void fillwithminus1(int arr[][],int row,int col ){
```

```
    int m=arr.length;
    int n=arr[0].length;
```

```
//        row
    for(int j=0;j<n;j++){
        if(arr[row][j]!=1){
            arr[row][j]=-1;
        }
    }
```

```
//        col

    for(int i=0;i<m;i++){
        if(arr[i][col]!=1){
            arr[i][col]=-1;
        }
    }
```

```
}
```

1

```
public static void modifyTheMatrix(int arr[][]){
```

```
    int m=arr.length;
    int n=arr[0].length;
```

```
    for(int i=0;i<m;i++){
        for(int j=0;j<n;j++){
            if(arr[i][j]==1){
                fillwithminus1(arr,i,j);
            }
        }
    }
```

```
    for(int i=0;i<m;i++){
        for(int j=0;j<n;j++){
            if(arr[i][j]==-1){
                arr[i][j]=1;
            }
        }
    }
```

```
    for(int i=0;i<m;i++){
        for(int j=0;j<n;j++){
            System.out.print(arr[i][j]+" ");
        }
        System.out.println();
    }
```

```
}
```

2

```
public static void main(String[] args) {
    /* Enter your code here. Read input from
    Scanner scn=new Scanner(System.in);
    int m=scn.nextInt();
    int n=scn.nextInt();
```

```
    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();
        }
    }
```

```
    modifyTheMatrix(arr);
```

```
}
```

3

0

-1

index

Rotation Check In Matrix

Problem

Submissions

Leaderboard

Discussions

Check whether all rows of a matrix are circular rotations of each other.

Given a matrix of $n \times n$ size, the task is to find whether all rows are circular rotations of each other or not.

Sample Input 0

```

3
1 2 3
3 1 2
2 3 1

```

Sample Output 0

YES

Sample Input 1

```

3
1 2 3
3 2 1
1 3 2

```

Sample Output 1

NO

$n=3$

0	1	2	3
1	3	1	2
2	2	3	1

str = 1 2 3
rot = 1 2 3

str = 1 2 3
rot = 1 2 3

str = 1 2 3
rot = 1 2 3

str = pencil
rot = "alpen"
(3)

str = str + str
rot = pencilpencil
alpen
alpen

index = -1

multiple