https://course.acciojob.com/idle?question=8bd8b45a-d71c-4878-bbab-8c531d3ef27a

- EASY
- Max Score: 30 Points

Transpose of Matrix

Write a program to find the transpose of a square matrix of size N*N. Transpose of a matrix is obtained by changing rows to columns and columns to rows.

Expected Time Complexity: O(N * N)

Expected Auxiliary Space: O(1)

Input Format

The first line contains an integer N.

The next N lines contains N spaced integers each, elements of matrix.

Output Format

Print the transposed matrix.

Example 1

Input

```
4
1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4
```

Output

```
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
```

Explanation

```
The rows and columns are switched.
```

Example 2

Input

```
5
1 2 3 4 5
6 7 8 9 10
11 12 13 14 15
16 17 18 19 20
21 22 23 24 25
```

Output

```
1 6 11 16 21
2 7 12 17 22
3 8 13 18 23
4 9 14 19 24
5 10 15 20 25
```

Explanation

```
The rows and columns are switched. For example: 6 was at position 0, 1 in original
matrix. In the transposed matrix, it is at position 1, 0.
```

Constraints

1 <= N <= 100

-10^3 <= mat[i][j] <= 10^3

Topic Tags

- 2D-Arrays

My code

```
// in java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
        public static void main (String[] args) throws java.lang.Exception
        {
                //your code here
         Scanner s=new Scanner(System.in);
      int n=s.nextInt();
      int arr[][]=new int[n][n];

        for (int i=0;i<n;i++)
          for(int j=0;j<n;j++)
            arr[i][j]=s.nextInt();

      for (int i=0;i<n;i++)
          for(int j=0;j<n;j++)
            {  if(j>i) continue;
             int y=arr[i][j];
              arr[i][j]=arr[j][i];
            arr[j][i]=y;
            }
```

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