

String
Matrix
Binary Search

```
import java.io.*;
import java.util.*;
```

```
public class Solution {
```

```
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int [][] mat = new int[n][n];
        for(int i=0;i<n;i++){
            for(int j=0;j<n;j++){
                mat[i][j]=sc.nextInt();
            }
        }
```

```
        for(int row=1;row<n;row++){
            boolean equal = false;
            for(int k =0;k<=n;k++){
                rotate(mat, row);
```

```
                if(compare(mat,0,row )==true){
                    equal = true;
                    break;
                }
            }
```

```
            if(equal == false ){
                System.out.print("NO");
                return;
            }
        }
```

```
        System.out.print("YES");
    }
```

```
    public static void rotate( int [][] mat , int row){
        int temp = mat[row][mat[0].length-1];
        for(int col =mat[0].length-1;col>0;col--){
            mat[row][col]= mat[row][col-1];
        }
        mat[row][0]=temp;
    }
```

```
    public static boolean  compare( int [][] mat ,
int row1, int row2){
        for(int col =0;col<mat[0].length;col++){
            if(mat[row1][col]!=mat[row2][col])return
false;
        }
        return true;
    }
```

Sample Input 0

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

Sample Output 0

YES

Explanation 0

All rows are rotated permutation of each other.

Sample Input 1

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

Sample Output 1

NO

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

3 2 1
1 2 3 → 2 3 1 → 1 2 3
2 3 1 → 1 2 3 → 3 2 1

```
6 public static void main(String[] args) {
7     Scanner sc = new Scanner(System.in);
8     int n = sc.nextInt();
9     int [][] mat = new int[n][n];
10    for(int i=0;i<n;i++){
11        for(int j=0;j<n;j++){
12            mat[i][j]=sc.nextInt();
13        }
14    }
15
16    for(int row=1;row<n;row++){
17        boolean equal = false;
18        for(int k =0;k<=n;k++){
19            rotate(mat, row);
20
21            if(compare(mat,0,row )==true){
22                equal = true;
23                break;
24            }
25        }
26        if(equal == false ){
27            System.out.print("NO");
28            return;
29        }
30    }
31    System.out.print("YES");
32 }
33 public static void rotate( int [][] mat , int row){
34     int temp = mat[row][mat[0].length-1];
35     for(int col =mat[0].length-1;col>0;col--){
36         mat[row][col]= mat[row][col-1];
37     }
38     mat[row][0]=temp;
39 }
40 public static boolean  compare( int [][] mat , int row1, int row2){
41     for(int col =0;col<mat[0].length;col++){
42         if(mat[row1][col]!=mat[row2][col])return false;
43     }
44     return true;
45 }
```