https://course.acciojob.com/idle?question=f8b8153b-a3fa-4797-8860-bdb51e7c160a

- EASY
- Max Score: 30 Points

Search element in a sorted matrix

Harsh has an M x N array 'MAT' where 'M' denotes the number of rows and 'N' denotes the number of columns. The element of each row are sorted in non-decreasing order.

Also, the last element of each row is smaller than the first element of the next row.

You are given an integer 'TARGET' and you need to check if this exist in 'MAT'.

Input Format

The first line of input contains three space-separated integers M, N and TARGET where M and N denote the number of rows and columns of the MAT, respectively and TARGET is the integer to be found.

From the second line of input, the next N lines represent the rows of the MAT. Every row contains M single space-separated integers.

Output Format

Print `TRUE` if 'TARGET' is present in the 'MAT', else print `FALSE`.

Example 1

Input

```
3 4 9
2 3 4 5
6 7 8 9
10 11 12 13
```

Output

```
TRUE
```

Explanation

The 'TARGET' = 9 exists in the 'MAT' at index (1, 3).

Example 2

Input

```
3 3 79
2 3 5
7 8 9
10 11 35
```

Output

```
FALSE
```

Explanation

The 'TARGET' = 79 which does not exists in the 'MAT'.

Constraints

1 <= N <= 500

1 <= M <= 500

-10^5 <= MAT[i], TARGET <= 10^5

Topic Tags

- **Binary Search**

My code

```
// n 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 m=s.nextInt();
	  int t=s.nextInt();
	int arr[][]=new int [n][m];
	for( int i=0;i<n;i++)
	  for(int j=0;j<m;j++)
	    arr[i][j]=s.nextInt();
```

```
    /*
          for( int i=0;i<n;i++){
            if(arr[i][m-1]>=t)
            for(int j=0;j<m;j++)
              {
                if(arr[i][j]==t) {System.out.print("TRUE"); return;}

              }

              }*/
int p=-1;
          for( int i=0;i<n;i++)
          {
            if(arr[i][m-1]>=t){ p=i;break;}
           }
 for(int j=0;j<m;j++)
              {
                if(arr[p][j]==t) {System.out.print("TRUE"); return;}

              }


      System.out.print("FALSE");




        }
}
```