Arrays 2D - Upper triangular matrix

Problem	Submissions	Leaderboard	Discussions

Irene who is one of the organizers of the event has arranged the audience(boys and girls)in a matrix format. Separate values were given to boys and girls which are 1 and 0 respectively. The arrangement should be done based on one condition. She should arrange all the girls below the main diagonal since it is done in a matrix format. If she did the arrangement in a proper way she will win the prize or else not. Help the Judges to find out whether she wins the prize. If she wins you can print "Upper triangular matrix" or else "Not an Upper triangular matrix". Write a program to check whether the given matrix is an upper triangular matrix or not

Input Format

The input consists of the number of rows and columns and the matrix

Constraints

NA

Output Format

The output is any one of the following two strings Upper triangular matrix or Not an Upper triangular matrix.

Sample Input 0

```
3
0 0 1
0 2 3
0 0 5
```

Sample Output 0

```
Upper triangular matrix
```

Explanation 0

Since all the elements below the diagonal of the matrix are 0 it prints the Upper triangular matrix.

Sample Input 1

```
3
0 0 0
0 8 0
4 9 7
```

Sample Output 1

```
Not an Upper triangular matrix
```

Explanation 1

Since all the elements below the diagonal of the matrix are not 0 it prints Not an Upper triangular matrix.

f   y   in

C

```c
1  #include <stdio.h>
2  #include <string.h>
3  #include <math.h>
4  #include <stdlib.h>
5
6  int main() {
7      int n,i,j,c=0;
8      scanf("%d",&n);
9      int a[n][n];
10     for (i=0;i<n;i++)
11     {
12         for (j=0;j<n;j++)
13         {
14             scanf("%d",&a[i][j]);
15         }
16     }
17     for(i=0;i<n;i++)
18     {
19         for (j=0;j<n;j++)
20         {
21           if(i!=j){
22               if(((i>=1 && i<n)) && ((j>-1 && j<n-1))){
23                   if(a[i][j]!=0){
24                       c=1;
25                       break;
26                   }
27               }
28           }
29
30         }
31     }
32     if(c==0){
33         printf("Upper triangular matrix");
34     }
35     else{
36         printf("Not an Upper triangular matrix");
37     }
38     return 0;
39  }
40
```

Line: 1 Col: 1

⬆ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code

Testcase 0 ✔ | Testcase 1 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
3
0 0 1
0 2 3
0 0 5
```

Your Output (stdout)

```
Upper triangular matrix
```

Expected Output

```
Upper triangular matrix
```