Elite-S007-Matrix Traversal

Solved Challenges **1/2**

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Spiral Matrix Printing - Anti Clockwise

ID:11053 **Solved By 496 Users**

The program must accept an integer matrix of size **R*C** as the input. The program must print the layers of the matrix in spiral format (Anti Clockwise) as shown in the Example Input/Output section.

Boundary Condition(s):
2 <= R, C <= 50

Input Format:
The first line contains R and C separated by a space.
The next R lines, each contains C integers separated by a space.

Output Format:
The first line contains R*C values separated by a space.

Example Input/Output 1:
Input:
6 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
26 27 28 29 30

Output:
1 6 11 16 21 26 27 28 29 30 25 20 15 10 5 4 3 2 7 12 17 22 23 24 19 14 9 8 13 18

Example Input/Output 2:
Input:
4 4
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16

Output:
1 5 9 13 14 15 16 12 8 4 3 2 6 10 11 7

Example Input/Output 3:
Input:
5 4
1 2 3 4
5 6 7 8

9 21 22 23
24 25 26 27
28 29 30 31

Output:
1 5 9 24 28 29 30 31 27 23 8 4 3 2 6 21 25 26 22 7

Max Execution Time Limit: 500 millisecs

Ambiance

C (gcc 8.x)

Reset

```c
#include<stdio.h>
#include<stdlib.h>

int main()
{
    int R,C;
    scanf("%d%d",&R,&C);

    int matrix[R][C];

    for(int row=0;row<R;row++)
        for(int col=0;col<C;col++)
            scanf("%d",&matrix[row][col]);

    int startRow = 0;
    int endRow = R-1;
    int startCol = 0;
    int endCol = C-1;

    while(startRow<=endRow && startCol<=endCol)
    {
        //T->B
        for(int row=startRow;row<=endRow;row++)
            printf("%d ",matrix[row][startCol]);

        //L->R
        for(int col=startCol+1;col<=endCol;col++)
            printf("%d ",matrix[endRow][col]);

        if(startCol!=endCol)
        {
        //B->T
        for(int row=endRow-1;row>=startRow;row--)
            printf("%d ",matrix[row][endCol]);
        }

        if(startRow!=endRow)
        {
        //R->L
        for(int col=endCol-1;col>=startCol+1;col--)
            printf("%d ",matrix[startRow][col]);
        }

        startRow++;
        endRow--;
        startCol++;
        endCol--;

    }
}
```

Code did not pass the execution

```
Hello.c: In function ‘main’:
Hello.c:15:5: error: ‘startRow’ undeclared (first use in this function); did you mean ‘strtoq’?
    startRow = 0;
    ^~~~~~~~
    strtoq
Hello.c:15:5: note: each undeclared identifier is reported only once for each function it appe
ars in
Hello.c:16:5: error: ‘endRow’ undeclared (first use in this function)
    endRow = R-1;
    ^~~~~~
Hello.c:17:5: error: ‘startCol’ undeclared (first use in this function); did you mean ‘strtol’?
    startCol = 0;
    ^~~~~~~~
    strtol
Hello.c:18:5: error: ‘endCol’ undeclared (first use in this function)
    endCol = C-1;
    ^~~~~~
```

Save Run

Run with a custom test case (Input/Output)