Elite-S007-Matrix Traversal

Solved Challenges 0/2



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Spiral Matrix Printing - Clockwise

ID:10773 **Solved By 583 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 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:

65

12345

678910

11 12 13 14 15

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

Output:

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

Example Input/Output 2:

Input:

44

1234

5678

9 10 11 12

13 14 15 16

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

Example Input/Output 3:

Input:

5 4

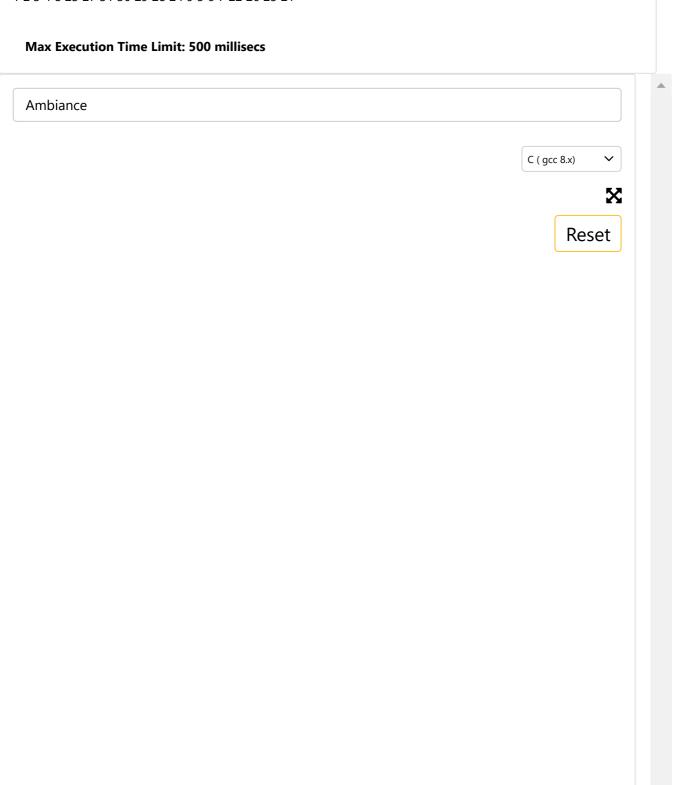
1234

5678

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

Output:

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



```
1 #include<stdio.h>
 2
   #include<stdlib.h>
 3
   int main()
 4
 5
   {
        int R,C;
 6
 7
        scanf("%d%d",&R,&C);
        int matrix[R][C];
 8
 9
        for(int row=0;row<R;row++)</pre>
             for(int col=0;col<C;col++)</pre>
10
                 scanf("%d",&matrix[row][col]);
11
12
13
        int startRow=0;
14
        int endRow=R-1;
15
        int startCol=0;
        int endCol=C-1;
16
17
        while(startRow<=endRow && startCol<=endCol)</pre>
18
19
        {
             //L->R
20
21
             for(int col = startCol;col<=endCol;col++)</pre>
22
                 printf("%d ",matrix[startRow][col]);
23
24
             //T->B
25
             for(int row = startRow+1;row<=endRow;row++)</pre>
                 printf("%d ",matrix[row][endCol]);
26
27
             if(startRow!=endRow)
28
29
             {
             //R->L
30
             for(int col = endCol-1;col>=startCol;col--)
31
32
                 printf("%d ",matrix[endRow][col]);
33
             }
34
             if(startCol!=endCol)
35
36
             //B->T
37
38
             for(int row = endRow-1;row>=startRow+1;row--)
                 printf("%d ",matrix[row][startCol]);
39
40
             }
41
42
             startRow++;
43
             endRow--;
44
             startCol++;
45
             endCol--;
46
47
        }
48
49
   }
```

