**Boundary traversal of matrix**

Statement..

You are given a matrix of dimensions **n x m**. The task is to perform boundary traversal on the matrix in a clockwise manner.  
  
**Example 1:**

**Input**:

n = 4, m = 4

matrix[][] = {{1, 2, 3, 4},

  {5, 6, 7, 8},

  {9, 10, 11, 12},

  {13, 14, 15,16}}

**Output**: 1 2 3 4 8 12 16 15 14 13 9 5

**Explanation**:

The matrix is:

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

The boundary traversal is:

1 2 3 4 8 12 16 15 14 13 9 5

**Example 2:**

**Input**:

n = 3, m = 4

matrrix[][] = {{12, 11, 10, 9},

  {8, 7, 6, 5},

  {4, 3, 2, 1}}

**Output**: 12 11 10 9 5 1 2 3 4 8

### Java code

import java.io.\*;

import java.util.\*;

class CodingMaxima

{

public static void main(String args[])throws IOException

{

Scanner sc = new Scanner(System.in);

int t = sc.nextInt();

while(t-- > 0)

{

int n = sc.nextInt();

int m = sc.nextInt();

int matrix[][] = new int[n][m];

for(int i = 0; i < n; i++)

{

for(int j = 0; j < m; j++)

matrix[i][j] = sc.nextInt();

}

Solution ob = new Solution();

ArrayList<Integer> ans = ob.boundaryTraversal(matrix, n, m);

for (Integer val: ans)

System.out.print(val+" ");

System.out.println();

}

}

}

//User function Template for Java

class Solution

{

static ArrayList<Integer> boundaryTraversal(int matrix[][], int n, int m)

{

ArrayList<Integer> ar=new ArrayList<Integer>();

if(n==1){

for(int i=0;i<m;i++){

ar.add(matrix[0][i]);

}

}

else if(m==1){

for(int i=0;i<n;i++){

ar.add(matrix[i][0]);

}

}

else{

for(int i=0;i<m;i++){

ar.add(matrix[0][i]);

}

for(int i=1;i<n;i++){

ar.add(matrix[i][m-1]);

}

for(int i=m-2;i>=0;i--){

ar.add(matrix[n-1][i]);

}

for(int i=n-2;i>0;i--){

ar.add(matrix[i][0]);

}

}

return ar;

}

}