#Edge cases: The for loops checks cases

The ones that are not checked need to be put in special if conditions

Single row top gets incremented

Single column right decremented

To avoid backward traversal

def spiralMatrix(matrix : List[List[int]]) -> List[int]:

    n=len(matrix)

    m=len(matrix[0])

    left=0

    right=m-1

    top=0

    bottom=n-1

    l=[]

    #left to right

    while(top<=bottom and left<=right):

        for i in range(left,right+1):

            l.append(matrix[top][i])

        top+=1

    #incase of only one row top is incremented

    #but for second case it is checked in the for loop

    #(top to bottom)

        for j in range(top,bottom+1):

            l.append(matrix[j][right])

        right-=1

    #right to left

    #hence the check here to avoid backward traversal

        if top<=bottom:

            for m in reversed(range(left,right+1)):

                l.append(matrix[bottom][m])

    #bottom to top

            bottom-=1

        if left<=right:

            for k in reversed(range(top,bottom+1)):

                l.append(matrix[k][left])

            left+=1

    return l