Approach:

1. To track movements:
   1. Move top-left to top-right, increment top
   2. Move top-right to bottom-right, decrement right
   3. If bottom<top or left<right, break(trick for col matrix or single row matrix)
   4. Move bottom-right to bottom-left, decrement bottom
   5. Move bottom-left to top-left, increment left

Code:

row = len(mat)

col = len(mat[0])

top = 0

bottom = row-1

left = 0

right = col-1

res = []

while top <= bottom and left <= right:

# step 1: move top left to top right increment top

for offset in range(left,right+1):

res.append(mat[top][offset])

top+=1

# step 2: move top right to bottom right, decrement right

for offset in range(top, bottom+1):

res.append(mat[offset][right])

right-=1

if bottom < top or right < left:

break

# step 3: move bottom right to bottom left, decrement bottom

for offset in range(right,left-1,-1 ):

res.append(mat[bottom][offset])

bottom-=1

# step 4: move bottom left to top left, increment left

for offset in range(bottom, top-1, -1 ):

res.append(mat[offset][left])

left+=1

return res