i = 0  
i is running index (inc by 2 every iteration)
while i < length(A)-1
    x = A[i]       
        # let x and y hold the next to elements in A
    y = A[i+1]

    if x < y then   
        # ensure that x is not smaller than y
        swap x and y

        j = i - 1   
            # j is the index used to find the insertion point
        while j >= 0 and A[j] > x   
            # find the insertion point for x
            j = j - 1
        end while
        A[j+2] = x   
            # store x at its insertion place
        A[j+1] is an available space now

        while j >= 0 and A[j] > y   
            # find the insertion point for y
            A[j+1] = A[j]# shift existing content by 1
            j = j - 1
        end while
        A[j+1] = y   
            # store y at its insertion place

    i = i+2
end while

if i = length(A)-1   
    # if length(A) is odd, an extra
    y = A[i]       
        # single insertion is needed for
    j = i - 1       
        # the last element
    while j >= 0 and A[j] > y
        j = j - 1
    end while
    A[j+1] = y
end if