algorithm InsertionSort(*list L*)
    for $i = 2$ to n **do**
        $value = L[i]$
        $j = i - 1$
        ▷ Insert $L[i]$ into the sorted subarray $L[1 : i - 1]$
        while $j > 0$ and $L[j] > value$ **do**
            $L[j + 1] = L[j]$
            $j = j - 1$
        end while
        $L[j + 1] = value$
    end for

Example: 17 12 14 15 13 11
At the beginning, the input is: L[1] = 17, L[2] = 12, L[3] = 14, L[4] = 15, L[5] = 13, L[6] = 11
n=6 because the array L has 6 elements.

Let's recall the logical **and** operator: the result of x **and** y is true if both x and y evaluate to true. Otherwise, the result is false.

Let's now run through the algorithm pseudocode.

for i=2 to 6 do
        1st iteration of for loop: i = 2
        value = L[2] = 12
        j = 2-1 = 1
        Let's run the while loop
        Condition of while loop is true, because (1 > 0) and (L[1]=17 > 12) are both true
            L[2] = L[1] = 17
            j = 1-1 = 0
        Condition of while loop is false, because (0 > 0) is false: end while
        L[1] = 12 because value is equal to 12
        After 1st iteration of for loop: L[1] = 12, L[2] = 17, L[3] = 14, L[4] = 15, L[5] = 13, L[6] = 11

        2nd iteration of for loop: i = 3
        value = L[3] = 14
        j = 3-1 = 2
        Let's run the while loop
        Condition of while loop is true, because (2 > 0) and (L[2]=17 > 14) are both true
            L[3] = L[2] = 17
            j = 2-1 = 1
        Condition of while loop is false, because (1 > 0) is true but (L[1]=12 > 14) is false: end while
        L[2] = 14 because value is equal to 14
        After 2nd iteration of for loop: L[1] = 12, L[2] = 14, L[3] = 17, L[4] = 15, L[5] = 13, L[6] = 11

        3rd iteration of for loop: i = 4
        value = L[4] = 15
        j = 4-1 = 3
        Condition of while loop is true, because (3 > 0) and (L[3]=17 > 15) are both true
            L[4] = L[3] = 17
            j = 3-1 = 2

Condition of while loop is false, because (2 > 0) is true but (L[2]=14 > 15) is false: end while
L[3] = 15 because value is equal to 15
After 3rd iteration of for loop: L[1] = 12, L[2] = 14, L[3] = 15, L[4] = 17, L[5] = 13, L[6] = 11

4th iteration of for loop: i = 5
value = L[5] = 13
j = 5-1 = 4
Condition of while loop is true, because (4 > 0) and (L[4]=17 > 13) are both true
        L[5] = L[4] = 17
        j = 4-1 = 3
Condition of while loop is true, because (3 > 0) and (L[3]=15 > 13) are both true
        L[4] = L[3] = 15
        j = 3-1 = 2
Condition of while loop is true, because (2 > 0) and (L[2]=14 > 13) are both true
        L[3] = L[2] = 14
        j = 2-1= 1
Condition of while loop is false, because (1 > 0) is true but (L[1]=12 > 13) is false: end while
L[2] = 13 because value is equal to 13
After 4th iteration of for loop: L[1] = 12, L[2] = 13, L[3] = 14, L[4] = 15, L[5] = 17, L[6] = 11

5th iteration of for loop: i = 6
value = L[6] = 11
j = 6-1 = 5
Condition of while loop is true, because (5 > 0) and (L[5]=17 > 11) are both true
        L[6] = L[5] = 17
        j = 5-1 = 4
Condition of while loop is true, because (4 > 0) and (L[4]=15 > 11) are both true
        L[5] = L[4] = 15
        j = 4-1 = 3
Condition of while loop is true, because (3 > 0) and (L[3]=14 > 11) are both true
        L[4] = L[3] = 14
        j = 3-1 = 2
Condition of while loop is true, because (2 > 0) and (L[2]=13 > 11) are both true
        L[3] = L[2] = 13
        j = 2-1 = 1
Condition of while loop is true, because (1 > 0) and (L[1]=12 > 11) are both true
        L[2] = L[1] = 12
        j = 1-1 = 0
Condition of while loop is false, because (0 > 0) is false: end while
L[1] = 11 because value is equal to 11
After 5th (and last) iteration of for loop, the array is sorted:
L[1] = 11, L[2] = 12, L[3] = 13, L[4] = 14, L[5] = 15, L[6] = 17