

Answer on Question #73553 – Programming & Computer Science | Algorithms

Comparing this 2 algorithms it is easy to notice, that they differ only in the body of 'while' loop.

```
Input: Array A[0...n-1]
Begin
for (index i = 1 to n-1) do
    v = A[i]
    index j = i-1
    while (index j ≥ 0) do
        if (v ≥ A[j]) then
            break 'j' loop
        else
            A[j+1] = A[j]
        end if
        j = j-1
    end while
    A[j+1] = v
End
```

Pseudo Code - I

```
Input: Array A[0...n-1]
Begin
for (index i = 1 to n-1) do
    v = A[i]
    index j = i-1
    while (index j ≥ 0) do
        if (v > A[j]) then
            break 'j' loop
        else
            A[j+1] = A[j]
        end if
        j = j-1
    end while
    A[j+1] = v
End
```

Pseudo Code - II

After several test I find out that in the Pseudo Code – I we have $(n-1)$ comparisons.

In the Pseudo Code – II we encounter $(n-2)$ comparisons.

Furthermore array :51,52,53,54,55, after sorting by both algorithms will look the same as on input:51,52,53,54,55.