Improved Algorithm for Selection Sort

For I = 0 to I < N-1 do

Min = i

Set Counter to 0 /\*Counter is set to 0 at the start of

For j = I + 1 to j < N do each outer loop increment \*

If A[j] < A[Min] then

Min = j

END IF

If A[j -1] < A[j] /\*If all of array is sorted, counter

Set Counter to Counter + 1 will increase a total of n -1 times

END IF

END FOR

If Counter == n – 1 /\*If counter ==n - 2, array is sorted

Return 0 as explained in step 2\*/

Else

Temp = A[min]

A[min] = A[i]

A[i] = temp

END FOR

Call Stack for (1,2,4,3) Without Improvement

First result: No change (1,2,4,3)

Second Result : (1,2,3,4)

Third Result: (1,2,3,4)

Fourth Result: (1,2,3,4)

Finished

Call Stack for (1,2,4,3) With Improvement

First result: No change (1,2,4,3), Counter is not n-1

Second Result : (1,2,3,4), Counter is not n-1

Third Result: (1,2,3,4), Counter is n \_1

Finished