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In an unsorted array of integers, design an algo and a program to sort the array using insertion sort. Find no. of comparisons.

Algorithm

1. first element present only, already sorted

arr[0]

2. < next element.

3. compare all element in the sorted sub list.

4. If all elements in sorted sub list is greater than all the elements to be sorted.

5. insert value

6. repeat until list is sorted.

3

an unsorted array. Sort array using selection sort.

thm \rightarrow

selection sort (arr, n)

for step 2 and 3 for $i=0$ to $n-1$.

smallest (arr, i, n, pos)

swap arr[i] with arr[pos]

end of loop

smallest (arr, i, n, pos)

small = arr[i]

pos = i

repeat for $j=i+1$ to n

(small > arr[j])

set small = arr[j]

at pos = j

end of if

end of loop

return pos