

Name: Akhil Montrose

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Student ID: 81788

Bubble Sort Algorithm

bubbleSort (arr a)

arrLength (length of array a)

for $i < 1$ to $i-1$ (start and end of array)

let $b < 0$

for $b < 0$ to arrLength -1

if $a[b] > a[b+1]$

then swap $a[b]$ with $a[b+1]$

$i < 1$ to $i-1 > c1$

$b < 0 > 1$

$b < 0$ to arrLength -1 $> C_2n$

if $a[b] > a[b+1] > n$

swap $a[b]$ with $a[b+1] > n$

So the number of primitive operations are:

$$C_1 + C_2n + 1 + n + n = 1 + C_1 + C_2n + 2n$$

Selection Sort Algorithm

arrLength < length of the array

SelectionSort (Array, arrLength)

For i = 0 to arrLength-2

Minimum = i

For b = i+1 to arrayLength-1

If Array[b] < Array[minimum]

Minimum = j

Swap (Array[b] < Array[minimum])

For i = 0 to arrLength-2 > c₁

Minimum = i > 1

b = i+1 > 1

b = i+1 to arrayLength-1 > C₂n

Array[b] < Array[minimum] > n

Minimum = j > 1

(Array[b] < Array[minimum]) > n

So the number of primitive operations are:

$$C_1 + 1 + 1 + C_2n + n + 1 + n = 3 + c_1 + C_2n + 2n$$