

Theoretical Analysis of Code

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8:06 PM

Sort of Sort

Based on in class example:

once

repeating

4 — int lenMax
1 — int toBegin
1 — int indOfMax
1 — int count
1 — int i = toBeg
1 — int temp = arr[lenMax]
1 — int temp = arr[toBegin]
1 — int max = arr[toBegin]

for loop — n
while loop — n
count++ — n
swap:
int temp = arr[lenMax] — n
arr[lenMax] = max — n
arr[indOfMax] = temp — n
lengthMax -- — n

swap:
int temp = arr[toBegin] — n
arr[toBegin] = max — n
arr[indOfMax] = temp — n
toBegin++ — n

Swap:
arr[i] >= max — n
max = arr[i] — n
indOfMax = i — n

8 + $14n$

$$T(n) = 8 + 14n$$

$$O(n) = O(n) \text{ (get rid of constants)}$$
