

Which sorting algorithm makes minimum number of memory writes?

Minimizing the number of writes is useful when making writes to some huge data set is very expensive, such as with **EEPROMs** or **Flash memory**, where each write reduces the lifespan of the memory.

Among the sorting algorithms that we generally study in our data structure and algorithm courses, **Selection Sort** makes least number of writes (it makes $O(n)$ swaps). But, **Cycle Sort** almost always makes less number of writes compared to Selection Sort. In Cycle Sort, each value is either written zero times, if it's already in its correct position, or written one time to its correct position. This matches the minimal number of overwrites required for a completed in-place sort.

Sources:

http://en.wikipedia.org/wiki/Cycle_sort

http://en.wikipedia.org/wiki/Selection_sort

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groomnestle · 5 months ago

I had no idea about cycle sort b4.. thanks for the info.

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Median of two sorted arrays

Tree traversal without recursion and without stack!

Structure Member Alignment, Padding and

Data Packing

Intersection point of two Linked Lists

Lowest Common Ancestor in a BST.

Check if a binary tree is BST or not

Sorted Linked List to Balanced BST



akanksha · 5 months ago

what is the reason for $O(n)$ being the tightest upper bound for the no. of swaps

^ | v ·



guest → akanksha · 5 months ago

coz u will be having max n swaps for n elements

2 ^ | v ·



ravikant · 3 years ago

Can somebody explain me the difference between cycle sort and selection so

3 ^ | v ·



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