



Common Sorting Algorithms

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1. Introduction

Three common (and easy to implement) sorting algorithms are: Quick Sort, Bubble Sort, and Selection Sort.

Average time complexities:

Quick Sort: $O(n \log n)$

Bubble Sort: $O(n^2)$

Selection Sort: $O(n^2)$

Big-O notation: Upper bound growth rate of a function.

Quick Sort: Divide-and-conquer; recursively sort left and right sublists.

Bubble Sort: Compares adjacent values and swaps them if necessary.

Selection Sort: Divides list into two sublists: sorted and unsorted.

Smallest value of the unsorted sublist is added to the end of the sorted sublist.

2. Methods

Each algorithm sorts identical, randomly created arrays.

3. Results