**Time Complexity Comparison of Bubble Sort vs Quick Sort:**

* **Bubble Sort:**
  + Best Case: O(n) (when array is already sorted)
  + Average Case: O(n²)
  + Worst Case: O(n²)
  + Bubble Sort repeatedly swaps adjacent elements. It is inefficient for large datasets due to nested loops.
* **Quick Sort:**
  + Best Case: O(n log n)
  + Average Case: O(n log n)
  + Worst Case: O(n²) (when pivot selection is poor, e.g., always smallest or largest)
  + Quick Sort uses a divide-and-conquer approach, partitioning the array around a pivot and sorting the partitions recursively.

**Why Quick Sort is Generally Preferred:**

* Quick Sort typically performs faster in practice than Bubble Sort due to its efficient partitioning strategy.
* It reduces the number of total comparisons and swaps significantly compared to Bubble Sort.
* While both have a worst-case of O(n²), Quick Sort's average performance is much better.
* Bubble Sort is mainly used for educational purposes or when data size is very small.