

Algorithm performance



Summarizing sorting



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By the end of this video you will be able to...

- State the best, worst, and average case performance for insertion sort, selection sort, merge sort, and quick sort
- Evaluate situations in which different sorting algorithms are appropriate

	Best case	Worst case
Selection Sort	$O(n^2)$	$O(n^2)$
Insertion Sort	$O(n)$	$O(n^2)$
Merge Sort	$O(n \log n)$	$O(n \log n)$

	Best case	Worst case
Selection Sort	$O(n^2)$	$O(n^2)$
Insertion Sort	$O(n)$	$O(n^2)$
Merge Sort	$O(n \log n)$	$O(n \log n)$
Quick Sort	$O(n \log n)$	$O(n^2)$

	Best case	Average case	Worst case
Selection Sort	$O(n^2)$	$O(n^2)$	$O(n^2)$
Insertion Sort	$O(n)$	$O(n^2)$	$O(n^2)$
Merge Sort	$O(n \log n)$	$O(n \log n)$	$O(n \log n)$
Quick Sort	$O(n \log n)$	$O(n \log n)$	$O(n^2)$

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Merge Sort		$O(n \log n)$	$O(n \log n)$
Quick Sort	$O(n \log n)$	$O(n \log n)$	$O(n^2)$

and many others....