

Both Quicksort and Mergesort use a divide-and-conquer approach, but there are a couple of key differences between the two. Quicksort requires you to select a pivot element, partitioning the array between elements that are smaller and larger than the pivot, and then sorting the partitions recursively *in-place*. Mergesort requires you to split the array into halves recursively until each piece has one element, then merging the smaller arrays back together in sorted order. Quicksort has a BigO average case of  $O(n \log n)$  and worst case at  $O(n^2)$ , while Mergesort's BigO is at  $O(n \log n)$ .