Quicksort (Time Complexity)

best, average and worst case time complexity of the quicksort algorithm. (Reading time: under 1 minute)

	TIME		SPACE
Best	**Average**	**Worst**	**Worst**
O(n log(n))	O(n log(n))	$O(n^2)$	O(log (n))

Best and average:

Each partitioning takes **O(n)** operations, and every partitioning splits the array **O(log(n))**. This results in **O(n log(n))**.

Worst:

If you always pick a pivot that is the highest or lowest value, you need to iterate through the entire array.

Worst space:

The number of variables that are stored

In the next lesson, I will discuss the selection sort algorithm.