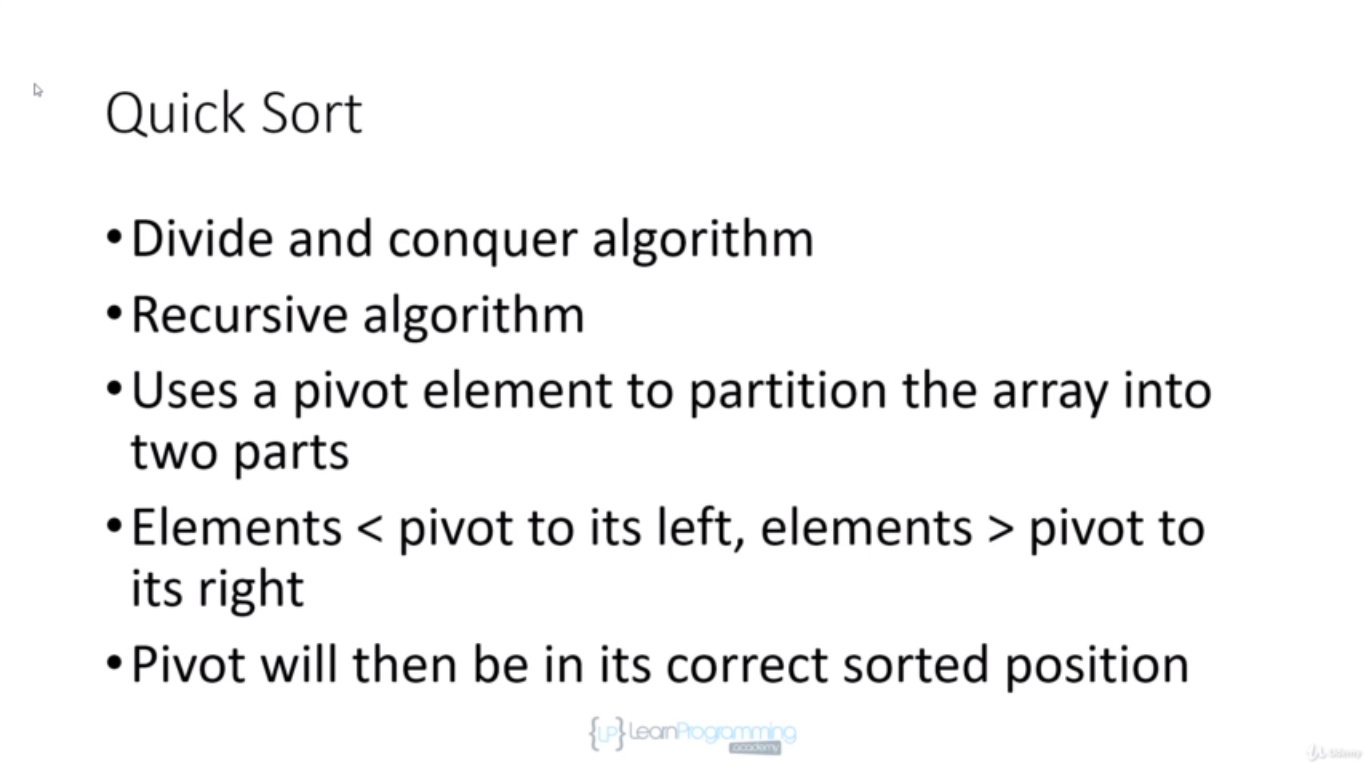
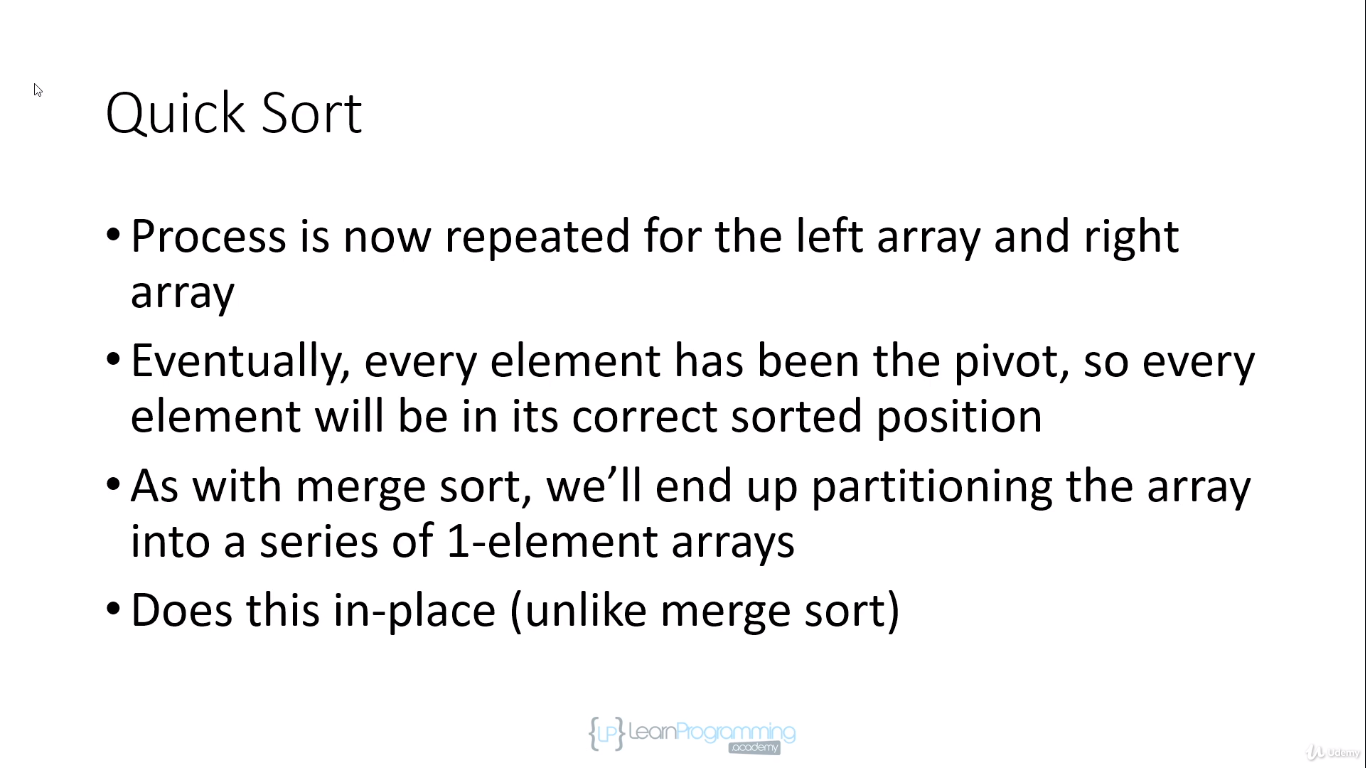
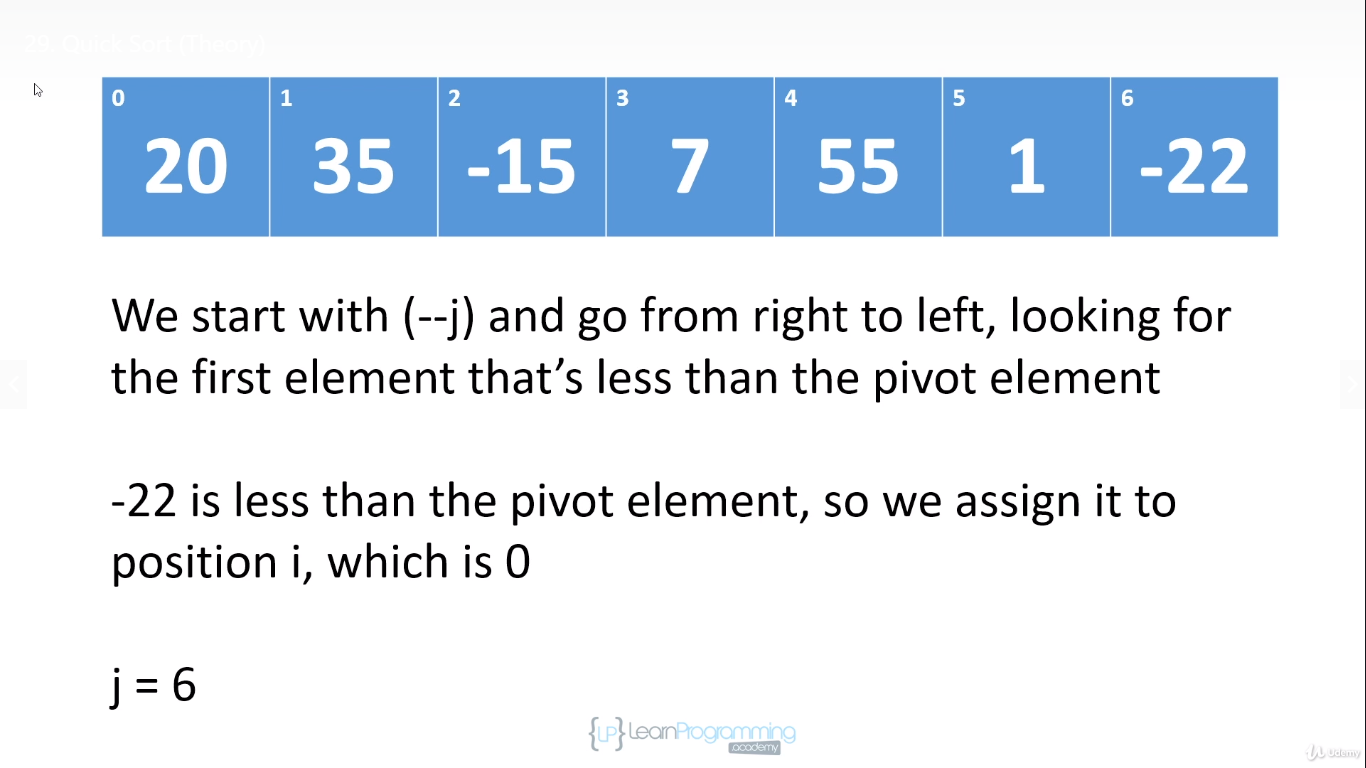
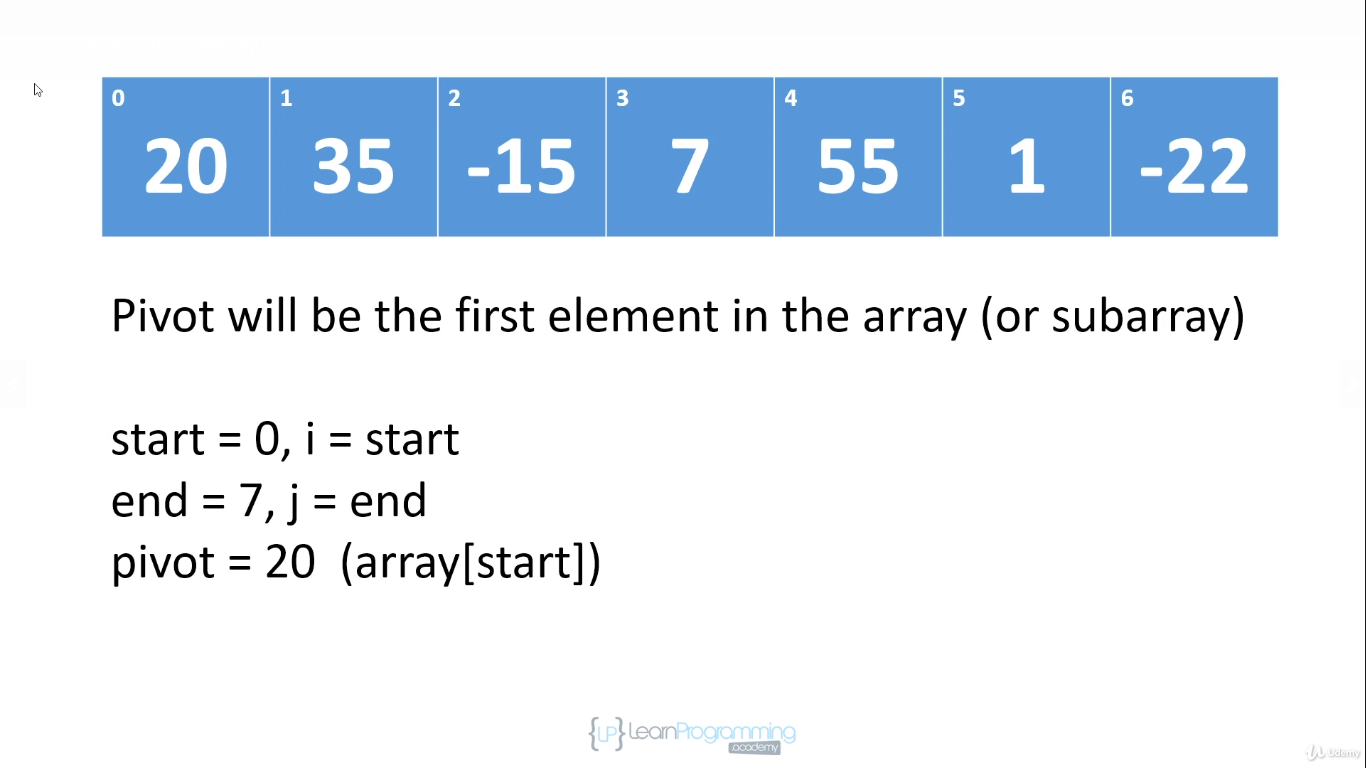
**Quick Sort**

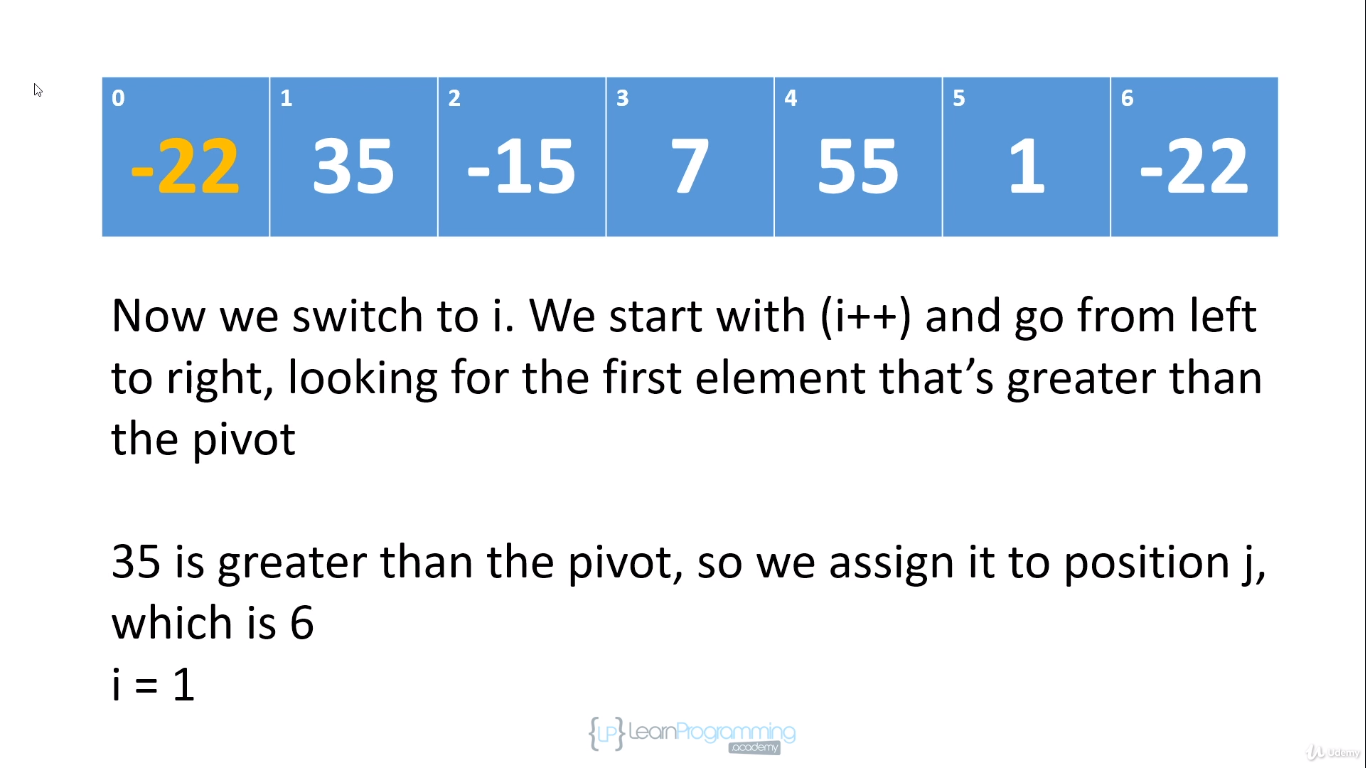


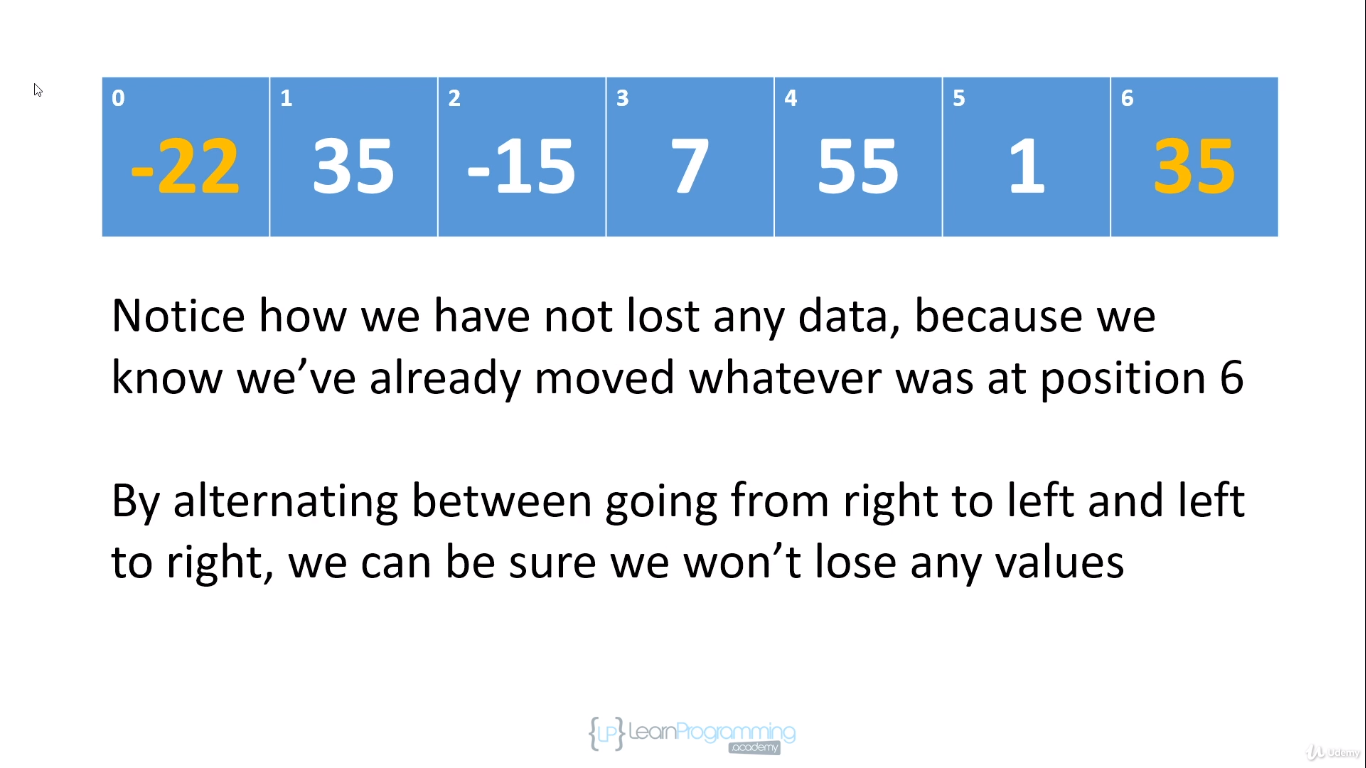
Everything less than pivot element will be in the left and all the elements greater than pivot element are it right after we finish portioning pivot element is at correct sorted position.

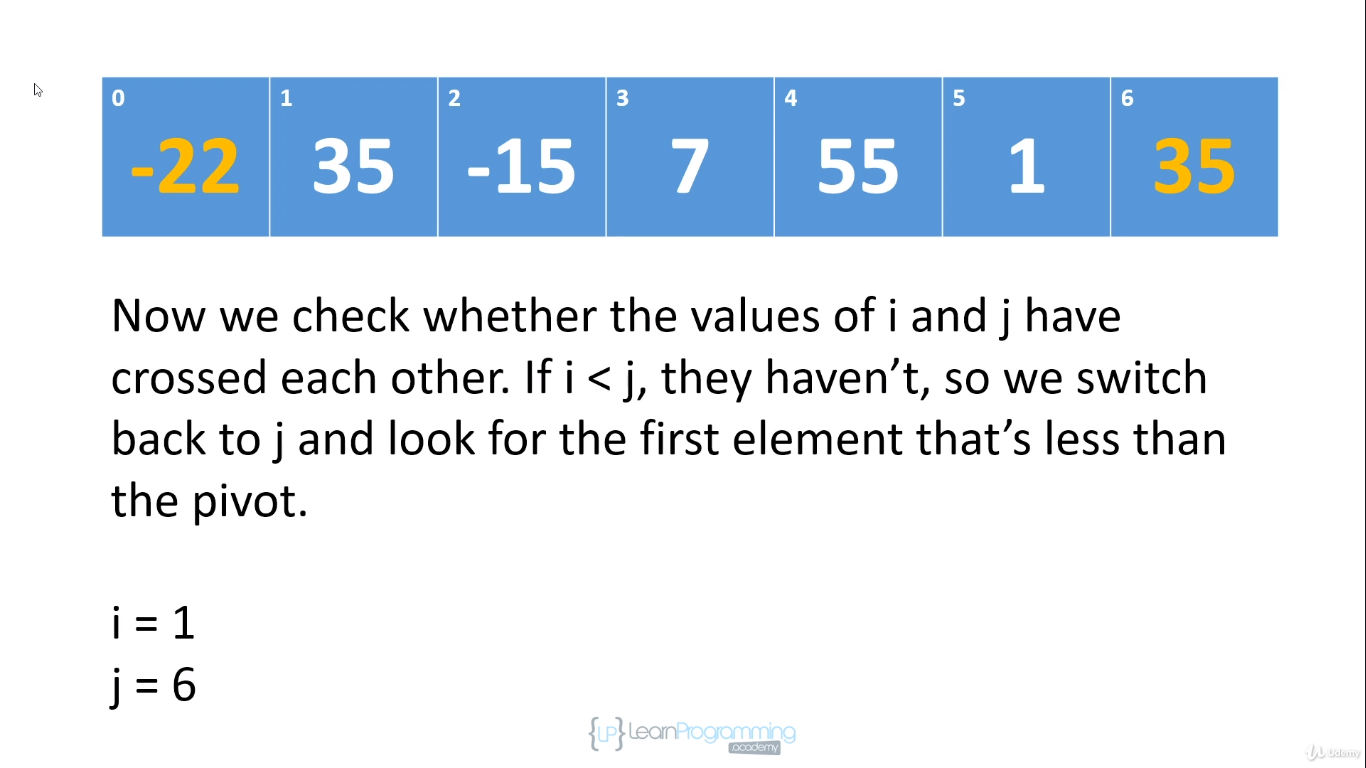
But left and right arrays to pivot are not sorted.

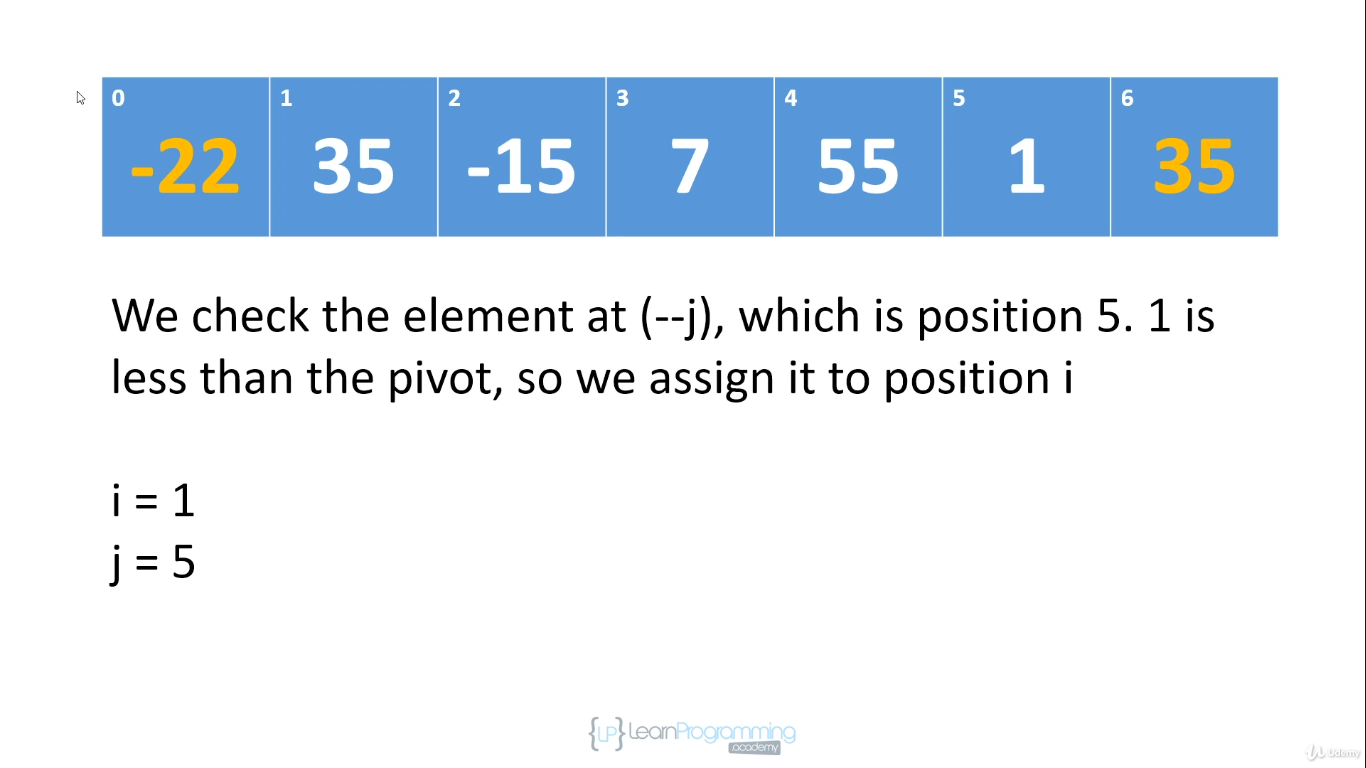


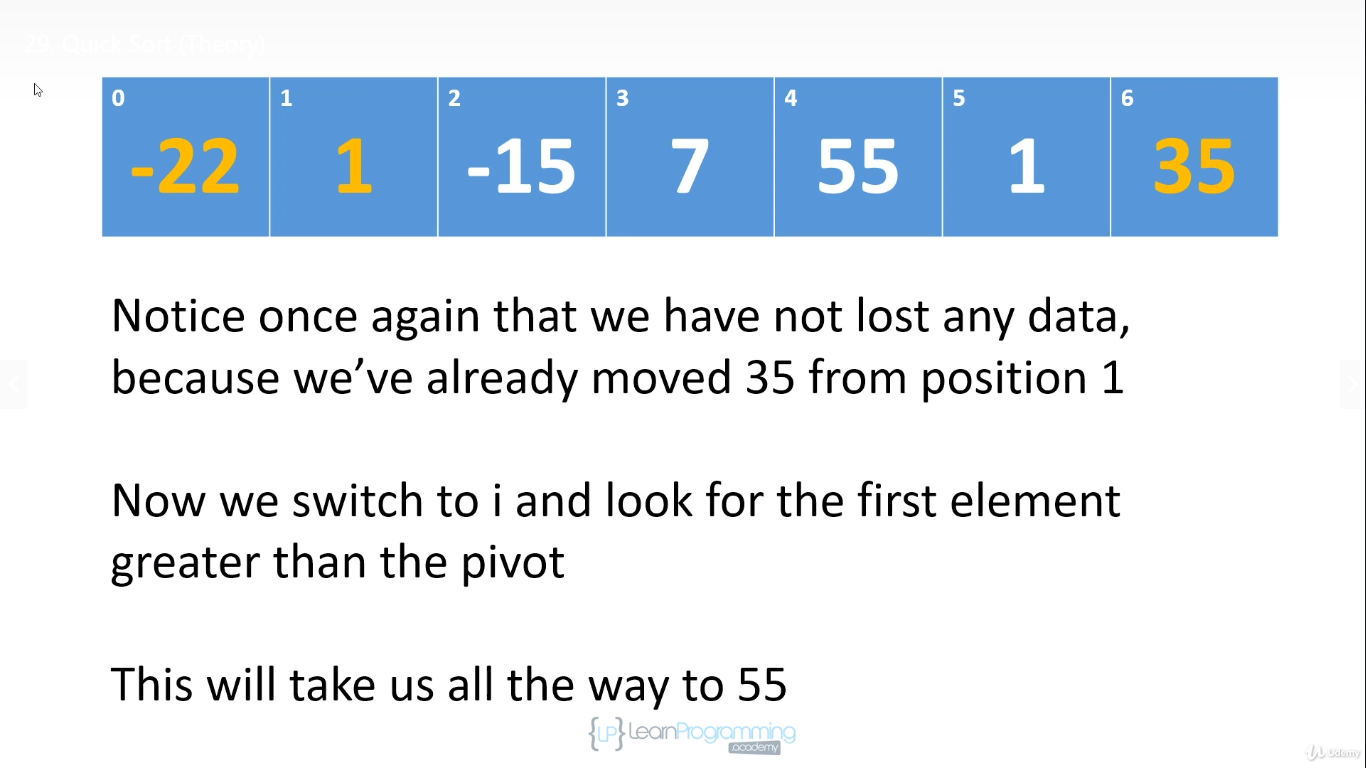


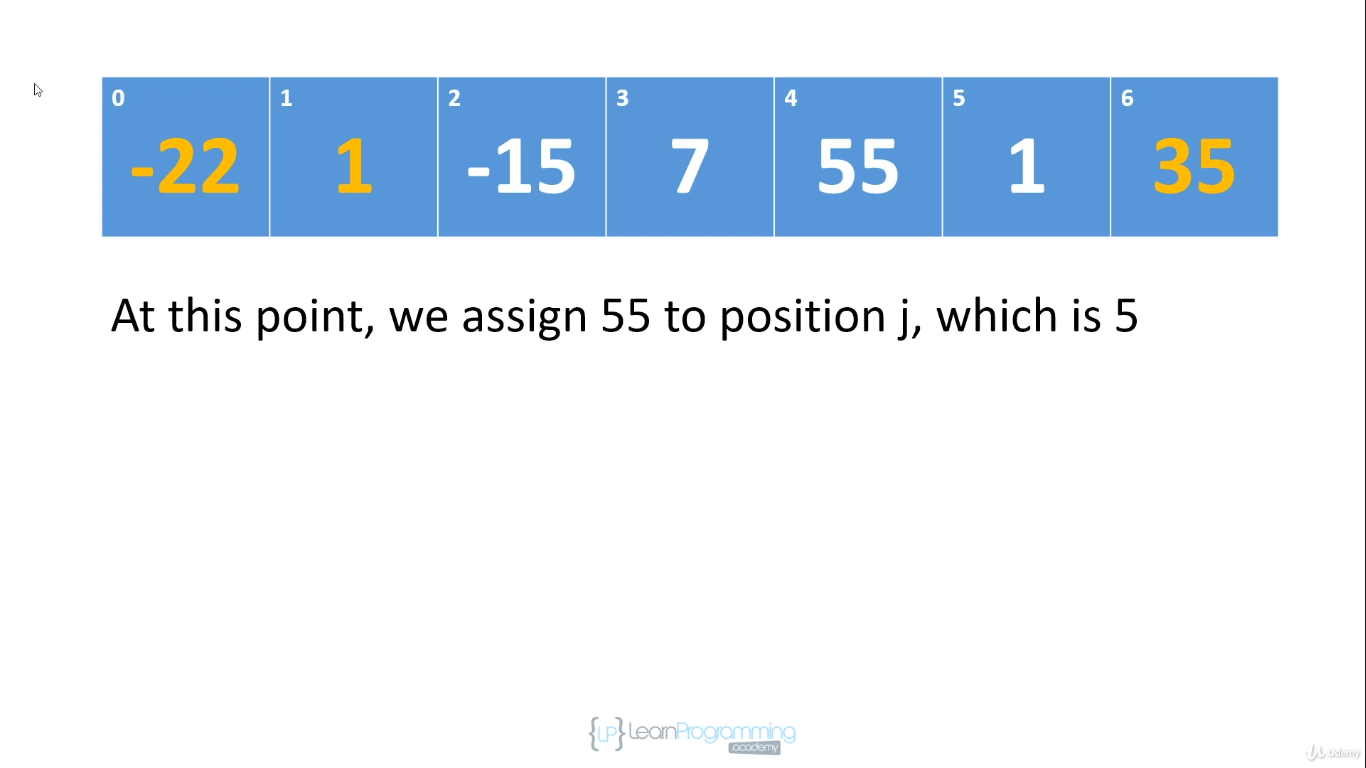


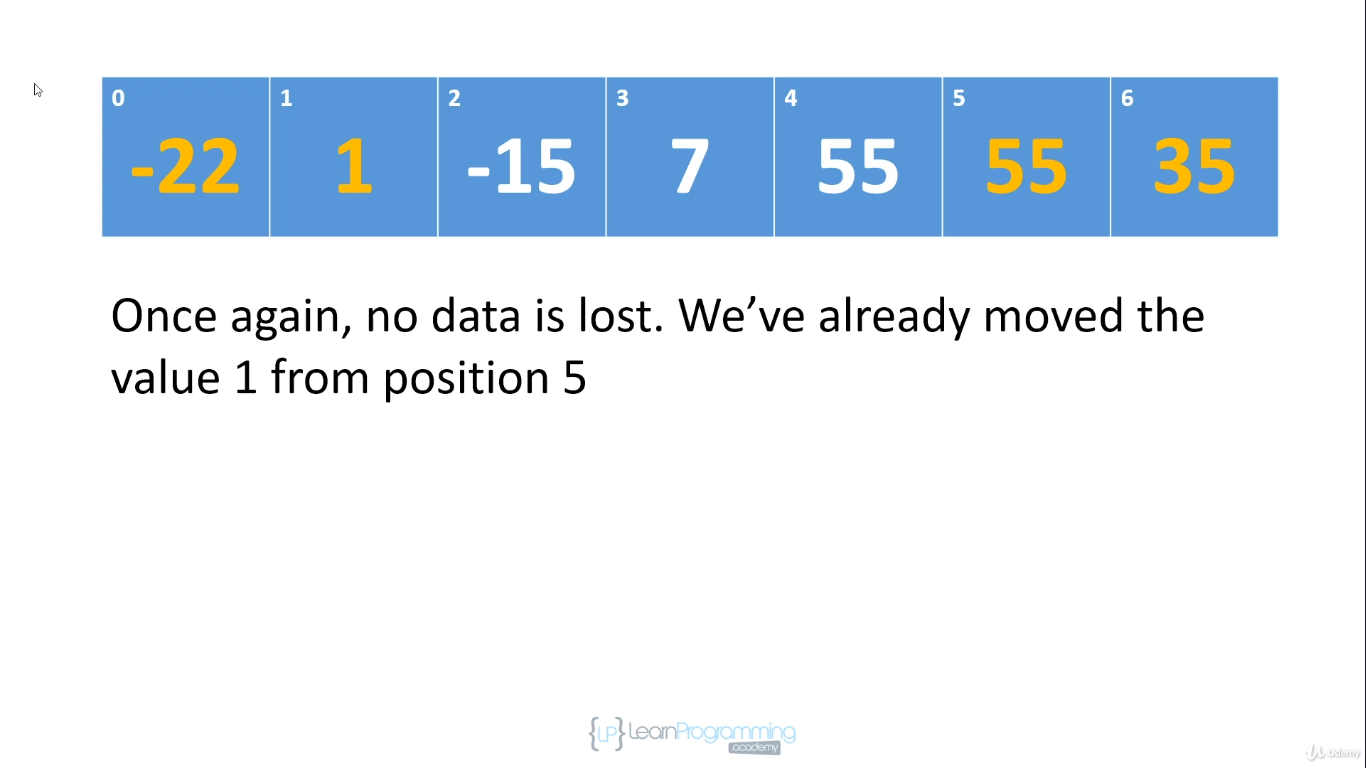
So essentially j moves from right to left looking for elements less than pivot and I moves from left to right looking for elements greater than pivot.

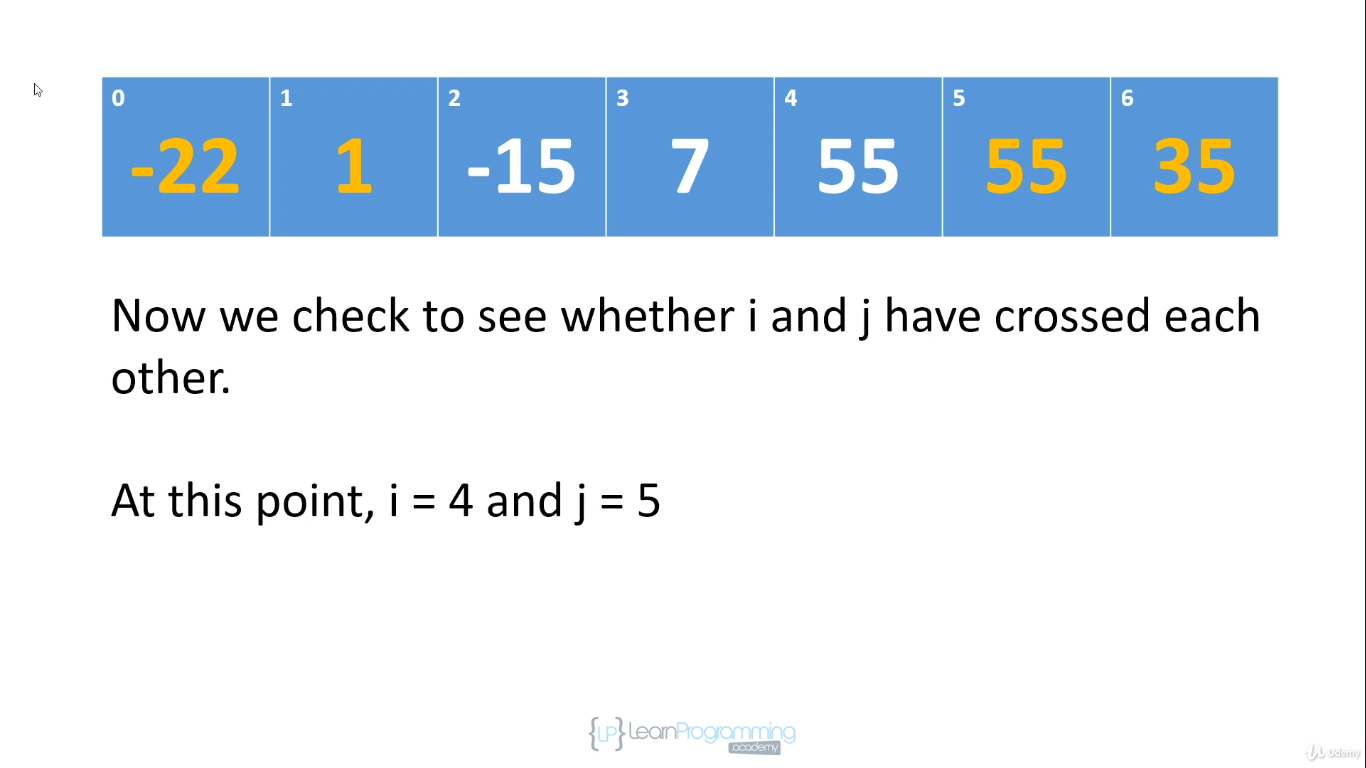


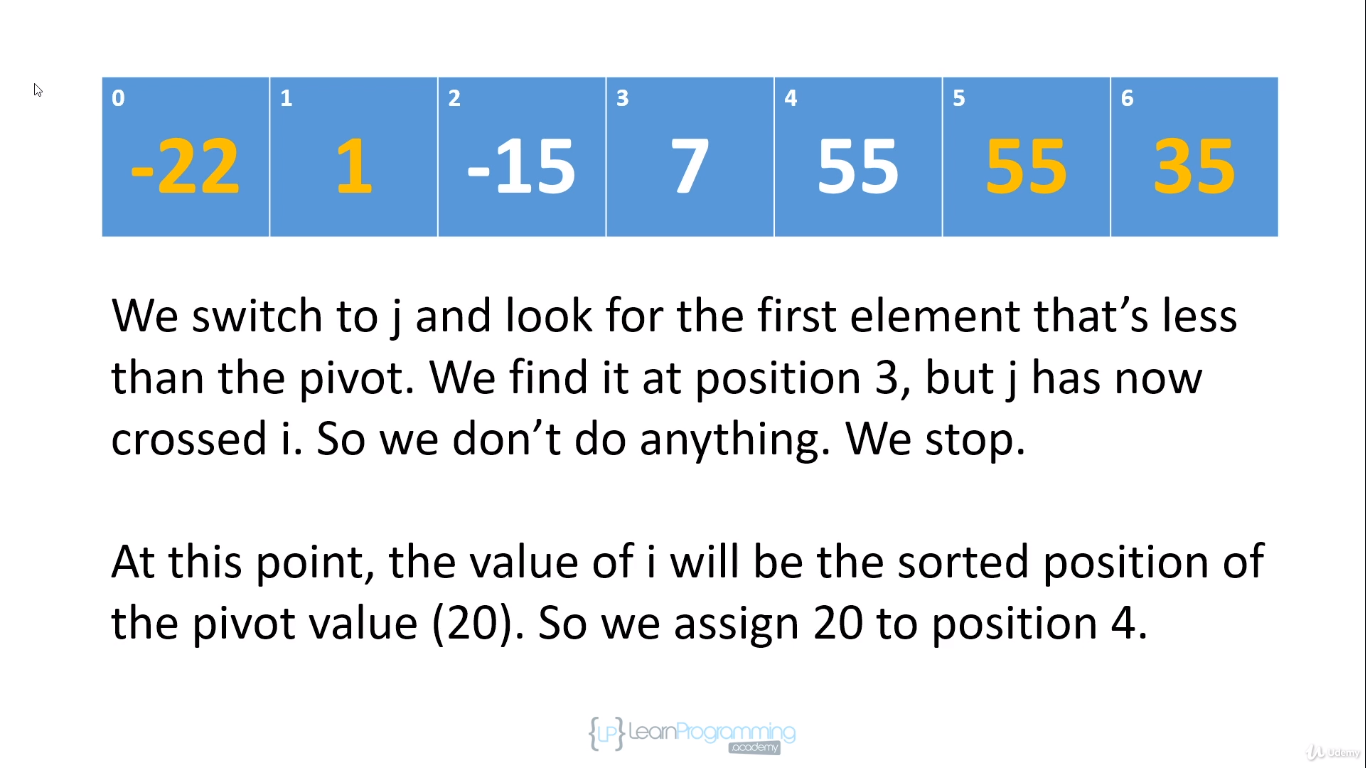


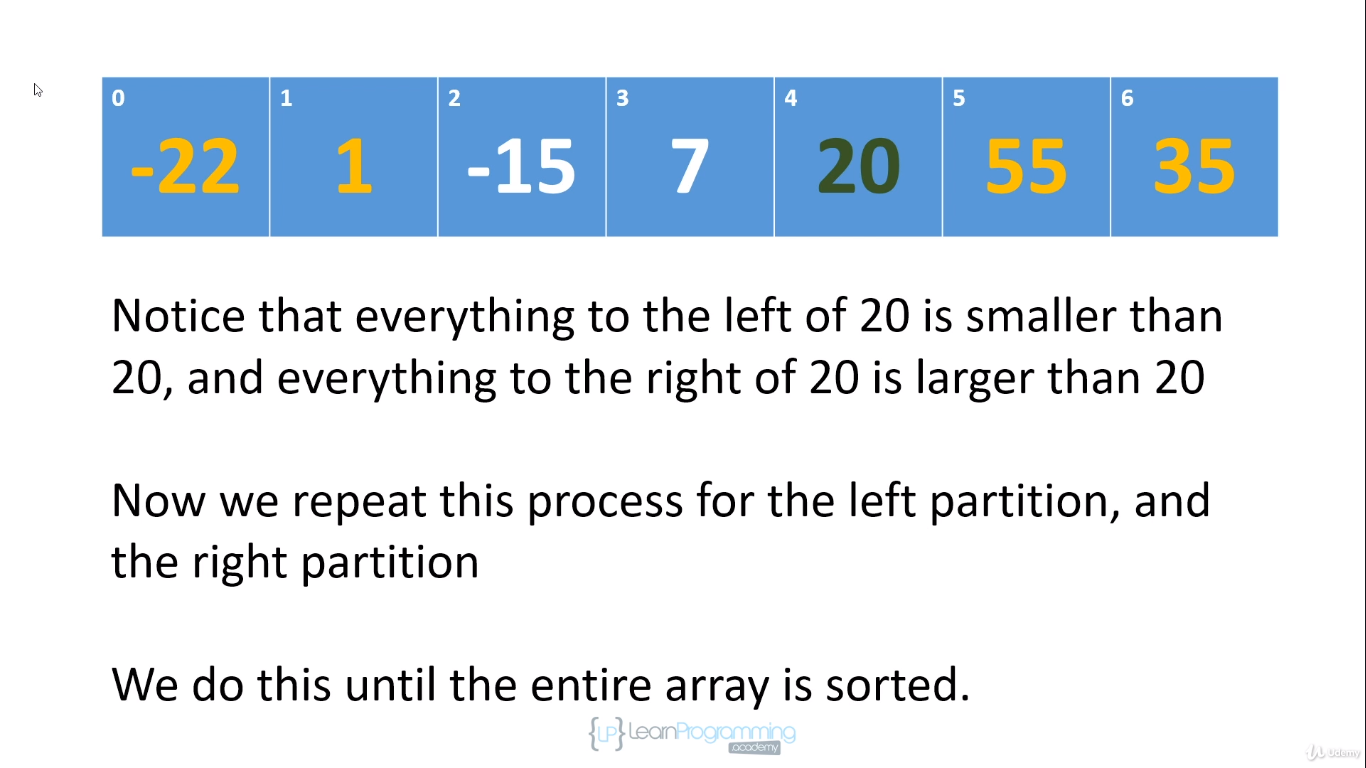


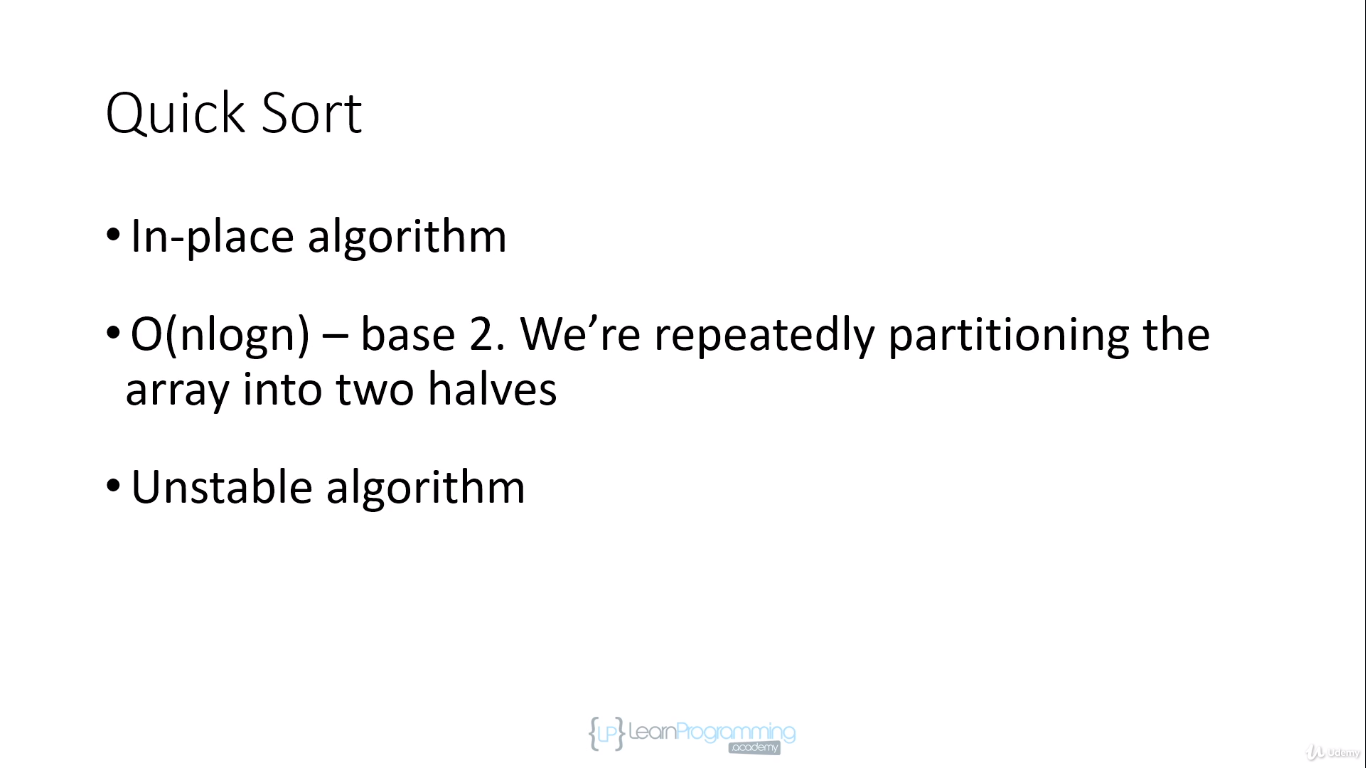












Choice of pivot can effect time complexity depends on the data that is sorted.

