Core Objectives for Lesson 6:

- know the basic algorithm for QuickSort

- know the average case analysis for QuickSort using random pivots

- be able to explain in a general way why QuickSort's worst case is very unlikely to occur

- know the basic algorithm for QuickSelect and that its average case running time is O(n)

- be aware that an optimization of QuickSelect can be found that has O(n) worst case running time, but that overhead costs make this optimization impractical in real-life implementations