

335 Project 2 Analysis

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Standard Deviation (mergesort): .007825

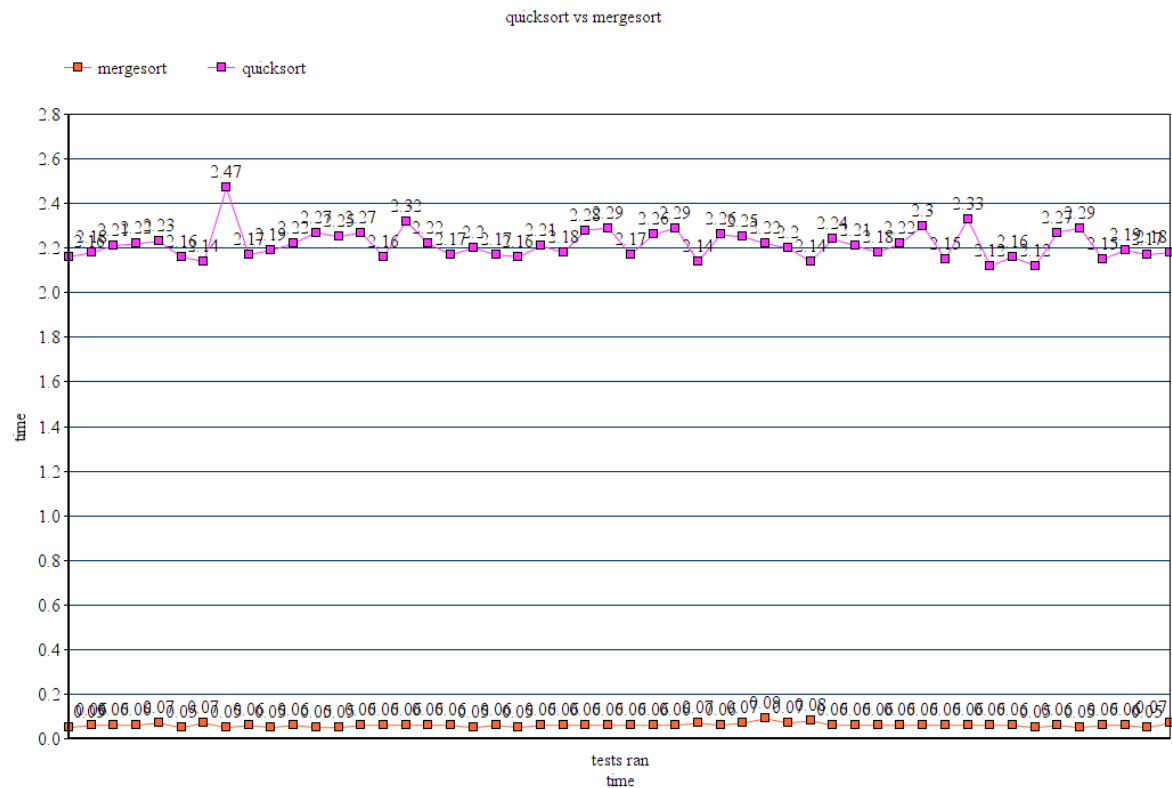
Average (mergesort): .06

Range(mergesort): 0.04

Standard Deviation (quicksort): .065375

Average (quicksort): 2.2142

Range(quicksort): 0.35



Analysis:

The Standard Deviation, Average, and Range of quicksort are all larger than mergesort. This seems to mean that quicksort overall takes more time to sort than mergesort. The best case for quicksort is $O(n \log n)$ while the worst case is $O(n^2)$, quicksort's best case is the same efficiency as mergesort which is also $O(n \log n)$. In this specific case quicksort encountered its worst case scenario which is why it took so long to sort. Overall mergesort seems way more consistent when it comes to efficiency.