CS 310 Algorithms and Data Structures
Assignment 4 **Name:** _____

Quick Sort

Due Tuesday October 23rd
9:00 am

1. (*40 points*) What you need to do?

(a) Implement Quick Sort using median of 3 elements as the pivot. You can download QuickSort.cpp from the class webpage to get started or you can start from scratch on your own.

(b) Your program should count and print the number of comparisons that Quick Sort makes for at least five arrays (Sizes should be: less than, greater than and equal to 10).

(c) Implement Insertion Sort. Your program should be able to sort the same input array and also print the total number of comparisons. (Make sure you are not passing an already sorted array to Insertion Sort).

What to Submit?

(a) Email your .cpp file. A hard copy should also be submitted on the due date before class.

(b) Submit your input arrays and the total number of comparisons made for each input computed by each algorithm.

2. (*20 points*) Extra Credit

Repeat the above for MergeSort.

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