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**CS2401 – LAB**

**Due Date: March 6, 2020**

**Performance of method sortofSort – runtime analysis**

The time complexity of the method is O(N2) since the outer loop iterates N-1 times, or O(N), the inner loop iterates over the unsorted part to find the maximum value which is done N-1 times. Considering the outer loop as well as the inner loop will result in O(N2).

**Worst case**

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Summation of consecutive numbers

**Best case**

The best case occurs when you pass an empty array, or the array has 1 element (the loops do not execute), since the runtime complexity is in constant time or O(1).

**Average case**

The average case would also result in O(N2) since swaps could be made to sort the array on average conditions.

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