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Lab report -1
Sorting
[COMP 314]

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Tasks:

1. Generate some random inputs for your program and apply both insertion sort and selection sort algorithms to sort the generated sequence of data. Record the execution times of both algorithms for inputs of different size. Plot an input-size vs execution-time graph.
2. Explain your observations.

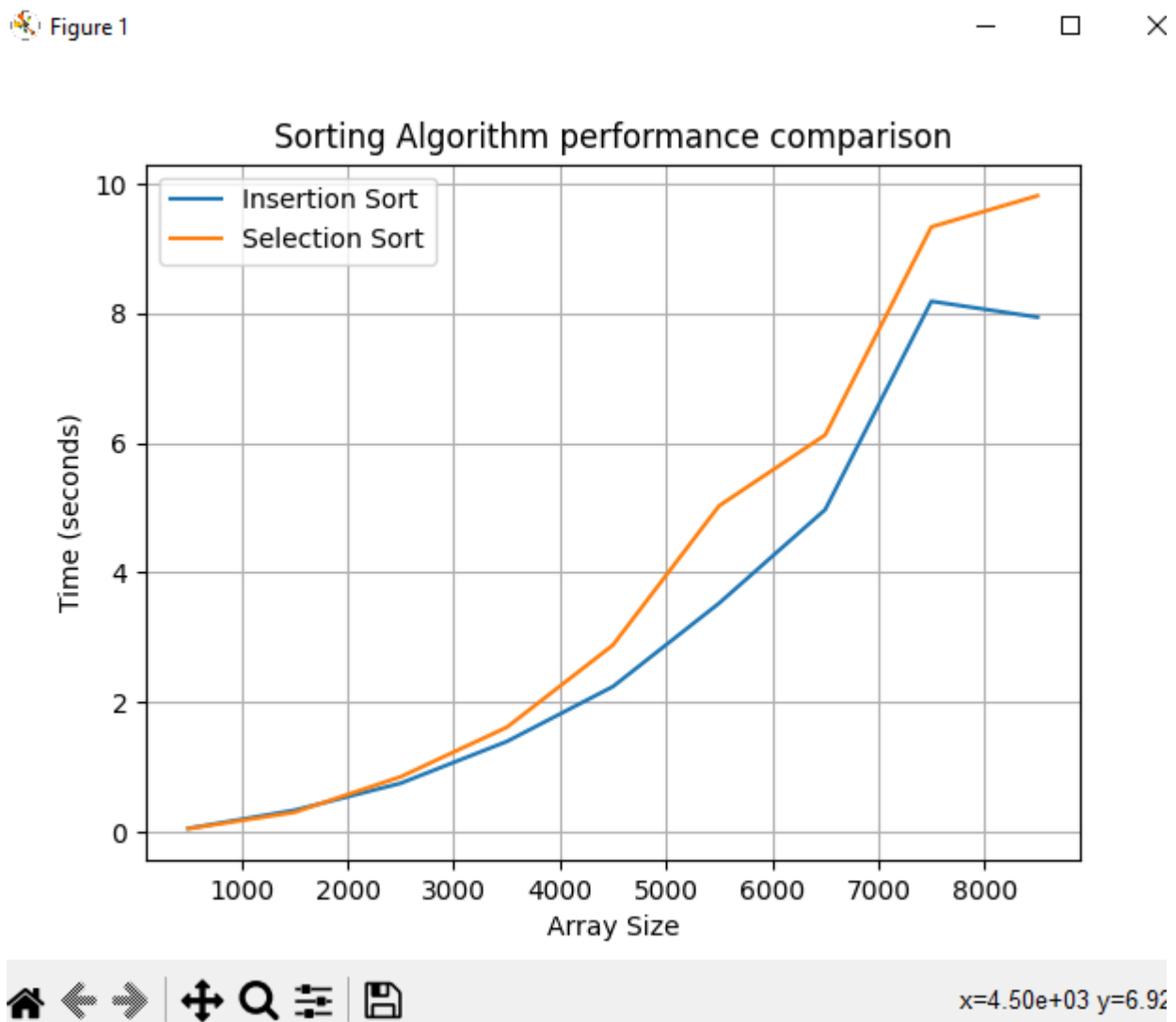


Figure 1: Time complexity comparison for insertion and selection sort

Observation:

This graph was obtained by plotting the size of array and time required for sorting by both sorting algorithms: Insertion and Selection sort.

Here the array we have used consists of randomly generated numbers ranging from 0 to array size value.

On comparing two plots, we see that the performance of Insertion sort is better than Selection sort, even though both have time complexity $O(n^2)$.