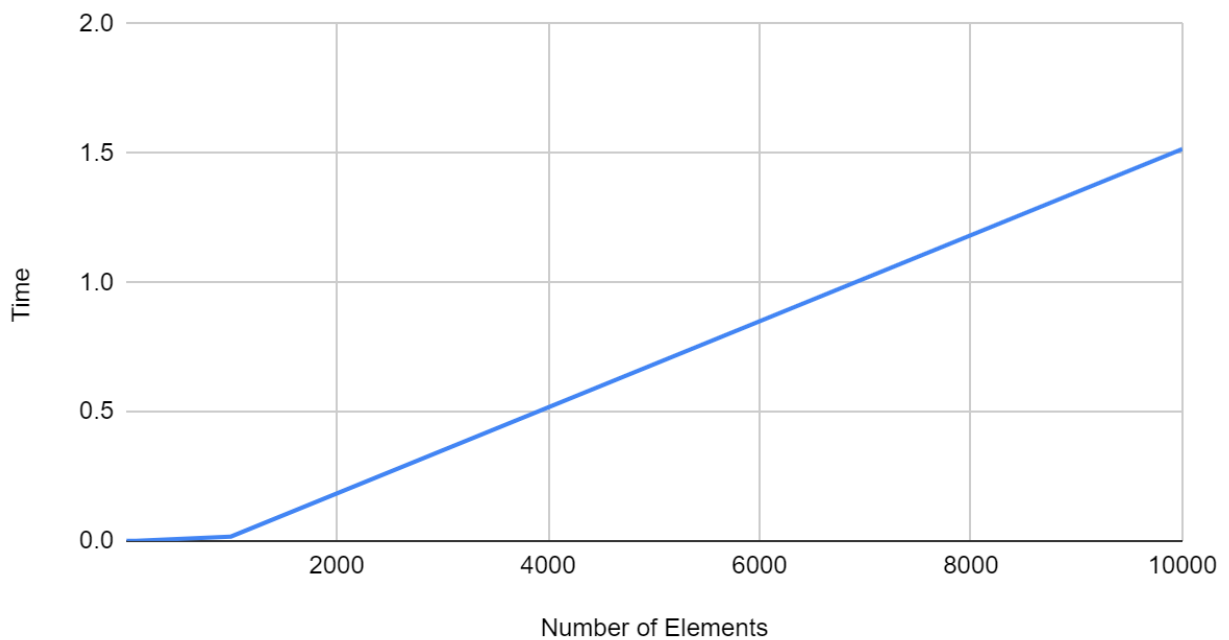


Part 3: Analysis Of MergeSort, MergeSortEnhanced and InsertionSort

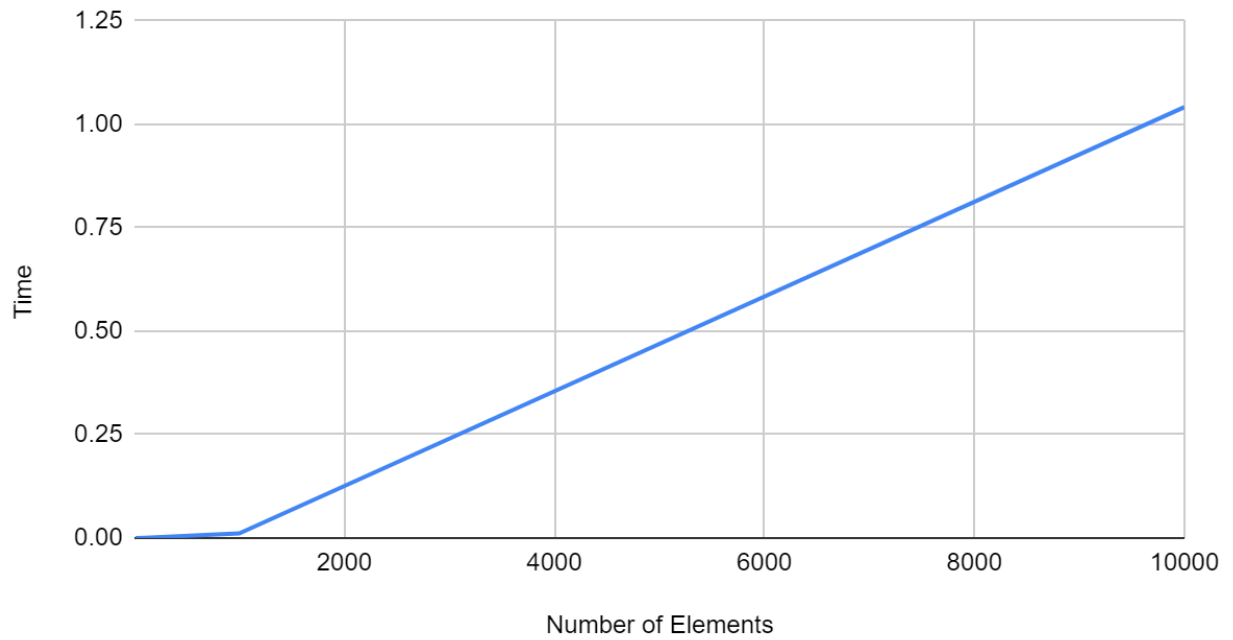
Insertion Sort

Time vs. Number of Elements



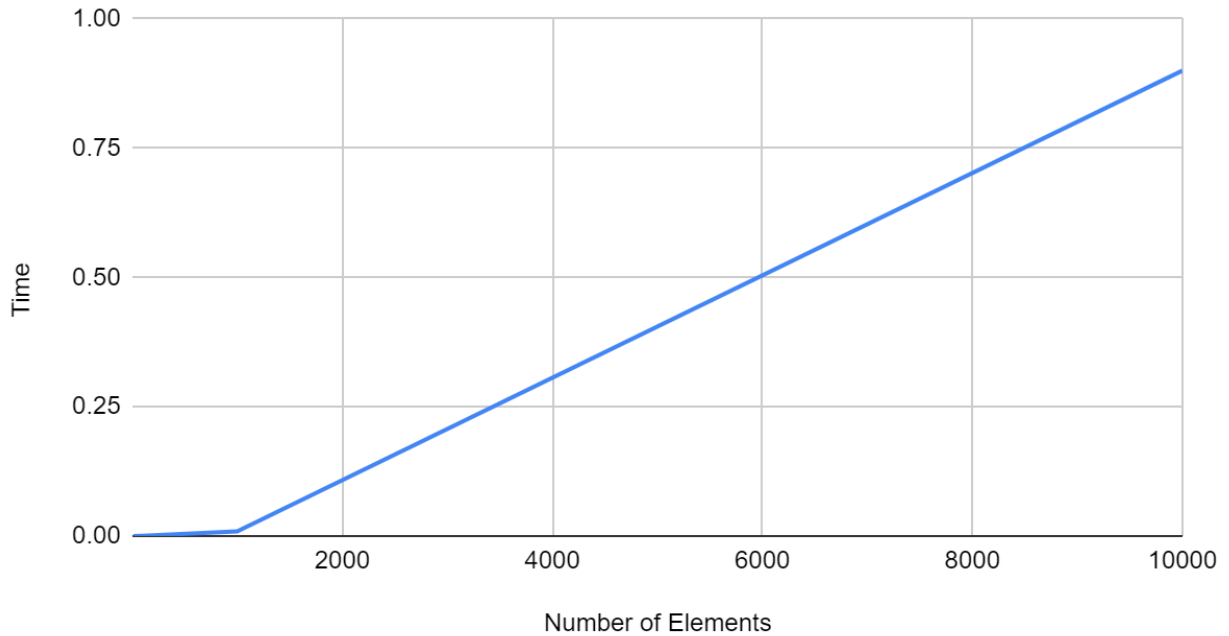
MergeSort

Time vs. Number of Elements



MergeSortEnhanced

Time vs. Number of Elements



MergeSortEnhanced was the fastest. It beat normal mergesort by 15%. Insertion sort was the slowest. MergeSort enhanced was the fastest because it utilised insertion sorts speed at low array sizes. Mergesort has a $n \log n$ best and worst case while insertion sort has a n best case. Thus combining them is useful.