CS2023 - Data Structures and Algorithms

In-class Lab Exercise

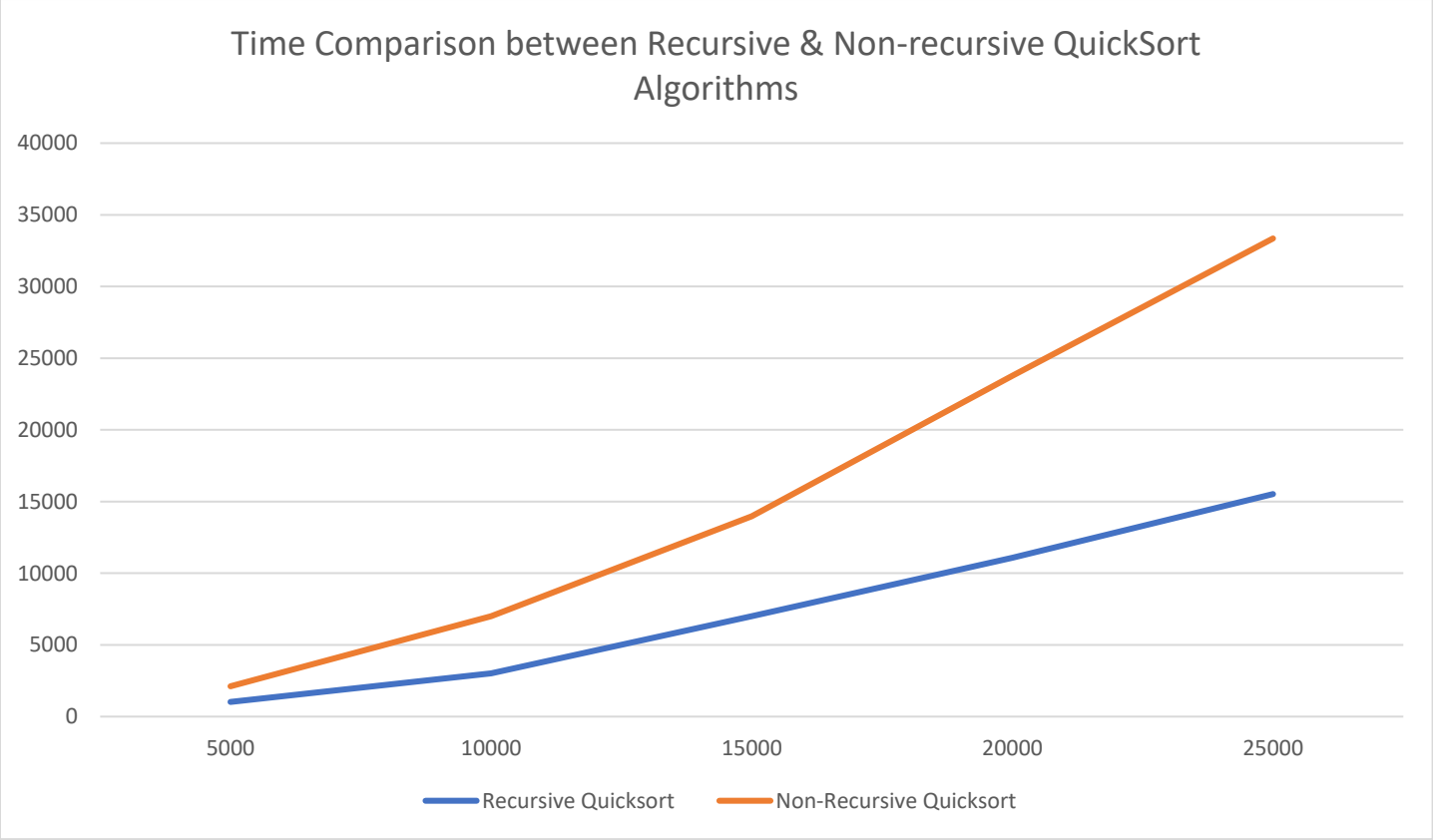
Week 5

Name: A.A.H. Pramuditha

Index: 200476P

Question 1

Array Length	Recursive Quicksort	Non-Recursive Quicksort
5000	1023	1090
10000	3012	3987
15000	6993	6980
20000	11066	12711
25000	15521	17830



It can be clearly seen, for larger number of data sets, recursive quicksort algorithm performs well than the non-recursive quicksort algorithm. In this case recursive quicksort algorithm took lesser time to sort arrays with large number of elements.

Question 2

Given an array with several elements, the algorithm takes one element at a time and calculates the median of the array made by elements collected from the initial array.