Home Work 2

Any coding platform and programming language is allowed

0: Code working insertion sort, quick sort and merge sort algorithms as methods

0: Make sure that your sorting methods are working properly and correctly

0: All of the homeworks will be checked at your own computer. So do not try to cheat

0: Homeworks are scheduled to be evaluated at 2 April 2018 in the next lesson, 02.04.2018

0: Calculate method run times as miliseconds

Main method

1: Generate an array or a list that contains 100,000 random integers

1: This first generated list will be the seed list and it wont be given methods

2: Write this list to a text file named as “seed.txt”

3: Make a temporary list or array

4: Copy seed list to temporary list

5: Write temporary list to a text file named as “temp_as_seed.txt”

6: Define a stopwatch/timer

7: Start timer

8: Call quick sort on temporary list. Make sure that the temporary list itself is sorted

9: End timer

11: Calculate method quick sort time and print to the screen

12: Write temporary list to a text file named as “quick_sort_temp1.txt” //this should have sorted list

13: Start timer again

14: Call quick sort on temporary list again (this time we are sorting a sorted list)

15: End timer

16: Calculate time and print to the screen with correct definition as quick sort call on sorted array

17: Write temporary list to a text file named as “quick_sort_temp2.txt” //this shpuld have sorted list

18: Reverse sort temporary list

19: Write temporary list to a text file named as “quick_sort_temp3.txt” //this should have reverse order sorted list

20: Start timer again

21: Call quick sort on temporary list again (this time we are sorting a reverse sorted list)

22: End timer

23: Calculate time and print to the screen with correct definition as quick sort call on reverse sorted array

24: Write temporary list to a text file named as “quick_sort_temp4.txt” //this should have sorted list

25: Copy seed list into the temporary list again

26: Write temporary list to a text file named as “temp_array_seed_2.txt” // this should have same unsorted list as seed

27: Repeat the same steps for insertion sort and merge sort as well so all of the algorithms performances can be compared on unsorted random array, sorted array and reverse order sorted array

28: Don’t forget to change txt file names according to the insertion and merge sort algorithms names

Additional Note

In addition, you need to RAR (e.g. Winrar) or ZIP (e.g. Winzip) your homework code and email to me. My email is furkangozukara@gmail.com. Make sure that you have included your Name, Student number and the number of the HomeWork such as HomeWork 2 to the email.