

Home Work 1

In this homework, you are going to compare practical run times of merge sort and insertion sort algorithms. Please bring your computers to the next lesson 19.03.2018 for homework evaluation. Any programming language and platform is allowed to be used like C, C++, C#, Java, Python etc

Steps

- 1: Create an array or a list
- 2: Insert 100,000 randomly generated integers to this list or array
- 3: Code merge sort and insertion sort algorithms
- 4: Sort this list in each algorithm 5 times and calculate the algorithm run times averages
- 5: Compare average run times and print each one of them to the screen

Example Code flow

Create an integer array or a list

Insert 100,000 randomly generated integers

Start timer

For loop $i=0$ to $i<5$

Call insertion sort method and give as an input the list

End timer

Save run time as seconds into a variable and divide by 5

Start timer

For loop $i=0$ to $i<5$

Call merge sort method and give as an input the list

End timer

Save run time as seconds into a variable and divide by 5

Print each functions average run times to the screen

Additional Note

In addition, you need to RAR (e.g. Winrar) or ZIP (e.g. Winzip) your homework

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code and email to me. My email is . Make sure that you have included your Name, Student number and the number of the HomeWork such as HomeWork 1 to the email.