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Algorithms

# Introduction

In this challenge I implemented and tested 3 different sorting algorithms. The algorithms are Bubblesort, Selectionsort and Quicksort. I will show how I tested the different algorithms and what the results of those tests were.

# Testing

For testing I used the getRealTime function we got with the assignment, this function returns the current realtime in seconds. I call this function before sorting and after sorting. After that I got the difference between these two and that is how I got the elapsed time. I made sure to not include the printf statements so that these will not influence the results. For the tests I used the same array of elements for every algorithm, I also chose the biggest algorithm to get the most accurate results. The array has a size of 999 elements.

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Figure 1 Example code for testing the algorithms

# Results

As I expected the quicksort algorithm was the fastest of the 3. I already expected this because quicksort has an average time complexity of nlogn, while the other 2 have a average time complexity ofn squared.

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Figure 2 Testresults different algorithms