CO 322 – Lab 01

Lab Report

1. Output for the different size of arrays for three sorting algorithm as following. I used sizes of 100,1000,10000,100000 elements for test the performance.

Using best case dataset of 100 elements

Time taken for best Array of 100 elements to sort

Bubble Sort = 35100

Selection Sort = 460399

Inserion Sort = 6500

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Using Worst case dataset of 100 elements

Time taken for worst Array of 100 elements to sort

Bubble Sort = 670299

Selection Sort = 192701

Inserion Sort = 4300

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Using best case dataset of 1000 elements

Time taken for best Array of 1000 elements to sort

Bubble Sort = 60400

Selection Sort = 4673801

Inserion Sort = 73900

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Using Worst case dataset of 1000 elements

Time taken for worst Array of 1000 elements to sort

Bubble Sort = 7029200

Selection Sort = 315100

Inserion Sort = 50800

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Using best case dataset of 10000 elements

Time taken for best Array of 10000 elements to sort

Bubble Sort = 71200

Selection Sort = 28676799

Inserion Sort = 472100

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Using Worst case dataset of 10000 elements

Time taken for worst Array of 10000 elements to sort

Bubble Sort = 120663800

Selection Sort = 16769199

Inserion Sort = 404500

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Using best case dataset of 100000 elements

Time taken for best Array of 100000 elements to sort

Bubble Sort = 64000

Selection Sort = 1933058199

Inserion Sort = 2202700

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Using Worst case dataset of 100000 elements

Time taken for worst Array of 100000 elements to sort

Bubble Sort = 8248141800

Selection Sort = 1313366599

Inserion Sort = 597100

First lets analyze the bubble sort algorithm. We can see for the