CS251 Report

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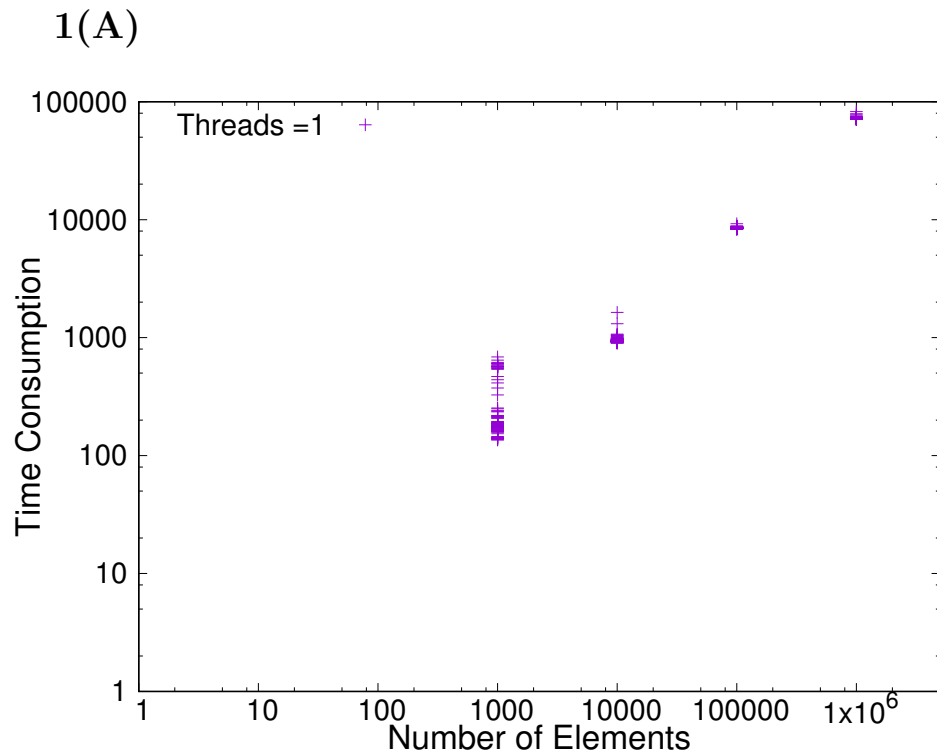
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1(A)

Figure 1: Scatter Plot

This is the **one point (scatter) graph** when no of threads=1 where X-axis is the Num-of-Elements and Y-axis corresponds to execution time for each sample. This shows that computation time increases with the increase in number of elements.
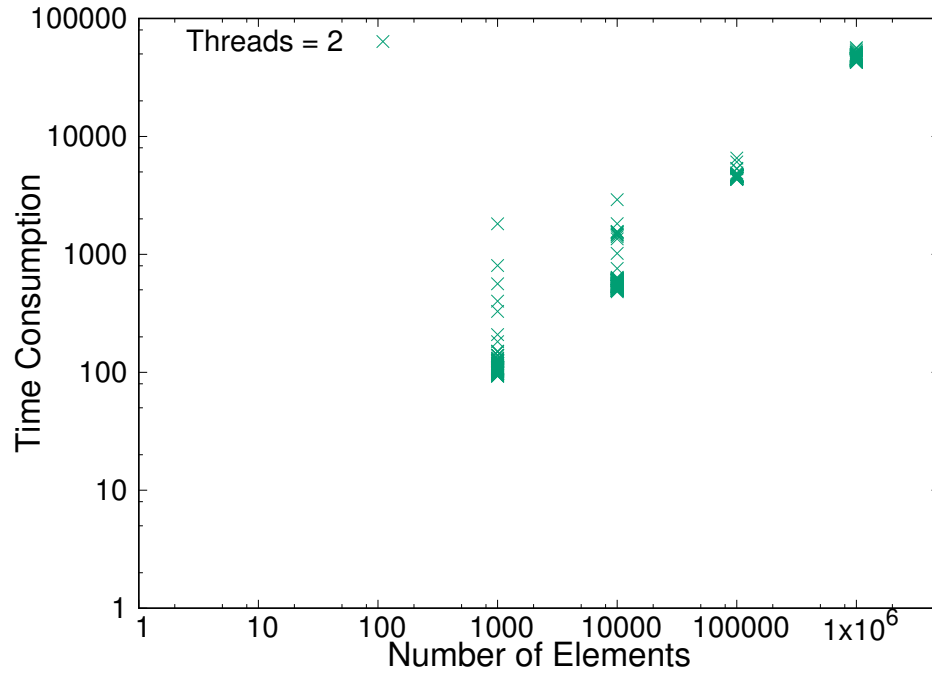
1(B)

Figure 2: Scatter Plot

This is the **one point (scatter) graph** when no of threads=2 where X-axis is the Num-of-Elements and Y-axis corresponds to execution time for each sample. This shows that computation time increases with the increase in number of elements.
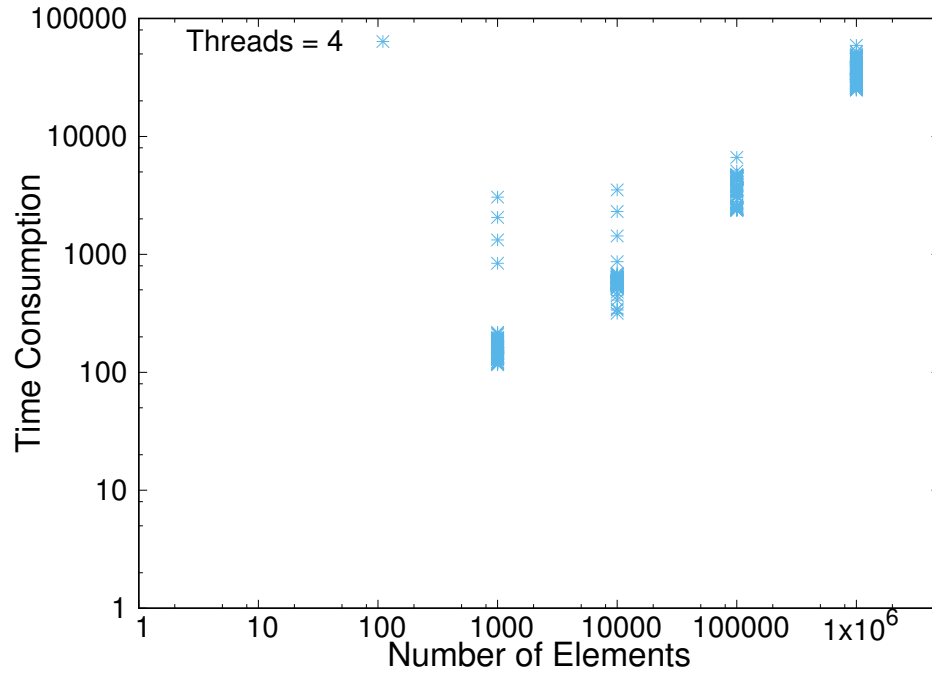
1(C)

Figure 3: Scatter Plot

This is the **one point (scatter) graph** when no of threads=4 where X-axis is the Num-of-Elements and Y-axis corresponds to execution time for each sample. This shows that computation time increases with the increase in number of elements.
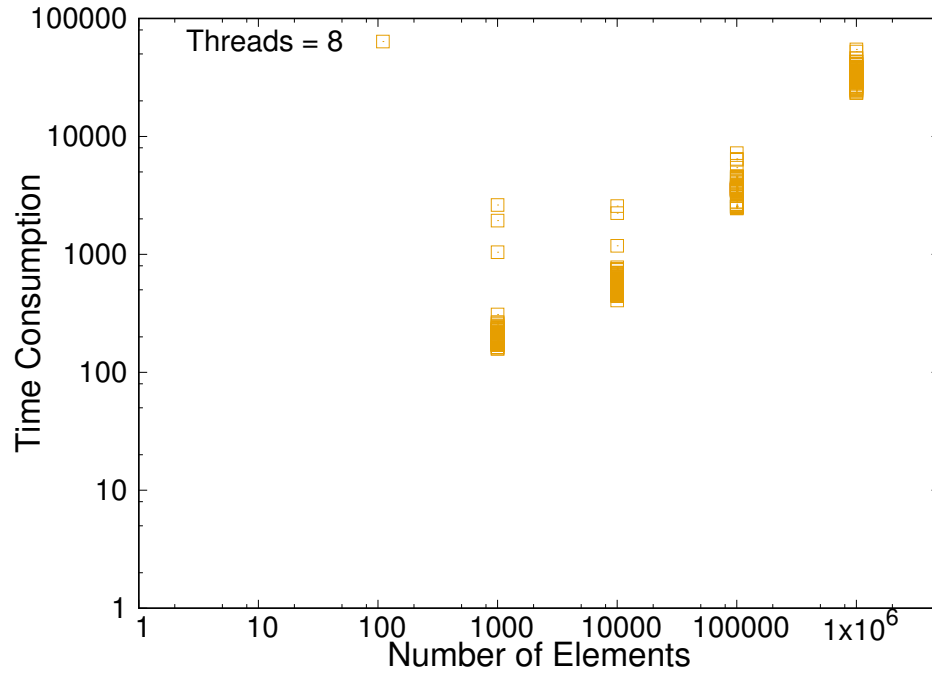
1(D)

Figure 4: Scatter Plot

This is the **one point (scatter) graph** when no of threads=8 where X-axis is the Num-of-Elements and Y-axis corresponds to execution time for each sample. This shows that computation time increases with the increase in number of elements.
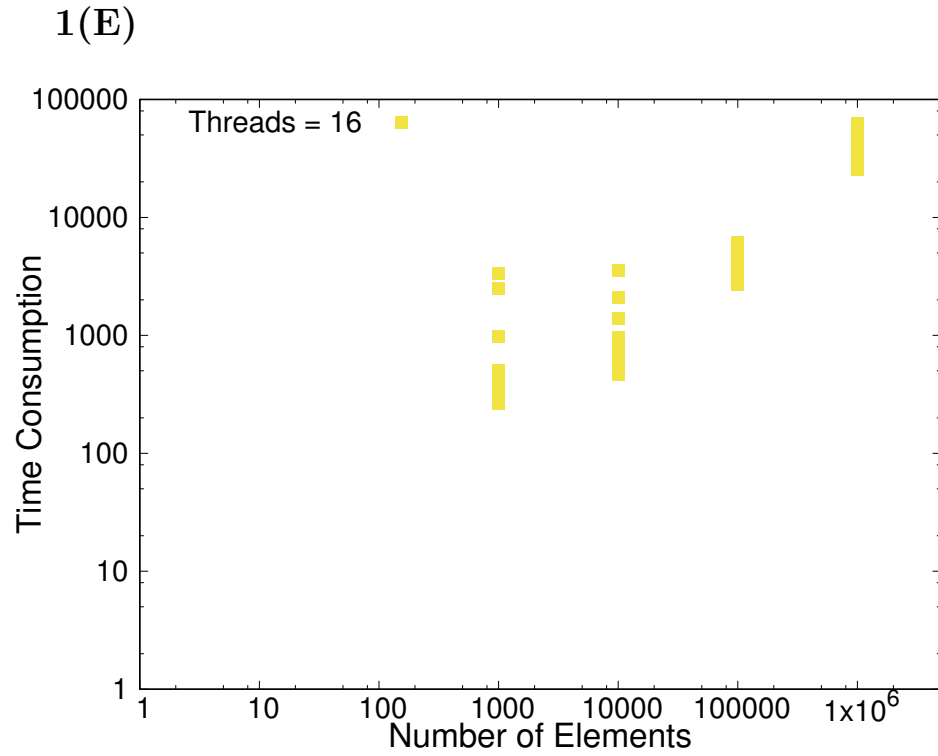
1(E)

Figure 5: Scatter Plot

This is the **one point (scatter) graph** when no of threads=16 where X-axis is the Num-of-Elements and Y-axis corresponds to execution time for each sample. This shows that computation time increases with the increase in number of elements.
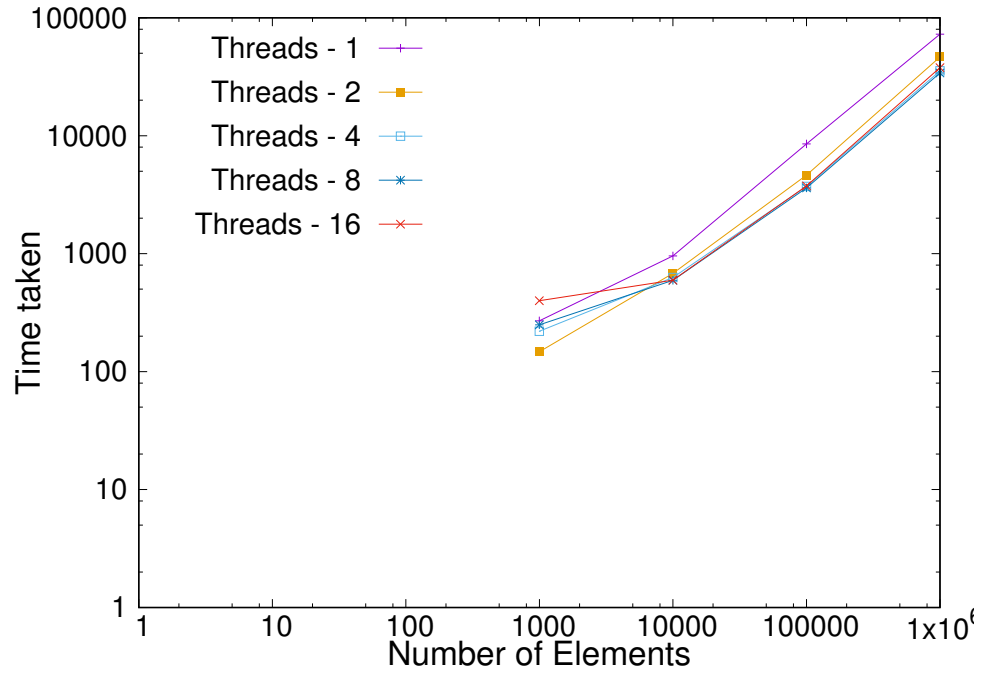
2.

Figure 6: Scatter Plot

This is a **Single line graph** for each thread configuration where X-axis is Number of Elements and Y-axis is average execution time over 100 samples. This shows how the computation time decreases till no of threads is 4 and and then again increases.
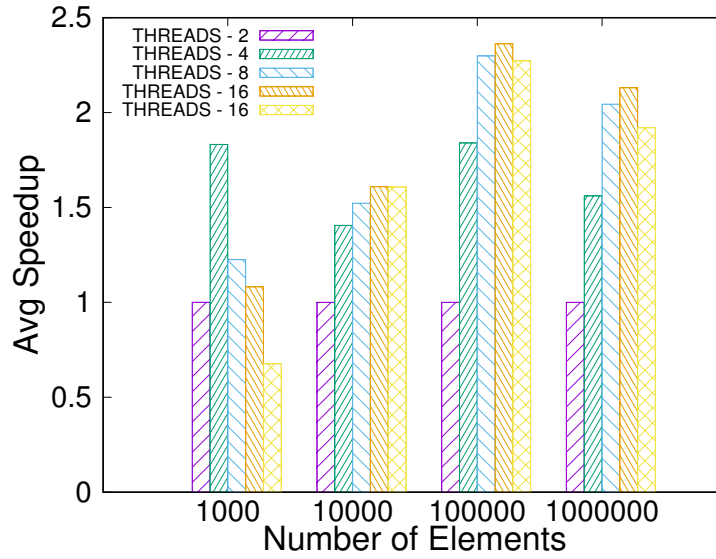
3.

Figure 7: Scatter Plot

This is a **bar graph** with X-axis as number of elements and Y-axis as average speedup w.r.t. speed when no of threads=1. The graph shows that how the speedup increases more faster with the increase in no of elements in the case when no of threads is more.
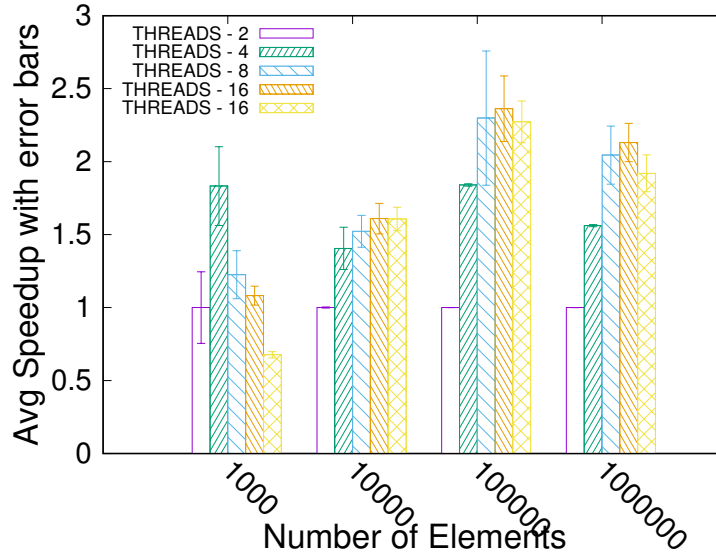
7

4.

Figure 8: Scatter Plot

This is again the bar graph but also consists of **error bars** in which error bars represent the variance calculated over 100 samples for each configuration. Error is always present due to different latency time in each execution of APP.