

## CDD Lab 2 Timing Report

| <u>Atomic</u>  |           | <u>Mutex</u>   |           | <u>Synchronised</u> |           |
|----------------|-----------|----------------|-----------|---------------------|-----------|
|                | Speed(ms) |                | Speed(ms) |                     | Speed(ms) |
| <b>Run 1</b>   | 2510      | <b>Run 1</b>   | 2516      | <b>Run 1</b>        | 2516      |
| <b>Run 2</b>   | 2507      | <b>Run 2</b>   | 2513      | <b>Run 2</b>        | 2518      |
| <b>Run 3</b>   | 2516      | <b>Run 3</b>   | 2517      | <b>Run 3</b>        | 2514      |
| <b>Run 4</b>   | 2515      | <b>Run 4</b>   | 2512      | <b>Run 4</b>        | 2511      |
| <b>Run 5</b>   | 2507      | <b>Run 5</b>   | 2518      | <b>Run 5</b>        | 2516      |
|                |           |                |           |                     |           |
| <b>Average</b> | 2511      | <b>Average</b> | 2515.2    | <b>Average</b>      | 2515      |
| <b>Slowest</b> | 2516      | <b>Slowest</b> | 2518      | <b>Slowest</b>      | 2518      |
| <b>Fastest</b> | 2507      | <b>Fastest</b> | 2512      | <b>Fastest</b>      | 2511      |

What can be observed from the average speeds is that the Atomic variable solution offered the fastest average elapsed time of 2511 milliseconds, while both the Mutex variable and synchronised method solutions displayed almost identical average speeds of 2515.2 milliseconds and 2515 milliseconds respectively.

For the slowest speeds, both the Mutex variable and synchronised method solutions came out to have the same slowest speed of 2518 milliseconds compared to the Atomic solution's slowest speed of 2516 milliseconds.

As for the fastest speeds, the Atomic variable solution came on top with an elapsed time of 2507 milliseconds followed by the synchronised solution with 2511 milliseconds, and finally the slowest of the fastest speeds being displayed by the Mutex solution with 2512 milliseconds.

To conclude from the small set of recorded runs that was gathered, the Atomic variable solution is the better option as it held the best numbers in all categories, however it should be noted that both the Mutex and synchronised solutions displayed practically identical speeds to each other.