|  |  |  |
| --- | --- | --- |
| Number of Orders | Single Thread  (Time in milliseconds) | Multiple Threads  (Time in milliseconds) |
| 3 | 270 | 175 |
| 10 | 598 | 342 |
| 100 | 2468 | 703 |
| 250 | 5562 | 1289 |
| 500 | 10968 | 3367 |

From the results, it can be seen that for the processing of a small number of orders, the time taken using single thread and multiple threads differs only by less than a second. However, as the number of orders increases, the difference between the times of the two approaches also increases. What starts off as being a difference of a few milliseconds turns into a difference of approximately 7.5 seconds. From this, we can see that in the short run using single thread or multiple threads doesn’t make much of a difference on the time taken as the multiple threads approach calls more functions like start() and run(), which takes up time. However, in the long run, the multiple threads approach is much faster as the time taken by the start() and run() methods becomes trivial due to the numerous threads running at the same time versus threads running one by one in the single thread approach.