|  |  |  |
| --- | --- | --- |
| Number of Orders | Single-Thread Runtime (msec) | Multi-Thread Runtime (msec) |
| 100 | 3266 | 2523 |
| 200 | 5909 | 3645 |
| 300 | 8636 | 6060 |
| 400 | 11382 | 8121 |
| 500 | 14497 | 9810 |

**Table Runtime**

**Explanation**

Sampled using Lenovo Y50, Intel Core i5-4200H @2.8GHz, with 8.00 GB of RAM. Operating System: Windows 10. Each data point has a sample size of 1.

It is obvious from the table and the graph that multithreading is superior in terms of runtime efficiency. Although it should be noted that with small runtime (e.g. example1, example2, and example3, with runtime of around 10 msec), it is hard to distinguish the difference since efficiency fluctuates. It should also be noted that since a critical part of the code was placed under synchronization, the benefit of multithreading was not fully demonstrated.