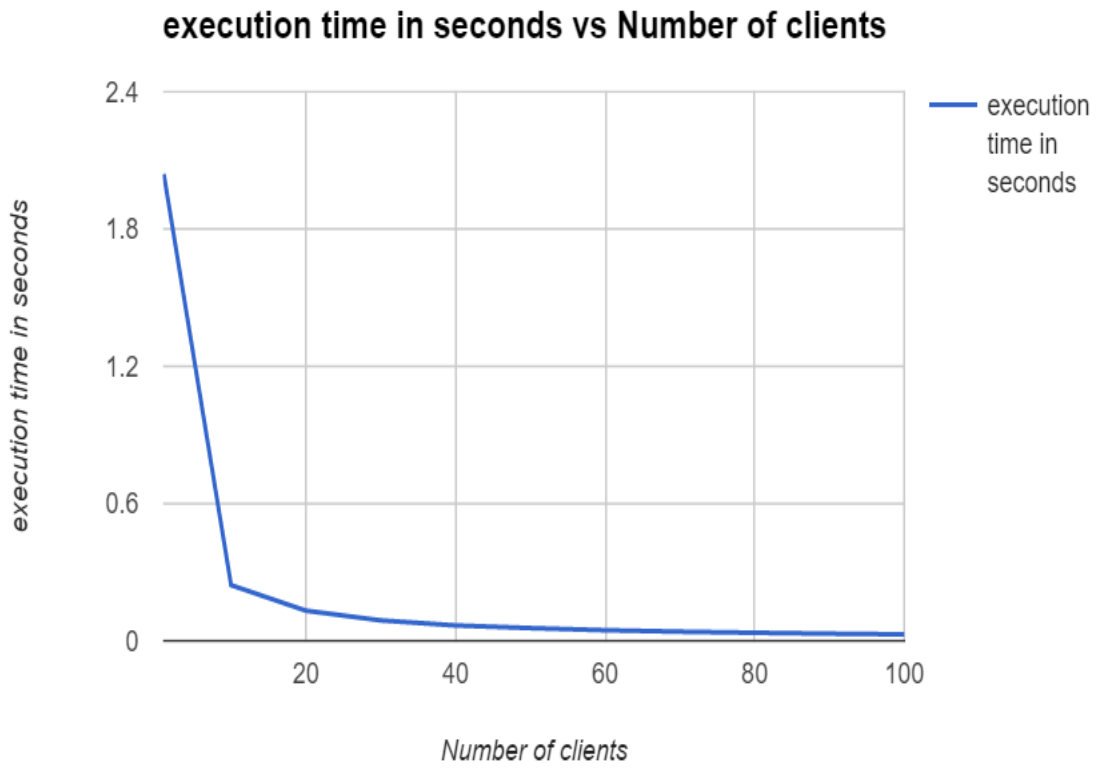
Scalability Test:

Test 1:

The number of clients are increased from 1 to 100 with a wait time of 2 seconds for each transaction respectively. A graph is plotted to calculate the average execution time for each transaction. As seen in the below graph the average execution time per instruction reduces as the number of clients are increased. This proves that multi-threading helps us to handle large number of client request simultaneously and helps to improve the overall system performance.



Test 2:

In the second test the number of clients are 25 and it is not changed. But we change the wait time from 0.1, 0.2, 0.3…1 sec respectively for the 25 clients. The average execution time per instruction is calculated in seconds for the different wait times and plotted on the graph. As seen in the graph below the average execution time increases linearly as the wait time is increased.