# CSCI 5673 - Assignment 1 - Performance Report

## Observations:

**Scenario 1: Run one instance of seller and one instance of buyer.**

Average response time: 18 microseconds for buyer and seller
Average server throughput: 350 requests per second for buyer and seller

**Scenario 2: Run ten instances of buyers and ten instances of sellers concurrently.**

Average response time: 26 microseconds for buyer and seller
Average server throughput: 280 requests per second for buyer and seller

**Scenario 3: Run 100 instances of buyers and 100 instances of sellers concurrently.**

Average response time: ~75 microseconds for buyer and seller
Average server throughput: ~210 requests per second for buyer and seller

## Explanation:

Scenario 1 gives the best performance since it's just one instance of seller and buyer client which gets connected to the server. The server was able to handle most of the requests in a few seconds and the response time seems to be relatively much quicker.

We were able to see some small lag when running 10 instances of buyer and 10 instances of seller concurrently, and the server took some time to handle all the requests.

For Scenario 3, using threads to handle 100 * 2 clients, and we were able to see that the server took around 4 - 7 seconds to complete one run ( ie: 1000 function calls ) for measuring throughput.