CSCE 412 – Load Balancer

Sameer Hussain

The optimal range for the load balancer occurred when the number of servers is 15. This means that the initial queue size becomes 30. After running the load balancer program multiple times, two of the most common outputs were that the queue clears, or the queue final size becomes 32. This is the closest that the program is able to get to having similar queue sizes. If the number of servers is set to 16, the queue is cleared because the load balancer begins to process requests slightly faster than when requests are able to come in to the load balancer. When the queue size is 30, the load balancer is processing requests relatively around the same time that the new requests come in, hence the final queue size is 32, which is very close to the initial queue size. At times, there are different outputs at queue size 30 (server size = 15), because the queue is always changing. The program is currently not being seeded, which means that the times, and the final queue size are always subject to change due to randomness, however the closest value that was able to be relatively close to the initial queue size was 32.