CS425 – Simple Client/Server Program

**Description:**

This program simulates the connection between server and clients using the amazon cloud system. Amazon provide us the opportunity to test our simulation using 1,2 and 4 CPU cores to export some useful information about how this model works. We run the program several times to produce some valid information and we create graphs using that information.

**Methodology:**

Client Class: In this class we create 10 threads which make request to a server which IP given from arguments. The user also gives the total amount of request and these requests split fairly to each thread (client). When a client finished his requests, the thread terminated. We calculate the Average Latency time by calculating and adding the latency for each request and when all requests finished we divide that number with number of requests. The number of clients (threads) changed to see how the simulation works with more than 10 users.

Server Class: In this class we create 10 workers (Threads) which service requests from the client. The response message of the server contains a random size payload for each request. We calculate the Average Throughput time by calculating and adding the throughput for each request and when all requests finished we divide that number with number of requests.