Cloud Computing

CS-351 **Winter 2022**

Homework 2 Due 11:59:59 p.m., Wednesday, 9 February, 2022 (5th Wednesday)

Assignment Weight: 2.0

Client and Server on AWS EC2

In this homework, you need to demonstrate your ability to write a Python program for client and server on AWS EC2.

You need to create two instances on AWS EC2, one as client and another one as server. You could use the code from Python tutorial (Python 3 - Networking) as an example.

For the server, it receives a file in its entirety (not line by line) from the client and returns the number of characters and words and lines in the file. It is similar to Unix/Linux commend: `wc`. You may assume a certain max file size.

The client runs on another instance on the cloud created using the same security group.

Here is some helpful commands that might be useful

% `ps -aef` (lists all the processes currently running)

% `kill -9 <pid>` (kills a process that you wish to kill)

% `netstat -listen` (tells which ports have listeners associated with them)

% `sudo su -` (sets the user as the super user so you don' t have to type sudo before the command)

You need to find the **ip address of the server** and **hardcode it in your client**. The ip address can found in the pubic ip of the instance.

Make sure ICMP IPV4 and All TCP is added to the security group used by your instance.

Submitting Your Program

Before 11:59:59 p.m., Wednesday, 9 February, 2022 (5th Wednesday), you must upload a zip archive to the course Blackboard assignment for Homework 2. This zip archive must contain all source code files (`server.py` and `client.py`) for your program, as well as demo screenshots from both server and client.