In this project, you are to write a client side code to communicate with the server with TCP.

To be more specific:

* The server will be waiting for connections on port 51000.
* The client will try to connect to the server and set up a TCP connection.
* The server will do the following:
  1. It will accept the connection.
  2. It will send a string to the client over this connection. The string may be a few hundred of bytes, but the server will send 100 bytes at a time, separated by a fixed interval, called INTERVAL. The string length may not be a multiple of 100, in which case the server will pad 0s in the end.
  3. After the entire string has been sent, the server will close the connection.
* The client should do the following (to be implemented by you):
  1. The client should receive the 100-byte segments from the server, and copy it to a local buffer.
  2. The client can detect the completion of the string by observing that the server has closed the connection (which happens when the client checks the socket buffer and finds it received 0 byte). Then, it should:
     1. Print out the string.
     2. Print out the value of INTERVAL measured in seconds.

You will find under “File ” on Canvas a package called “proj5\_template.zip,” which has the template code, including server.cpp, client.cpp, and the Makefile. The code can be complied by typing “make” in a terminal at that directory. The server code is complete, and you can run it by typing “./server”. The client code is about half empty, but you can still run by typing “./client” and it will just connect to the server but not doing anything further.

The template code is written and tested in C++. However, the server should respond to client written in any language.

More details on how to complete the client code can be found in client.cpp by searching “TODO”.

For testing, you can run server and client on the same machine, and use “char SERVERNODE[100] = "localhost";” in client.cpp.

I also have requested an instance on Amazon AWS and run the server on the instance. You can connect to the Amazon server by changing "SERVERNODE" from "localhost" to the one above it in the template code.