Programming Assignment #1

CSCE 3530 - Introduction to Computer Networks

Fall 2016

100 Points

Due: 09/28/2016, 11:55 PM

Instructions: Compile the C programs and make sure it's working. Comment your code. Create a readme file that describes the working and usage of the code. Please create a zip archive of your assignment folder (readme, code, and header files) and upload the zip file. **Not following the above instructions could result up to 20% deduction from your lab assignment score. Late submissions are not allowed.**

Objective:

Create a proxy server that can be connected by a single client and would only allow http requests.

Requirements:

1. Create a C-based client-server architecture using sockets
2. The proxy server should be able to accept and service single client's http requests
3. The proxy server should run on cse01.cse.unt.edu machine and the client should run on cse02.cse.unt.edu machine

Procedure:

1. Create a C-based server that can accept single client's request using sockets
2. The created proxy server should also be able to connect to the client requested website through port 80
3. Make sure the proxy server runs on cse01.cse.unt.edu and the format to start the proxy server as follows
   `pserver <port_number>`
   where pserver is the proxy server executable and port_number is the port number on which the proxy server listens
4. Create a C-based client that can connect to the proxy server using sockets
5. Make sure the client runs on cse02.cse.unt.edu and connects the proxy server. The user can request the desired web page using the below format
   `client <port_number>`
   `url: <url>`
   where client is the client executable, port_number is the port number on which the client connects the server and url is the requested url

6. Once the proxy server gets a request from the client, it then forwards the request to the web server
7. The web server responds with the requested web page. Capture the returned webpage from the web server and forward it to the client
8. Verify to see if the returned page is same as the browser returned page. Figure 1 shows the overall architecture
9. An example client and server code is given on Blackboard to start programming.

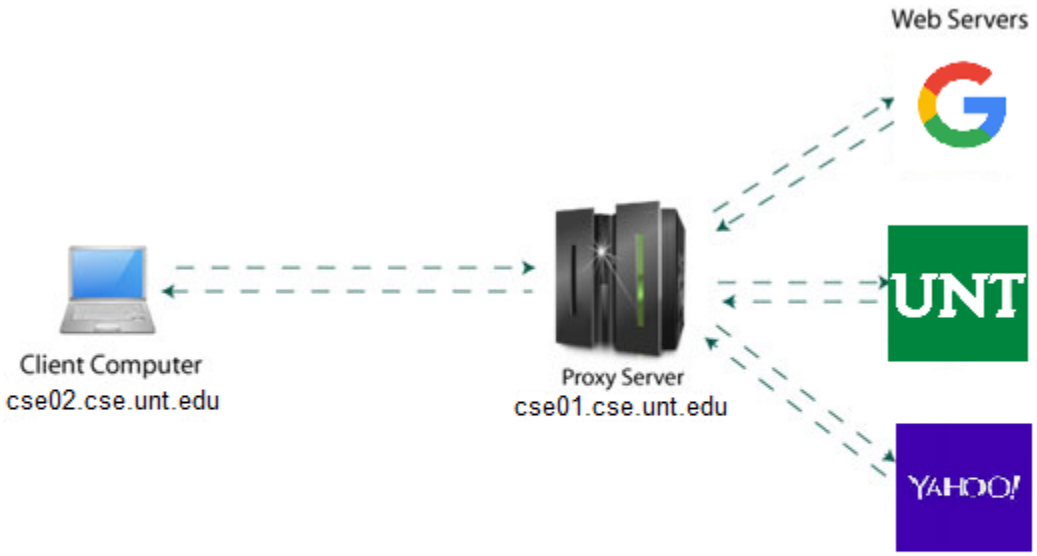

Figure 1. Overall Architecture