

# Programming Assignment -1

Due Date: 10 Oct 2011

In this assignment we will program a client, which when given a web address can fetch the requested html pages from remote web server. This client will perform the fundamental operation performed by the web browsers except rendering the html. We will perform this task in two steps: 1. Understand the communication protocol (http) that goes between the browser and the web server using Wireshark 2. Use this knowledge to code the protocol in the client.

1. Perform the tasks specified on Wireshark lab 1: (PDF is included in the zipped assignment file).

Determine what is being sent by the browser to obtain the webpage. Don't worry about other details, but try to find the fundamental statement/command (http request message).

Extra Credit:

a. Try logging into a site that does not use SSL while Wireshark is capturing the packets. Can you read your username and password in the Wireshark logs? Mention the website you used and the results (no username or password).

b. Now try a popular IM client. Can you read the messages on Wireshark? Please list the IM client you used and the findings.

(Also try other Wireshark labs provided at the text book resource website. If you have difficulty accessing it, contact the TA)

2. Now start coding the client to get html files from the URL. You can use any programming language you are comfortable with. The tutorial given here: <http://goo.gl/a7ec6> is a good resource for socket programming. Primary things to do include:

- a. Do DNS lookup for the given website to obtain the IP address.
- b. Fetch the URL by sending the correct commands to the server.

Example URL: <http://www.cise.ufl.edu/~ukumar/cnt4007.html>

## **Deliverables:**

Part 1: Mention the steps you took to reverse engineer the http protocol and get the request messages. For extra credit questions, do as directed in the questions.

Part 2: Submit the code with a readme file that explains clearly all the steps needed to compile and run the code.

**Submission:** Please send a single zipped file containing deliverables for both Part 1 and Part 2 to the TA at [ukumar@cise.ufl.edu](mailto:ukumar@cise.ufl.edu) (with subject : "CNT4007-programming assignment 1") by 11:59pm on the due date. Late submissions would carry a penalty.