

# Computer Networks: Home work project 4

Assigned: Thursday, Mar 29

Due: Tuesday, Apr 19

(LATE SUBMISSIONS WILL NOT BE ACCEPTED)

## 1. **libnet packet injection library**

Libnet is a high level library to create and inject network packets. Libnet is installed in the gateway machines. A number of sample programs, including code to inject TCP packets is available in `~surendar/libnet/sample/` in the gateway machines. More information on libnet is available at <http://www.packetfactory.net/libnet/>. For this question, you will

- 1 Develop a program that uses libnet to open a "tcp" connection to some web server, write a 1 byte packet and close the connection. This program should perform operations similar to your tcp test program in HWP #3.
- 2 Use your program from HWP #3 to capture the packets on the wire and verify that you see the same kinds of packets as you did for HWP #3. Note that if you do not talk the right "tcp" protocol, the server will RESET the connection.

You would need super-user privileges to run this project; you can get this access by using `sudo <your program>`. The password is your AFS password.

- 3 **Extra credit:** if your program can complete a full interaction with the server and download an entire web page (Try sending 'GET / HTTP/1.0')