**CPSC 441: Assignment 1 User Manual- Kathryn Lepine 30044629**

**Compile, Configure, and Use Proxy**

This proxy uses two files ‘proxy.c’ and ‘dynamic.c’. The dynamic code allows you to unblock and block content through the proxy using key words. Through terminal (mac’s command prompt) ssh into linux.cpsc.ucalgary.ca and sign in. Compile ‘proxy.c’ with the command ‘gcc -o proxy proxy.c’. Compile ‘dynamic.c’ with the command ‘gcc -o dynamic dynamic.c’. Enter command ‘ifconfig -a’ into terminal to find the public IP address. Open Firefox and go into Network Settings. Change the Configure Proxy Access to Manual and enter the public IP you have just found using ‘ifconfig -a’ on the computer science linux server. Make sure the port is set to 8638. It is recommended to clear cache (in Firefox go to History then clear recent history) before running proxy to ensure everything loads through the proxy. However, you can also reload pages by refreshing to load through the proxy. To run ‘proxy.c’ enter command ‘./proxy’. To run ‘dynamic.c’ enter command ‘./dynamic’. Do note you need to run both these programs on separate terminal windows. To dynamically change censorship type any of the following commands into the terminal running ‘dynamic.c’:

blockfloppy – blocks Floppy in the URL name

blockspongebob – blocks SpongeBob in the URL name

blockcurling – blocks curling in the URL name

blockall – blocks Floppy, SpongeBob, and curling in the URL name

freefloppy – unblocks Floppy in the URL name

freespongebag – unblocks SpongeBob in the URL name

freecurling – unblocks curling in the URL name

freeall – unblocked Floppy, SpongeBob, and curling in the URL name

blockmsgall – blocks Floppy, SpongeBob, and curling from the body of the HTTP response

freemsgall – unblocks Floppy, SpongeBob, and curling from the body of the HTTP response

Because web pages get stored to cached data you may need to refresh web pages to see the dynamically changing settings of the proxy. To terminate both programs press control-c.

**Required Features – Optional Features**

* Functional web proxy that uses simple interactions between client and server using HTTP/1.1. Can deliver web pages unaltered and redirection when appropriate.
* Can parse HTTP response and make appropriate decisions about what content to block.
  + By referencing the URL
  + By referencing the body of the HTTP response. As seen above the last two commands ‘blockmsgall’ and ‘freemsgall’ parse HTTP messages rather than URL. There are severe issues with this functionality right now.
* The web proxy and be dynamically updated based upon the list of key words identified above.

**Where and How Testing Was Done**

Testing was done on my MacBook Air, using the terminal to shh into the computer science linux lab to compile and run my code. For a browser I used Firefox. Testing was done both at my house and school campus. Need to make sure IP address is properly set on Firefox to match the public IP when using linux server. This IP address occasionally changes when logging into the linux server different times.

Why the message reading HTTP does not work all the time

Because the message only comes through in the HTTP request when the page has not been already loaded, that is the only time we read the look through the message

Otherwise just get already loaded

Example

Run new with cache cleared

blockmsgall

-go to example picture page will get blocked

-go to simple page will be able to see

freemsgall

note the main assignment page will get blocked if loaded without using the cache