

# Assignment 1 User Manual

For the assignment 1 Clown Proxy I built a proxy that replaces the word “Happy” with “Silly” and .jpg files will be substituted with clown images. The proxy acts like both a server and client sending and receiving HTTP requests and responses using HTTP/1.1. When sending the HTTP request back to the web browser it alters the data, thus changing what the web browser user sees (ex. “Silly” vs “Happy”). I did my testing through multiple csx.cpsc.ualgary.ca servers from my home internet, trying different IP’s and Ports to make sure the proxy worked consistently when these items were changed. I made sure that the proxy worked with both the web browser (Firefox) and through using Telenet to connect to the proxy using terminal then manually entering the HTTP requests. When working with the browser I used the developer mode and/or private mode where I could disable the cache to ensure that pages were not stored and reloaded with each HTTP call. All components of my assignment are working: Transparent Proxy, redirection, the word “Happy” is replaced with “Silly”, JPG’s are substituted with clown, burger, or pansage image, and the bonus that the JPG is replaced randomly by one of these images.

## How to Setup Proxy using Firefox:

There are a few simple steps needed to set up the Clown Proxy.

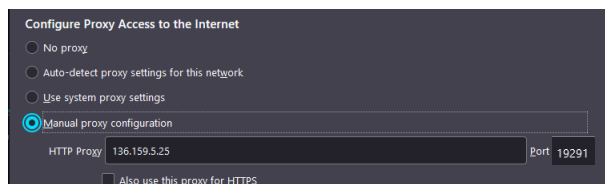
1. Make sure you have Firefox installed from: <https://www.mozilla.org/en-CA/firefox/new/>
2. Download the Proxy file `Proxy.cpp`
3. In terminal `cd` into the folder that it is located in and compile it using the following:  

```
g++ Proxy.cpp -o Proxy
```
4. Run the program using: `./Proxy`
5. You will receive a message stating:  

```
Proxy_server_socket created!  
Bind was successful  
Listen successful listening on port 19280...
```

*Note: if you receive a message that the Bind failed, the Port is busy and you need to wait to try again or change the port (see Notices below)*

6. Go to the Settings, then Network settings and change the HTTP Proxy to your IP and Port to 19291. Then select ok.



7. Once this is set up navigate to **http pages** and you should see the word “Happy” be replaced with “Silly” and the .jpg files will now be substituted with one of the other images mentioned above. The proxy will continuously run so you can visit multiple pages while it’s running.

## Notices:

1. The default port of the Proxy is 19280. The Port can be changed on line 21 `#define PORT` if this is done make sure update the proxy settings in your browser and recompile the code.