**PROJECT 2**

**REPORT**

In this project, we are creating multi-thread proxy server which will implement following functions:

1. Blocking web sites if they are found in a black list.
2. Filtering out inappropriate language (http://www.hyperhero.com/en/insults.htm) from a requested site.
3. Caching sites that have already been visited using conditional GET.

First while designing this project, we have thought about multi-threading, In this design every time when user requests for web page the socket will open new connection deliver the information. Initially in the first phase of design we will convert the hostname to IP address and the program will receive its url information.

In the second phase it will generate temporary file with .txt extension and it will the cache content to server. Once the url type in address in browser it will initially search for the matching cache content and then it will return the response to the browser, if not it will create content in the cache. Next feature it should also look up for the blocked url content simultaneously, if found it will block the site and it will reflect accordingly in the browser.

In real time when creating websites some companies will use ETAG HTTP protocols which will help avoiding over riding the cache validation. In this case these webpages are never cached (unless we use some high level extensions). For this whenever the client enters the url in the browser the server will check for ETAG content if found it will return error.

Next functionality is to hide bad words, for this we have dumped all the bad words listed in to text file from http://www.hyperhero.com/en/insults.htm and our server program will check line to line in the web page content and if any bad words it will block them by replacing with ‘CENSORED’.