Multi-Threaded Web Proxy

In this project, you will develop a web proxy. When your proxy receives an HTTP request for an object from a browser, it generates a new HTTP request for the same object and sends it to a remote server that is hosting the requested object. When the proxy receives the corresponding HTTP response with the object from the remote server, it creates a new HTTP response, including the object, and sends it to the client. The proxy will be muti-threaded, so it will be able to handle multiple requests at the same time.

Your proxy should have the following features:

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

To test your program, use a web browser as a client. The following address format should be used in the address bar:
129.120.151.96:8888/www.cse.unt.edu

- 129.120.151.96 -> ip address of the proxy server
- 8888 -> port number of the proxy server
- www.cse.unt.edu -> the address of the website being accessed on the origin server

The project should be completed in a group, and the assignment will be graded in the following manner:

5% Comments

5% Individual journal

5% README text file (it describes how to set up, compile, and run your program)

10% Report (what problem is being solved, your approach, and your solution)

15% GitHub repository for the project

20% Compiles and executes for the grader with correct results

40% Code

FYI: the companion Web site provides a skeleton code for both web server and web proxy in Python. However, your assignment has to be completed in C or C++ programming language!!