MIC0003: Computer Networking
Assignment 2: Web Server

Deadline: 21 March, 2011

The goal of the assignment is to familiarize yourselves with web servers, the Hypertext Transfer Protocol (HTTP) and related concepts.

1 Assignment

You are going to implement a web server with version 1.0 of HTTP, as defined in RFC 1945[1].

- Separate HTTP requests are sent for each component of the Web page (opposed to pipelining introduced in HTTP v1.1).

- The server should handle multiple simultaneous requests, each on a separate thread.

- A maximum of 16 pending connections should be allowed at the server.

- In case of an error/exception, the server should return it in the HTTP response (if possible).

- The MIME types for at least the following files should be supported: plain text, html, jpeg, png, gif, flash and a video format of your choosing.

A solution skeleton is provided in the *WebServer.java* and *HttpRequest.java* files, but you are welcome to roll your own (especially if you choose another programming language over Java).

In order to test your web server, please provide an html file with the above listed images/objects embedded.

2 Notes

- To simplify your task, it's suggested to first develop a web server that simply displays to contents of the HTTP request, and only after that actually do the servicing.

- As you are developing the code, you can test your server from a standard web browser, but take care of the port number (i.e. if you host your service on 8080, then access with http://localhost:8080).

- According to the HTTP specification, you need to terminate each line of the server's response message with a carriage return (CR) and a line feed (LF).

Google is your friend.

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[1]http://www.rfc-editor.org/rfc/rfc1945.txt

3   Deliverables

The programming language is not fixed (i.e. you can use whatever you like), but a compilation script **must** be provided (makefile for C/C++, ant file for Java, etc). The compilation script requirement is waivered if the solution is presented in class, and strictly before the deadline.

All the source files must include your full name, user name and group identifier (the lack thereof leading to a failed assignment).

The source files, compilation script and other data files should be uploaded in a single archive to the usual location (http://www.scs.ubbcluj.ro/~labhu/laborok.php).