**Assignment 1 – a18013 Luis Carvalho**

**Multi-threaded Web Server with an admin console**

(Distributed Systems 2017/2018)

**Objectives**

In this assignment, you will be developing a real working web server. The web server must implement the HTTP protocol (for a full description of HTTP protocol, consult the RFC 2616).

**Requirements**

The project can be divided into two major parts:

1. Administrator console interface

2. Web Server Functionalities

Your server will support multiple connections from the clients. Each client connection request will be handled with a separate thread on the server. Also, there will be a command line interface (CLI) for the administrative commands and a separate thread will handle the request. You can use web browsers to test your web server.

**Admin CLI Requirements**

1. Starting server: You can use a simple command like “start”, to start the server and accepting new connections from the clients.

2. Shutting down: You can use another command like “stop” to stop the server. In order stop server, you must be careful about stopping all active threads.

3. Listing active connections: just dump all the active server threads and some details about them for debugging (command “connections”).

**Multi-Threaded Server Requirements**

1. You must provide a thread for each active connection

2. Serve the requested file from the file system of the server

3. Keep connection active until client requests a close

4. Use the communication through HTTP (already provided some source codes)

**Work Developed**

As of today, the assignment in its current state of development only fulfills the Web Server Functionalities of the Requirements as there is no way to interact with the server and its sockets.

From the testing that took place, the 2nd part of the assignment seems to be operational, however the POST part of testing website is not working as no response is given from the server.