

CSCI 3614, Systems Programming

Assignment 4 (02.05.2019)

This assignment contains a single task with 100 points. You don't need to create any extra folders for this task, include only source codes (not binaries). As this task is about a web-server, a sample web page will be provided. Also make sure, that your code is neat, clean and thoroughly commented. Try to use meaningful variable names.

Deadline: 10.05.2019

Mini Web Server - (100 points)

This time your task is to create a simple web-server, which can handle HTTP requests and load a static web page. The web-server should be accessible on port 9000 and must be able to load different files described in the HTML page, including different types of images and CSS files. The default request `http://localhost:9000/` should be considered to be same as `http://localhost:9000/index.html`

You don't have to implement the full HTTP protocol, instead only focus on the GET request. As for different file types, pay attention at the "Content-Type" argument of the HTTP header protocol. For existing files, the web-server should respond with code 200. For non-existing files, the web-server should respond with code 404 and a "Page Not Found" error page.

Also make sure that the server works asynchronously, i.e. multiple users can access the server at the same time. You may use threads or forking for this purpose, but the recommended way of doing it is with non-blocking sockets.

You may test the web-server with any web browser available. Before starting with the implementation, make sure that you fully understand how HTTP works. A simple guide explaining the HTTP can be found here: <https://www.jmarshall.com/easy/http/>.