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PA 4 CPTS 360 Web Proxy

Implementation Details:

Implemented this proxy using the libs `<netdb.h>`, `<arpa/inet.h>`, `<sys/socket.h>`, and `<netinet/in.h>`. They provide functions for resolving hostnames, converting IP addresses, and managing sockets for network communication. The basic flow of the programming goes as follows. Open a proxy server on a given port. Queue connections to the port. (Main while loop control flow begins) Await a connection. Once a client connects create a buffer to read the socket, then parse for a http request. If there is a error parsing log it and close client connection. Make http request with parsed strings, store response in a buffer. If the response is bigger then the buffer continuously write to the client socket multiple times until all data is read. At the point by closing the socket it sends an http response to the client and goes to the next client in queue.

Firefox URLs

The reason why some urls don't work is basically because of how HTTPS is upgraded HTTP. Its designed to make web browsing secure by encrypting the data exchanged between the browser and the website. It uses SSL/TLS to keep your information safe from hackers and ensures that the site communicating with is actually the one it claims to be. A proxy is a middle man so https is designed to be blocking to proxies. While it works the same way as HTTP in terms of loading pages, HTTPS adds that extra layer of protection that effect the proxy.