Computer Network Project1 Report

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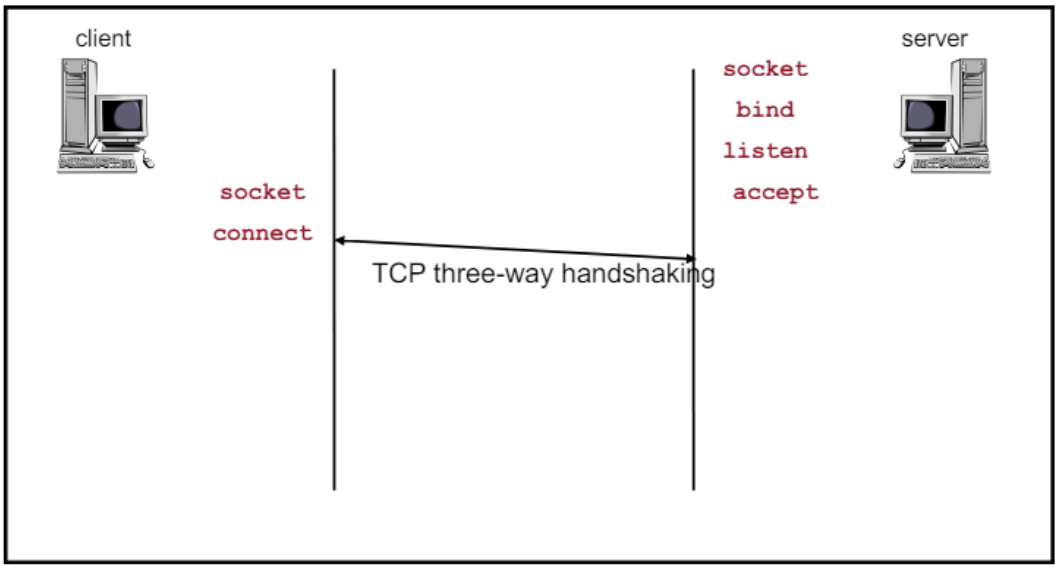
김은지

1. A high-level description of my server's design

After receiving the port number from the command line, the following steps are taken to create and set up the server socket and establish a connection. Once the connection is established, the server prints the data received from the client. Next, the request line is extracted from the message to determine which file to be sent. If the URL request is for '/', the 'default.html' is displayed. For other requests, the corresponding file is transmitted.



2. What difficulties did you face and how did you solve them?

Implementing theoretical concepts into practical applications was challenging at every step. Initially, I was able to quickly implement Part A by understanding the material provided by the professor. However, I encountered difficulties with Part B, particularly with parsing the HTTP request. I had to revisit the basics to understand that the request line is crucial in an HTTP request message. After researching, I found a function to effectively parse the request line.

Following the parsing, I needed to determine necessary information such as file length, file modification time, last access time, and ETag for the header line. I then appended this information to the header buffer and sent it to the client, followed by sending the file located at the requested path. I struggled with how to find file status and time information, which consumed a considerable amount of time. Through Google searches, I discovered that this could be implemented using predefined 'stat' and 'tm' structures, which allowed me to methodically construct the solution.

3. Some sample outputs of your client-server

   Entering './myserver <port number>' opens the server. As the server and browser run on the same machine, use 'localhost' or '127.0.0.1' as the machine name. Accessing Firefox and typing 'localhost:' or '127.0.0.1:' followed by the given port number will open the configured 'default.html' file. Even if you don't append a '/' after the port number, the HTTP request message shows it as if '/' was received. The server is set up to send 'default.html' when '/' is received, which ensures that the HTTP request and response are successfully exchanged.

Computer Network Project1 - my web server

Project1 : socket programming