

Lab 1

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The Server :

Overall Organization:

- Open a socket using socket system call and set it to TCP
- bind the socket to an address
- Listen for connections
- Accept new connection from incoming client and delegate it to worker process.
- Parse HTTP request
- process the request
- Close the connection

Process VS Threads:

- I used process as the process is safer than threads, as if one thread crashes it will affect other threads
- It is easier for implementation
- Web server usually be implemented as process based

Functions:

- readTheFile(fileName) : check if it is image or not and choose the proper way of reading
- writeTheFile(filename): write a file

The Client:

Overall Organization:

- Read all requests from the file
- For each request:
 - Determine if it is GET or POST request
 - Create a connection with the server
 - Send the request
 - Wait for the response
 - Close the connection

Functions:

- readTheFile(fileName) : check if it is image or not and choose the proper way of reading
- GET_REQUEST(): process the GET request
- POST_REQUEST(): process the POST request
- writeTheFile(filename): write a file

HOW TO RUN:

- Run the server >> ./server portNum
- Run the client >> ./client serverIP portNum