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Organization:

Our program is mainly divided into two c files (client.cpp and server.cpp). ***Server.cpp*** starts operating by inputting the name of the server and its port number through the terminal. The server starts by getting information about the server and get socket(file descriptor to connect to clients) , then I bind a specific port to the server and start listening to connections from different clients.finally I accept a specific connection from a client and create a new file descriptor which will be responsible for sending and receiving data between the client and the server. The client will be represented as a process separated from other clients.For each process I need to get a specific request either (GET or POST) and response with OK or with NOT Found in case of GET request. To enable the persistent connection , I keep receiving data for a minute and recv() function remains idle for 10 seconds only.

Client.cpp starts sending requests to the server after the server receives and parses them. The client will receive the response messages and depending on these messages the client will begin to receive the requested files or not (depending on OK or NOT Found in case of GET). or it will send the file to the server directly in case of POST.

Data structures :

char Buf [ ] : array of characters which holds data sent between server and the client.

Struct addrinfo servinfo : struct that holds information about the server

Struct sockaddr_storage their_addr : struct that holds information about the connected client to the server.

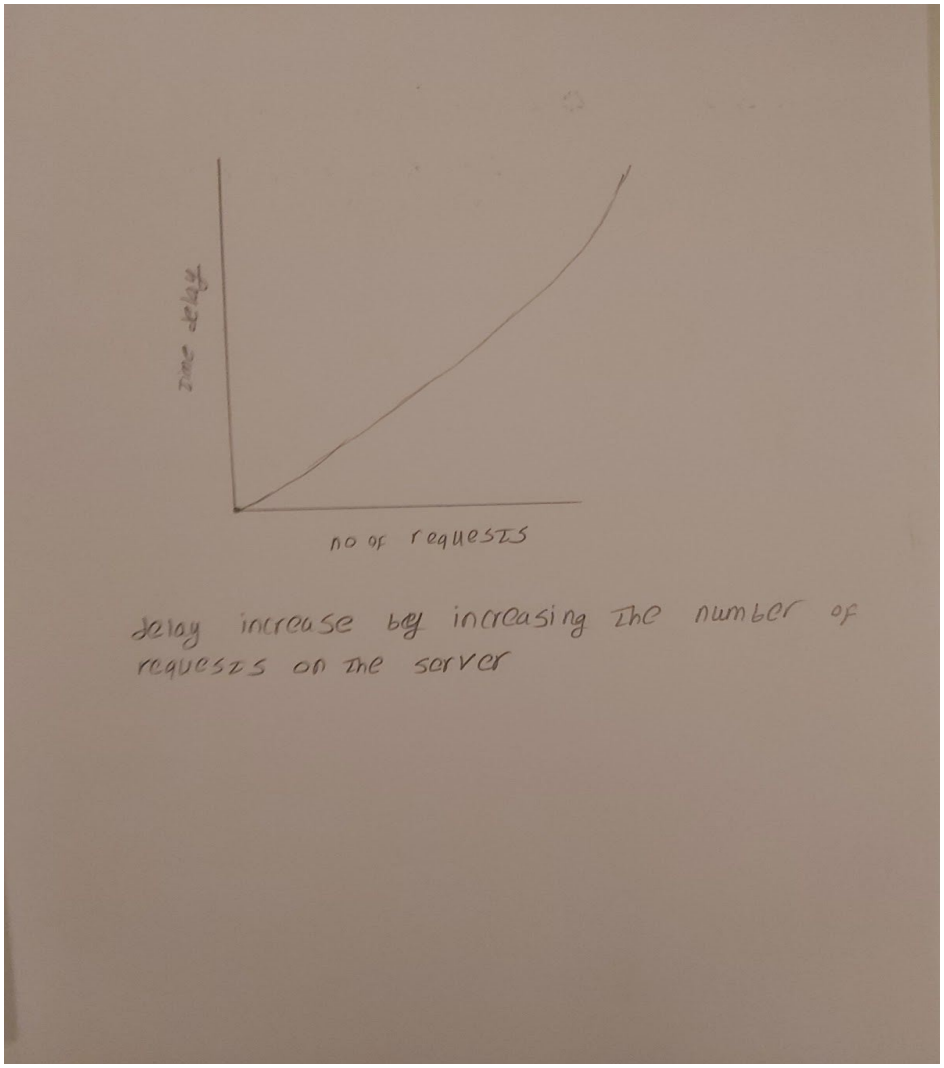
Functions :

read_file() : I read a file in any format given a pointer to it , looping through it and sending a small number of bytes each loop.

write_file() : I write a file in any format given a pointer to it by receiving different bytes in loop.

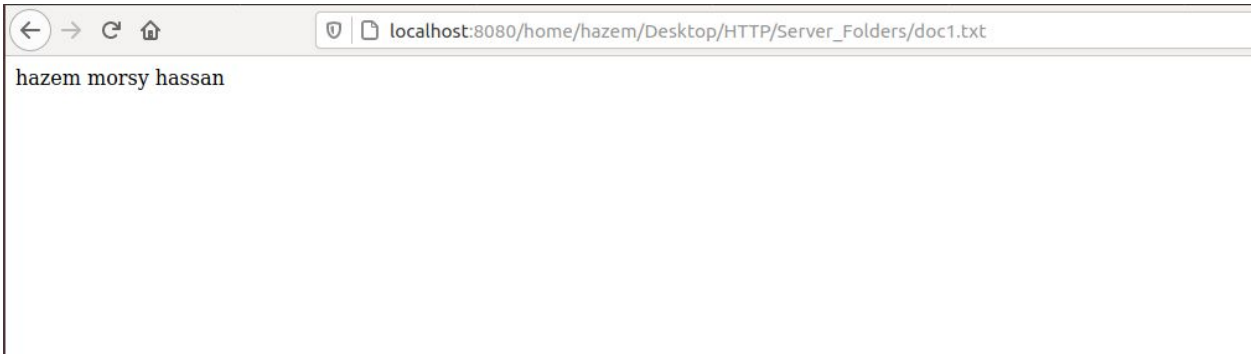
split_request() : get request from the client and parse it to get the request type and file path.

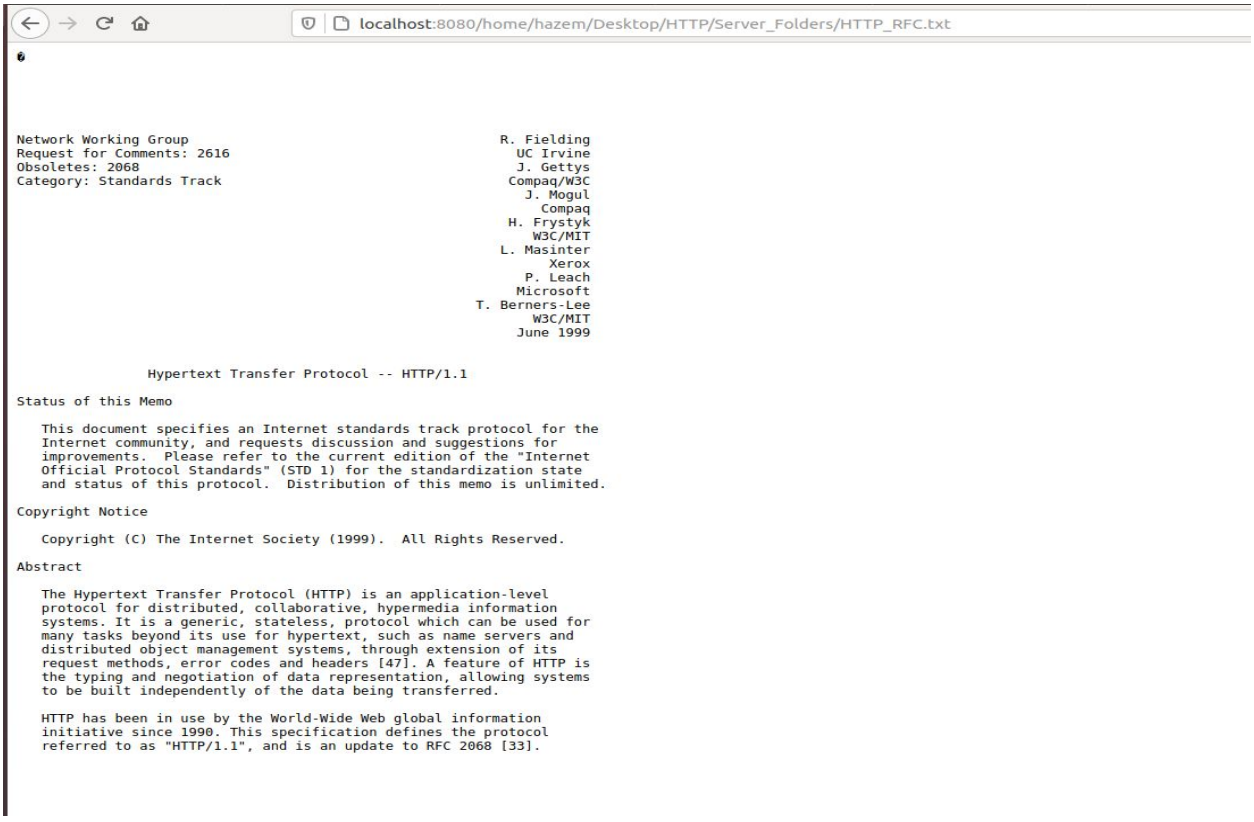
Evaluation:



Bonus:

Showing some text and pdf files in browser





Sheet ③ : AI

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رقم : 16

1) $\Rightarrow P(A,B|C) = P(A|C)\,P(B|C)$ ①

$P(A,B|C) = P(D|C)$ let $(A,B) = (D)$

$= \frac{P(D \cap C)}{P(C)} = \frac{P(A \cap B \cap C)}{P(C)}$ ②