Develop a TCP-based server and client using C. The single client requests data from a file on the server. The server opens the file and sends data back to the client.
Given: The server has few text files files in its present working directory. The client and server will work in separate directories.

Input: The server will accept its port number as the input parameter. (5 marks) The client sends a query to server requesting data from <filename> to the server. The client will accept server's IP address, server' port number, and the requested <filename> as input parameters. (5 marks)

Output: The server parses the query and returns the first 10 bytes of the file <filename>. If the file has 'n' bytes, such that 'n' is less than 10 bytes, then the server returns only the 'n' bytes. (5 marks) On receiving the data, the client creates the file <filename> and stores the data. (5 marks). A sample file is attached.

Error handling:
If the server is unreachable, the client must say so. (2 marks)
If the requested <filename> file is missing or if it is empty, the server sends an empty file to the client. (2 marks)

DELIVERABLES
Source code of client and server.
Screenshots of an example showing the input and outputs described above in a PDF. (2 marks) README file on how to compile and run the code. (2 marks)

REFERENCES:
https://notes.shichao.io/unp/ch4/#chapter-4-elementary-tcp-sockets
https://ops.tips/blog/a-tcp-server-in-c/