Practical Work 1 DS2021

GROUP 6

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1 Designing the protocol

+——+ — Client — +—+—-+ — — TCP/IP — v +—+—-+ — Server — +——+

2 Organizing the system

System:
- Create a socket with the socket()
- Bind the socket to an address using the bind()
- Listen for connections with the listen()
- Accept a connection with the accept()
- Send and receive data, use the read() and write() system call
Client
- Create a socket with the socket()
- Connect the socket to the address of server using the connect() system call
- Send and receive data, use the read() and write() system calls

3 Roles

Client:
The client performs the following functions:

Start the program, Declare the variables and structures required, A socket is created and the connect function is executed, The file is opened, The data from the file is read and sent to the server, The socket is closed, The program is stopped.

Sever:
The client performs the following functions:

Start the program, Declare the variables and structures required, The socket is created using the socket function, The socket is binded to the specific port, Start listening for the connections, Accept the connection from the client, Create a new file, Receives the data from the client, Write the data into the file, The program is stopped.