tcp_server & tcp_client

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tcp_client.c

This file implements a TCP client that connects to a server, sends a message, and receives a response.

1. Header Inclusions: The necessary libraries for input/output operations, standard library functions, string manipulation, and socket programming are included.

2. Constants: Two constants are defined: SERVER_PORT (48763) and BUFFER_SIZE (1024).

3. Main Function:

- Socket Creation: A TCP socket is created using socket(AF_INET, SOCK_STREAM, 0).

- Server Address Setup: The server_address structure is initialized with the server's IP address (127.0.0.1) and port number (8080).

- Connection to Server: The client attempts to connect to the server using connect().

- Sending Data: A message is sent to the server using send().

- Receiving Data: The client waits for a response from the server using recv(), then prints the server's response.

- Socket Closure: The socket is closed using close().

tcp_server.c

This file implements a TCP server that accepts connections from clients, receives messages, and responds to them.

1. Header Inclusions: The necessary libraries for input/output operations, standard library functions, string manipulation, and socket programming are included.

2. Constants: Two constants are defined: SERVER_PORT (48763) and BUFFER_SIZE (1024).

3. Main Function:

- Socket Creation: A TCP socket is created using socket(AF_INET, SOCK_STREAM, 0).

- Binding: The server binds the socket to port 8080 using bind().

- Listening: The server listens for incoming connections using listen().

- Accepting Connections: The server accepts a connection from a client using accept().

- Reading Data: The server reads the client's message using read(), then prints it.

- Sending Response: The server sends a response to the client using send().

- Socket Closure: The server closes the client socket and the server socket using close().