Graphical user interface, text

Description automatically generated with medium confidence

Program Explanation:

**Server:** creates a new TCP listener, listening for incoming request connections at IP address/port. A byte array is created as a buffer for reading data and a String data variable is set to null.

While in the listening loop, it prints waiting for connection.

After a client connects, the data string is set (or reset) to null, and a NetworkStream object is used to read/write data from/to the client.

While the NetworkStream object has data from the client in it, the data bytes are translated to ASCII and stored in the data string.

The server prints to itself the data received, processes the data sent by the client, converts the string back into a byte array and then sends back a response, then prints to itself the data that was sent. Then the connection is shutdown.

**Client:** Main calls the connect function with IP and the message it wants to send, a new TCP client is created using the IP and port that the server listener is using.

The message is converted into a byte array, and a NetworkStream object is used to send the message to the TCP server. The client prints to itself the message was sent.

A byte array is made as a buffer to store the response data, and an empty string is made to store the converted version.

The NetworkStream object is used to read the message and stored as a bytes variable, it’s converted to ASCII and stored in the response data string. The client then prints to itself the response string received.

Everything closes.