

## Server

The server code is separated into 3 sections, the first section (or section 0) is just to connect to the local hostname with a set hardcoded port number besides checking if the debug mode is on or off and then starts listening to incoming packets by entering an endless loop that doesn't break unless it crashes.

In the second section, the program enters an endless loop that starts with getting some necessary data from the received packet and then examines the opcode of the message sent to identify the next action and choose one of the three routes. In each one of these routes, the buffer is filled with appropriate responses and is sent back to the user.

The last section is a debugging section that is only active if the debugging mode is set to true and its responsibility is to print the name and code of messages that are being sent (like some kind of logger).

Notes: if the user doesn't enter any message, it's detected and acts as if the user entered a wrong input.

## Client

The client code is divided into four parts, the first part is similar to one of the servers (part 0), just setting up and entering in an endless loop, but this time the loop breaks when a user enters a specific command. The second part is also to determine the path of the logic based on the keyword (user input) that is translated to a certain upcode, it builds the buffer with binary data to be sent to the server.

The third part is to handle the server response and behave based on the response code of the user, it only has two functionalities, one of them is saving the file sent from the server and the other is displaying the help menu.

The last section is also a debugging section very similar to the server's debugging section

Note: if the user requests to upload a file that doesn't exist, this file is gonna be created and uploaded anyway (empty file) and if the user wishes to submit unknown commands or empty |brake lines, they are interpreted with a special flag that marks to the server that "this is invalid input ad reject it".

