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Programming Assignment
Design Description

Part I

tcp_client: The client takes three inputs before opening a socket. These inputs are operands and operator. Then a socket is open and the client connects to the server through the host and port information. It sends each input one by one and receives the result of the calculations.

tcp_server: The server opens a socket and listens. When it receives information from the client, it stores it into an array. The expected order is operator, followed by the two operands. A try-except block is used for error handling. It sends back the result and status.

udp_client and udp_server: The udp client and server work in the same way as the tcp client and server. The only thing that is different is that there is no connection between the server and the client. Thus, the udp server must send information to the specified address.

Part II

Udp2_client: The changes made to the udp_client is that the block of code that receives information from the server is now in a while loop. The while loop condition is that $d < 2$. This acts as the timer.

Udp2_server: The changes made is that there is a random variable that generates either 1 or 2. This simulates dropped packets.