SERVER:

Startup Protocol:

Opens Connections

Broadcasts ENQ with source null destination “A”

If it receives a name, it is not root server, send ACK

Populate table with names it receives afterwards

If it times out or receives ACKs, it is root server, and assigns itself “A”

List/Port Protocol:

Maintains list of names with ports

When sent a list, populates innate list from that list

When sent a request to create port entry with a port, assigns the next letter name in line and adds to list

When sent a name, returns the port number attached

Forwarding Packets

Verifies SOH and CRC integrity. str[3] is size.

Breaks apart packet and sends to decision maker (str[1] = destination, str[2] = source, everything from str[4] till the character before the CRC is the data)

Include function to broadcast, as well as one to send to a specific address

Decision Making:

Receives 1 char destination, 1 char source, and string of data

If the source is “A”, send to list builder (list/port protocol)

If the destination is 0xFF, send to broadcasting function (forwarding packets)

If the destination is a specific address, send to forwarding function (forwarding packets)

If the destination is “A” and the source is null, check the data for an ENQ. If it exists, return list of names.