CO324 – Lab 02

Sockets and Message Framing in Transmission Control Protocol (TCP)

2) The socket object is created inside the try block. So whenever the program comes out from the try block, the object which was created is closed. So the memory can be saved by this.

3)

a) <u>When delimiter is available</u>

   Client -> Enter your message:hey how are you?

   Server -> message: hey how are you?

<u>When delimiter is removed</u>

   Client -> Enter your message:hey how are you?

   Server -> message: hey

      message: how

      message: are

      message: you?-

What has happened here is that in Delimiter Based Approach an end of one message is denoted by this special character 'delimiter'. The sender attaches this special character at the end of the string. The receiver then reads characters until this special character is reached.

Since data is not sent as a continuous stream through a network, Instead, data is separated into packets of a particular size defined by protocols and configurations of the system(a large message would be separated into small chunks before being sent), due to the unreliability of the network, certain packets might have a delay in delivery.

This might become a problem since the receiver has no way to figure out how much data is sent by the sender as one message.

So in above message this problem can be clearly figure out when comparing received message when the delimiter is available and not available. Message has received in a certain delay.

The character " - " has been added to the received message when the delimiter is unavailable.

b) <u>Not having a dash (-) character in one of the messages</u>

Client -> Enter your message:hey how are you?

Server -> message: hey how are you?

<u>Having a dash (-) character in one of the messages</u>

Client -> Enter your message:hey how are you?

Server -> message: hey how are

message: you?

When the dash character is used in a message, the message divided into two parts and the part of the message which is after the dash character got delivered later since it occurred a delay in transferring the packets after the dash character is added as it denoted the end of one message.

4) The delimiter used here is the space " " character.