Debra Mulwa

**Data encapsulation**

Encapsulation is the process of adding additional information when data is traveling in OSI or TCP/IP model.

Here will be no additional information added in the user’s data in the Application layer in TCP/IP model or Application, Presentation, Session layers in OSI model.

Then Session layer sends data to Transport layer.

In the Transport layer, the data broken up into different pieces. It adds the header in each of the broken data, which contains information like source port, destination port, sequence number, etc. Now, everything combined to a new form.

The encapsulated data in Transport layer is called Segments or Datagrams. If the transmission uses TCP, then it is called Segments, or UDP is called Datagrams.

Now, the data will travel down and reach Network layer. Here, layer 3 header is added. That contains information like source IP, destination IP, and so on. This information combines into a new form. The encapsulated data in the network layer is called Packets.

Network layer sends packet to Data Link layer When it enters into data link layer, a new header (Layer 2) is added.

Also, a trailer is added. It contains information like source MAC address, destination MAC address, and so on. The trailer is used for error checking. The encapsulated data in the data link layer is called Frames.

