OSI Model: Layer Operation(*)

- Layer Operation
  - Layers are stacked on top of one another
  - Data travels from the sending layer down to the physical layer, across the network to the destination physical layer and back up to the peer destination receiving layer.

- Protocol Data Send Processing
  - Data chunk (Protocol Data Unit or PDU) from layer N+1 is passed down to layer N with instructions on the destination, (e.g. network destination, port destination)
  - Layer N encapsulates the data with a header that contains the peer destination Service Access Point (SAP). If layer N is the transport layer the SAP is the port number.

- Protocol Data Receive Processing
  - Layer N receives data from Layer N-1 and strips off the Layer N header to extract the destination Layer N SAP.

Example:
Application wishes to send data packet to destination IP address 130.95.208.1 on port 1330.

The transport layer will encapsulate the data with a header containing 1330 and pass this “new data” to the network layer
→ new data is [TH = 1330 | Data].

The network layer will encapsulate this data with a header containing the destination IP address forming the “newer data” which is passed to the link layer
→ newer data is [NH = 130.95.208.1 | TH = 1330 | Data]

At the destination network the NH is stripped off and the [TH | Data] is passed to the destination transport layer which extracts the port number (1330) from the TH and passes [Data] up to the application that is waiting for it.