Data Link Layer:

Data Link Layer (DLL) is the second layer of the model. While the physical layer transfers bit by bit, the DLL is responsible for delivering frames on the same network.
One of the most popular data link layer protocols is **Ethernet** for local area networks.

MAC Destination 6 bytes	MAC Source 6 bytes	Ethertype 2 bytes	Payload 46 - 1500 bytes	CRC 4 bytes

1. MAC address - unique 48-bit address to each network adapter.
2. Ethertype - used to indicate which protocol is used in the payload or used to represent the size of the payload.
3. Tag - used for VLANs. Optional field.
4. Payload - is the actual data to send. Bit/Byte stuffing is used when the payload is less than 46 bytes.
5. Frame Check Sequence (FCS) - is a trailer to check for errors (CRC32 bits).

Automatic Repeat Request (ARQ) Protocols:

Error control method for data transmission is used in a two-way communication system that uses Acknowledgements (ACK) and timeouts.

Stop and Wait (S&W):

It is the simplest ARQ protocol. The transmitter sends one frame and waits until the receiver responds with ACK. When the transmitter gets the ACK, it sends the next data frame. However, if the transmitter doesn't get the ACK in a reasonable time (timeout), the frame is resent.