**Data Communication concepts**

1. When the ping must be done between source to destination.
2. The first packet is the ARP message which is broadcasted to identify the destination.
3. The second reply packet is the ARP message which is unicasted acknowledgment.
4. Then from third packet the main packet i.e. ping message is sent which comes under IP Packet (more specific ICMP packet).
5. In IP packet, there could be various packets like (DHCP packet, DNS packet, ICMP packet, HTTP packet, FTP packet)
6. All the packets are wrapped in ethernet frame before sending it to destination the packet may be of type ARP or IP.
7. ARP packet is sent to get the information of the MAC address of the destination, since MAC is required by the DLL.
8. First ARP packet has the source MAC address and the destination broadcast MACs (of all computers within network), and IP of source as well as destination.
9. In IPV4 there is primarily source and destination IP and most importantly protocols basically there are 3 major protocols (ARP, TCP(web, ftp, icmp), UDP(dns) .
10. Note 🡪 any error in network whether using TCP or UDP but it always comes under the ICMP packet.