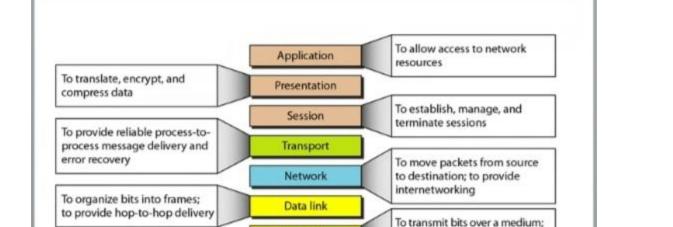
Figure 2.15 Summary of layers



to provide mechanical and electrical specifications

Physical

Figure 2.16 TCP/IP and OSI model

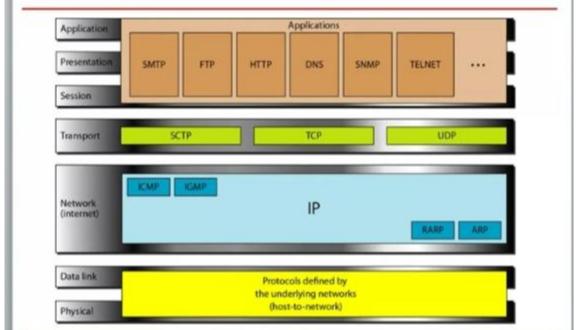
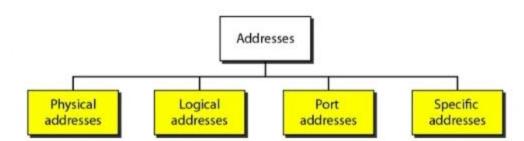
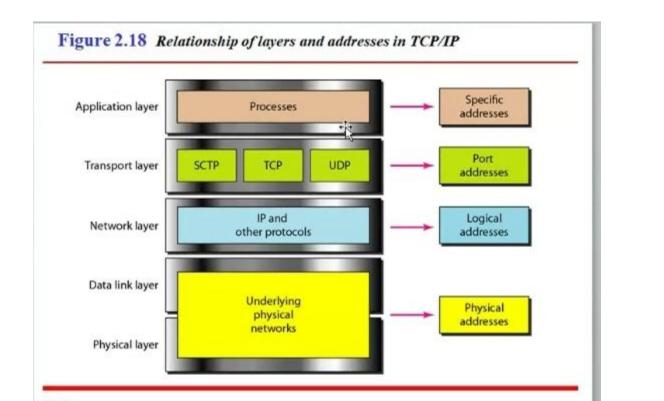


Figure 2.17 Addresses in TCP/IP



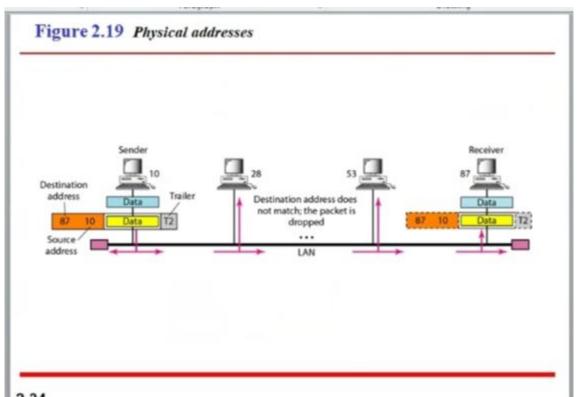


the receiver.

Drawing

In Figure 2.19 a node with physical address 10 sends a frame to a node with physical address 87. The two nodes are connected by a link (bus topology LAN). As the figure shows, the computer with physical address 10 is

the sender, and the computer with physical address 87 is



Example 2.2

As we will see in Chapter 13, most local-area networks use a 48-bit (6-byte) physical address written as 12 hexadecimal digits; every byte (2 hexadecimal digits) is separated by a colon, as shown below:

I07:01:02:01:2C:4B

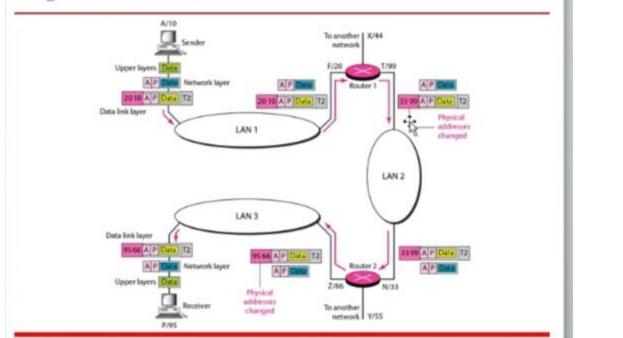
A 6-byte (12 hexadecimal digits) physical address.

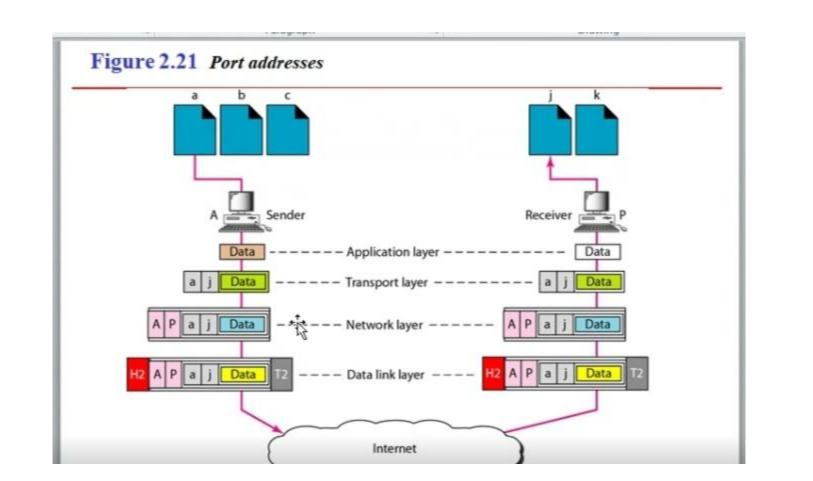


connection.

Figure 2.20 shows a part of an internet with two routers connecting three LANs. Each device (computer or router) has a pair of addresses (logical and physical) for each connection. In this case, each computer is connected to only one link and therefore has only one pair of addresses. Each router, however, is connected to three networks (only two are shown in the figure). So each router has three pairs of addresses, one for each

Figure 2.20 IP addresses







Note

The physical addresses change from hop to hop, but the logical and port addresses usually remain the same.