- The above figure illustrates the relationship between layers, protocols & interfaces I.e. network architecture
- In this, each layer is a kind of virtual machine that provides a service to the layer present below it
- In general, layer n on one machine carries out a conversation with layer n on another machine in the network
- The entities comprising the corresponding layers on different machines are called peers
- The peers may be processes, hardware devices, or even human beings
- In other words, it is the peers that communicate by using the protocol
- Between each pair of adjacent layers, there is an interface
- The interface is one that defines primitive operations and services that the lower layer must follow while providing service to the upper layer
- Interface is a way through which the data/message is transferred from one layer to another layer
- In reality, there is no direct data transfer between layer n on one machine (host1) to layer n on another machine(host2)
- Instead, each layer passes data and control information to the layer present just below it, until the lowest layer is reached
- In the Figure, below layer 1, there is the physical medium through which actual communication (data transfer) occurs
- The virtual communication is shown by dotted lines and physical communication by solid lines (as shown in figure)

Design Issues for the Layers in the network/ Design Issues in the network

The following are the design issues for the layers:

1 Reliability: It is a design issue of making a network that operates correctly even though it is made up of unreliable components

2 Addressing: