TUTORIAL-2
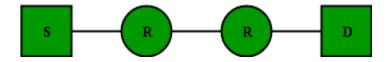
Q.1. How many cable connections are required if 8 pc's and 2 laptop's are there in following network topologies:

   a) Star
   b) Mesh
   c) Ring

Q.2 You're a network administrator at a large company in Greater Noida. The boss comes to you and says that he got your requisition to buy all new switches and is not sure about approving the expense; do you really need it?

Q.3 Assume that source S and destination D are connected through two intermediate routers labeled R. Determine how many times:

A) Each packet has to visit the network layer and the data link layer during a transmission from S to D.

B) Each packet has to visit the application layer during a transmission from S to D.

Q.4 What is the need of Internetworking reference model?

Answer the following questions about the OSI model:

1. Which layer chooses and determines the availability of communicating partners along with the resources necessary to make the connection, coordinates partnering applications, and forms a consensus on procedures for controlling data integrity and error recovery?
 2. Which layer is responsible for converting data packets from the Data Link layer into electrical signals?
3. At which layer is routing implemented, enabling connections and path selection between two end systems?
4. Which layer defines how data is formatted, presented, encoded, and converted for use on the network?
5. Which layer is responsible for creating, managing, and terminating sessions between applications?
6. Which layer ensures the trustworthy transmission of data across a physical link and is primarily concerned with physical addressing, line discipline, network topology, error notification, ordered delivery of frames, and flow control?

7. Which layer is used for reliable communication between end nodes over the network and provides mechanisms for establishing, maintaining, and terminating virtual circuits; transport-fault detection and recovery; and controlling the flow of information?
8. Which layer provides logical addressing that routers will use for path determination?
9. Which layer specifies voltage, wire speed, and pinout cables and moves bits between devices?
10. Which layer combines bits into bytes and bytes into frames, uses MAC addressing, and provides error detection?
11. Which layer is responsible for keeping the data from different applications separate on the network?
12. Which layer is represented by frames?
13. Which layer is represented by segments?
14. Which layer is represented by packets?
15. Which layer is represented by bits?