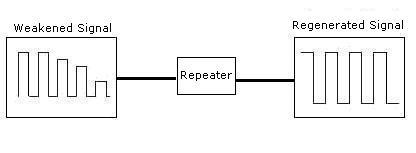
1.REPEATER

* As signals travel along a network cable degrade and become distorted in a process that is called attenuation. If a cable is long enough, the attenuation will finally make a signal unrecognizable by the receiver.
* A Repeater enables signals to travel longer distances over a network. Repeaters work at the OSI's Physical layer. A repeater regenerates the received signals and then retransmits the regenerated (or conditioned) signals on other segment



2.BRIDGE

Bridge is used to divide a large network into smaller segments. Basic functions of the Bridge are the following: -

* Breaking a large network into smaller segments.
* Connecting different media types. Such as connects UTP with the fiber optic.
* Connecting different network architectures. Such as connects Ethernet with the Token ring.
* A bridge works on the principle that each network node has its own address. A bridge forwards the packets based on the address.
* Bridges simply pass all protocols along the network. Because all protocols pass across the bridges, it is up to the individual computers to determine which protocols they can recognize

3.SWITCH

A switch can be any of the follwing:

* A switch is a piece of a physical circuitry  that governs the signal flow. Having a switch or toggle switch allows a connection to be opened or closed
* On a network, a **switch** is a hardware device that filters and forwards network packets, but often not capable of much more. A network switch is more advanced than a hub but not as advanced as a router.

4.ROUTER

* Routers work at the Network layer of the OSI model meaning that the Routers can switc h and route packets across multiple networks. They do this by exchanging protocol-specific information between separate networks.
* Routers have access to more information in packets than bridges, and use this information to improve packet deliveries.
* Routers are usually used in a complex network situation because they provide better traffic management than bridges and do not pass broadcast traffic.
* Routers can share status and routing information with one another and use this information to bypass slow or malfunctioning connections.

5.GATEWAY

* Gateways make communication possible between different architectures and environments. They repackage and convert data going from one environment to another so that each environment can understand the other's environment data.

A gateway links two systems that do not use the same:

* Communication protocols
* Data formatting structures
* Languages
* Architecture

6.TP CABLES

A **twisted-pair cable** is a cable made by intertwining two separate insulated wires. There are two twisted pair types: shielded and unshielded. A STP (Shielded Twisted Pair) cable has a fine wire mesh surrounding the wires to protect the transmission and a UTP(Unshielded Twisted Pair) cable does not. Shielded cable is used in older telephone networks, as well as network and data communications to reduce outside interference.

7.RJ CONECTOR

A **registered jack** (**RJ**) is a standardized telecommunication network interfacefor connecting voice and data equipment to a service provided by a local exchange carrier or long distance carrier.

8.HUB

* A network hub is a device that allows multiple computers to communicate with each other over a network. It has several Ethernet ports that are used to connect two or more network devices together. Each computer or device connected to the hub can communicate with any other device connected to one of the hub's Ethernet ports
* Hubs are similar to switches, but are not as "smart." While switches send incoming datato a specific port, hubs broadcast all incoming data to all active ports. For example, if five devices are connected to an 8-port hub, all data received by the hub is relayed to the five active ports. While this ensures the data gets to the right port, it also leads to inefficient use of the network bandwidth. For this reason, switches are much more commonly used than hubs.