1. **Diff b/w Hubs, Switches and Bridge**
2. **Diff b/w Gateway and Firewall**
3. **Diff b/w Router and Switch**

**Hub**

* A repeater operates at the physical layer.
* A hub connects multiple wires coming from different branches.
* Hubs cannot filter data, so data packets are sent to all connected devices.
* They do not have intelligence to find out best path for data packets which leads to inefficiencies and wastage.

**Bridge**

* A bridge operates at data link layer.
* It is used for interconnecting two LANs working on the same protocol.
* It has a single input and single output port, thus making it a 2 port device.

**Switch**

* Switch is data link layer device.
* A switch is a multiport bridge with a buffer and a design that can boost its efficiency(large number of ports imply less traffic) and performance.
* Switch can perform error checking before forwarding data, that makes it very efficient as it does not forward packets that have errors
* It forward good packets selectively to correct port only.

**Router**

* Router is mainly a Network Layer device.
* A router is a device like a switch that routes data packets based on their IP addresses.
* Routers normally connect LANs and WANs together and have a dynamically updating routing table based on which they make decisions on routing the data packets.
* Router divide broadcast domains of hosts connected through it.

**Gateway**

* They can operate at any network layer.
* A gateway, as the name suggests, is a passage to connect two networks together that may work upon different networking models.
* They basically works as the messenger agents that take data from one system, interpret it, and transfer it to another system.
* Gateways are also called protocol converters.
* Gateways are generally more complex than switch or router.