CN Lab 6

1)Difference between hub, switch and router

Hub:

-A hub is just a connector and connects the wires coming from different slides, there is no signal processing or regeneration.

-whatever we give input it will give to all other interface

-used in physical layer

Switch:

-Switch is a point-to-point communication device.

-it operates at the data link layer

-it uses switching table to find out correct destination

-in simple word, switch check signal meant for which device so it will forward to that PC only

Router:

-router contains a routing table that enables it to make decision about the routes.

-The main objective of router is to connect various networks simultaneously

-it operates at network layer.

Main Difference:

-The main objective of router is to connect various networks simultaneously and it works in network layer, whereas the main objective of switch is to connect various devices simultaneously and it works in data link layer.

-A Hub is a broadcast device that sends data from one node to all nodes but a Switch is a multicast device that can send data to a particular node.

-Both Router and Switch are the connecting devices in networking. A router is employed to settle on the littlest path for a packet to achieve its destination.

2) Importance Of Default Get way

-A default gateway is a node that enables a seamless connection between networks, allowing one machine to talk to another machine on a different network. It's called a 'default' gateway because it is the first and default route taken unless another option is actively requested.

-Default gateways are essentially routing systems that ensure the request is sent to the right destination, even if the sender and receiver use different network protocols.

-It allows you to uncover any issues you might have with your network when troubleshooting or accessing your router's web-based management tool

3)How to Configure router terminal

-double click router and then open CLI ☐click the terminal and follow the below process

COMMANDS:

- Router>enable

-Router#configure terminal

-Router(config)#interface gigabitethernet0/0/0

-Router(config-if)#ip address 10.0.0.5 255.0.0.0

-Router(config-if)#no shutdown

-Router(config-if)#exit