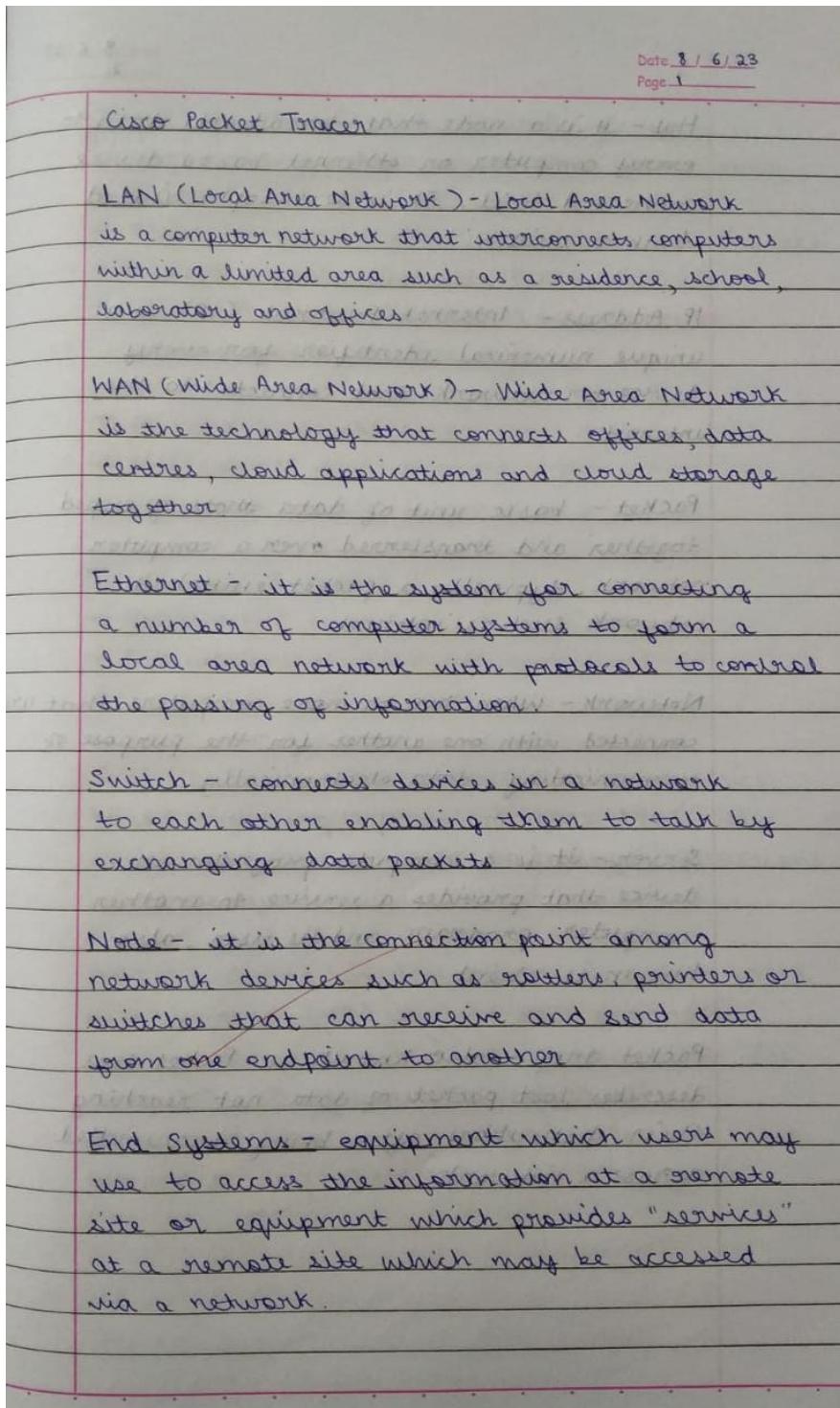


First Lab:

Definitions & Creating a First Network:

OBSERVATION:



Hub - it is a node that broadcasts data to every computer or ethernet based device connected to it. It is less sophisticated than a switch.

IP Address - Internet Protocol (IP) is a unique numerical identifier for every device or network that connects to the internet.

Packet - basic unit of data that is grouped together and transferred over a computer network, typically a packet switched network such as internet.

Network - when two or more computers that are connected with one another for the purpose of communicating data electronically.

Server - it is a computer program or device that provides a service to another computer program and its user, also known as client.

Packet drop - also known as packet loss describes lost packets of data not reaching their destinations after being transmitted across a network.

There are 3 toolbars available.

- Top toolbar - New, open, save, print, copy, paste, undo, redo, etc
- Right toolbar - Select, place note, del, inspect, polygon, resize, complex PDV
- Bottom toolbar - Routers, switches, hubs, wireless devices, connections.

There are 2 workspaces

- Logical
- Physical

There are 2 modes of usage

- Realtime
- Simulation

GUI (Graphical User Interface) - a graphics based operating system interface that uses icons, menus and a mouse to manage interactions with the system.

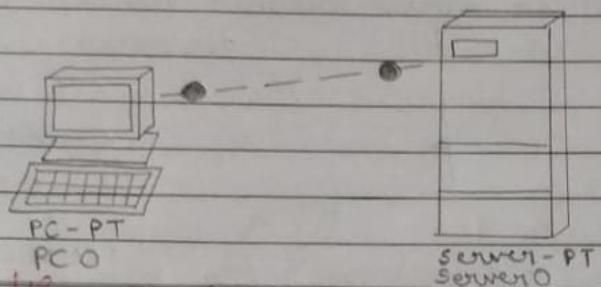
CLI (Command Line Interface) - is a text based user interface (VI) used to run programs, manage computer files and interact with the computer. They are also called as command line user interface, console user interfaces and character user interfaces.

Creating a First Network

- 1) Start creating a network by first selecting the end devices. Add a generic PC and a Generic Server to the workspace.
- 2) Under connections, select Copper straight through cable and connect the devices. Red light indicates that it is not working. Delete can be used to remove the cable and use copper cross over cable instead which makes the lights go green. Link status will be shown as 'Up' if mouse pointer is held over it.
- 3) Click on the PC, turn on the power and off, on again. Repeat the steps. Red light when it is off and green lights when it is on.
- 4) Mouse over the device to see basic configuration information about it. Click on each device to show the device configuration. Use inspect tool to view the table.
- 5) Open the PC configuration window and change the display name and set the DNS server to 10.0.0.1. Under interface click FastEthernet and set IP address to 10.0.0.2. Make sure the Port status box is checked.
- 6) Go to Desktop tab and click on IP Configuration.
- 7) Change Display name to Web server in Server Configuration and set IP address to 10.0.0.1 in FastEthernet. Set domain name as www.firstlab.com in DNS and set IP address to 10.0.0.1 and click add.
- 8) Drag the devices of network to new location. Add network descriptions and add some text labels within logical workspace.

- 9) Load a Background grid using the set Tiled Background button
- 10) Save your work using File > Save As option and create a meaningful filename.

Topology



8/6/23

TOPOLOGY:

