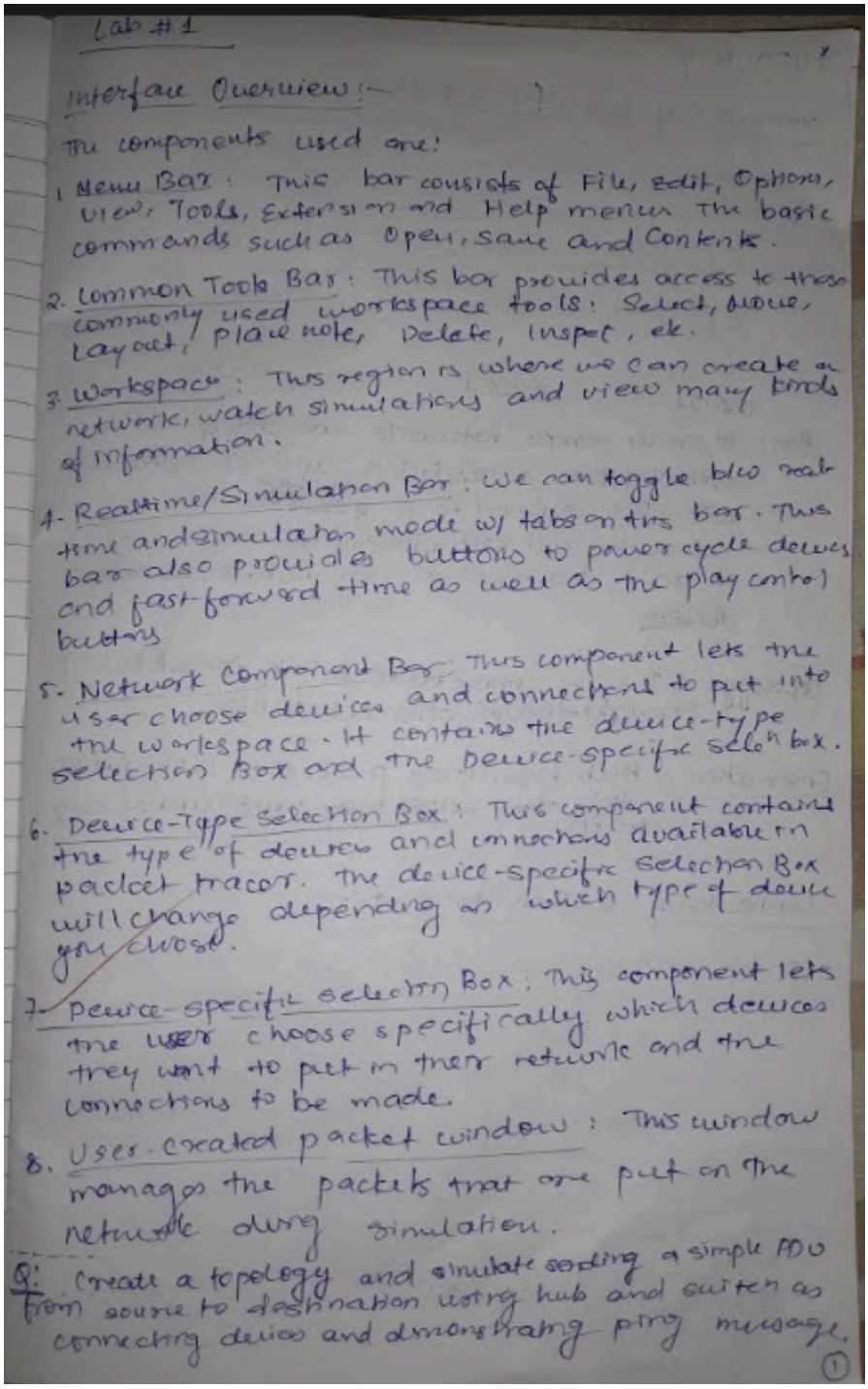
Observation Book:



Lab #1

Interface Overview:-

The components used are:

1. Menu Bar: This bar consists of File, Edit, Options, View, Tools, Extension and Help menus. The basic commands such as Open, Save and Contents.

2. Common Tools Bar: This bar provides access to these commonly used workspace tools: Select, Move, Layout, Place note, Delete, Inspect, etc.

3. Workspace: This region is where we can create a network, watch simulations and view many kinds of information.

4. Realtime/Simulation Bar: We can toggle b/w real time and simulation mode w/ tabs on this bar. This bar also provides buttons to power cycle devices and fast-forward time as well as the play control buttons.

5. Network Component Box: This component lets the user choose devices and connections to put into the workspace. It contains the device-type selection box and the device-specific selection box.

6. Device-Type Selection Box: This component contains the type of devices and connections available in packet tracer. The device-specific selection box will change depending on which type of device you chose.

7. Device-specific selection Box: This component lets the user choose specifically which devices they want to put in their network and the connections to be made.

8. User-created packet window: This window manages the packets that are put on the network during simulation.

Q: Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices and demonstrating ping message.

Aim: To create sample network consisting of 3PCs connected to a control hub is another network with 3 PC connected to a switch. This connection will help observe the behaviour of data transmission using switch.

Topology: 3 PCs are connected to a switch using straight through ethernet cable

~~Observation: Switch hub broadcasts packets to all~~

Observation: Switch forwards packets only to appt. devices by learning MAC addresses making it more efficient.

~~Draw exh. topology~~

PC to Server

Aim: To set up point-to-point network between a PC, server facilitating direct communication to observe data exchange.

Topology: A PC is connected to a server using cross-over ethernet cable

I.P address of PC : 10.0.0.1

IP. address of Server : 20.0.0.2

Observation: The direction connection allows PC to communicate with server which typical in small networks for tasks such as file sharing, service request taking server responds to client qe

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Difference b/w Switch & Hub

HUB	SWITCH
Hub broadcasts data to all devices	Switch sends data only to destination
Hubs create more traffic	Switches reduce traffic by directing data
Hubs work at physical layer	Switch operates at data link layer
Hubs are slower due to shared bandwidth	Switches are faster with dedicated bandwidth
Hubs are cheaper	Switches are expensive

25/9/24