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Program-6

Create To study about remote desktop / anydesk

→ Remote desktop (Microsoft Remote desktop)

→ A built-in windows features for accessing another PC remotely ~~work~~

Working:

a. Require the computer being accessed to have remote desktop enable.

b. The accessing devices needs the remote desktop application.

c. Operater over network or the internet with proper port forwarding.

→ Key features:-

a. Full desktop control

b. Integration with windows environment

c. support windows, macOS, iOS and Android.

d. Secure connections with encryption.

→ Ideal for: Corporate Network.

→ Any Desk

A third party application for remote access and supports.

→ working:

a. Both Devices must have AnyDesk installed

b. uses a unique address for each devices to establish a connection

c. Works across different operating system like windows, macOS, Linux, Android and iOS.

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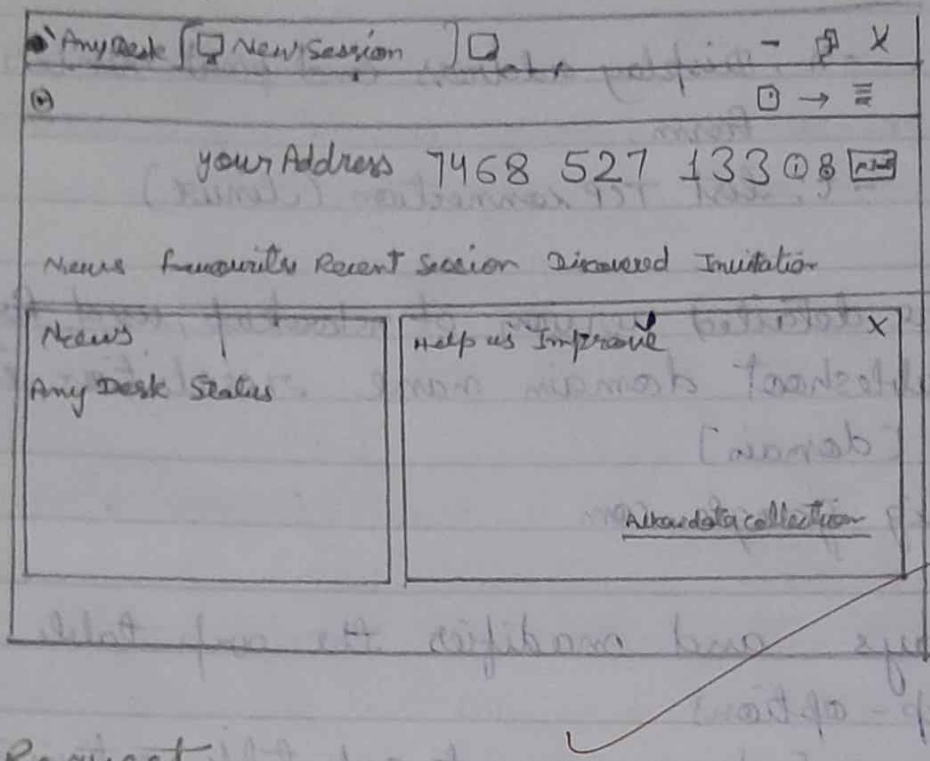
→ features

a. lightweight and fast
b. cross-platform support
c. file transfer and clipboard sharing
d. secure with AES-256 encryption.

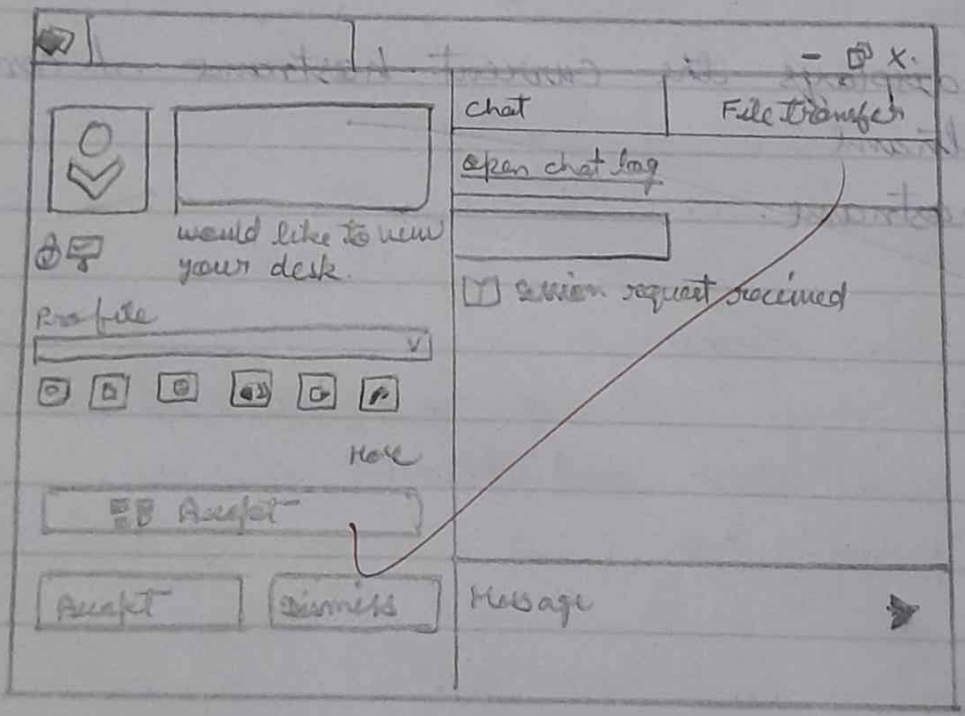
→ Ideal for : general remote desktop use, technical support and cross platform access.

Teacher's Signature

Any Desk Interface



Session Request



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Program - 7

How to share a folder on a network in windows.

→ folder sharing on windows

1. Right-click the folder you want to share and select properties
2. click on sharing tool and select share.
3. In the pop-up window, select the people or group to share with.
4. set permission (Read or Read/Write)
5. Once shared, windows will display a network path
6. share this path with others.
7. Other users on the same network can access the folder by entering the network path in file explorer.
8. In the advanced sharing option you can get specific user permission and limits.

→ folder sharing via anydesk

1. During the session, click on the file transfer in the anydesk toolbar.
2. Because for the folder to share on transfer.
3. Drag and drop file b/w the two systems.

→ folder sharing via remote desktop

1. Before connecting open the Remote Desktop connection app.
2. click show option > Local Resource > More
3. Check the drive or folder you want to share with remote system
4. On the remote system, the stored folder will appear under this PC.

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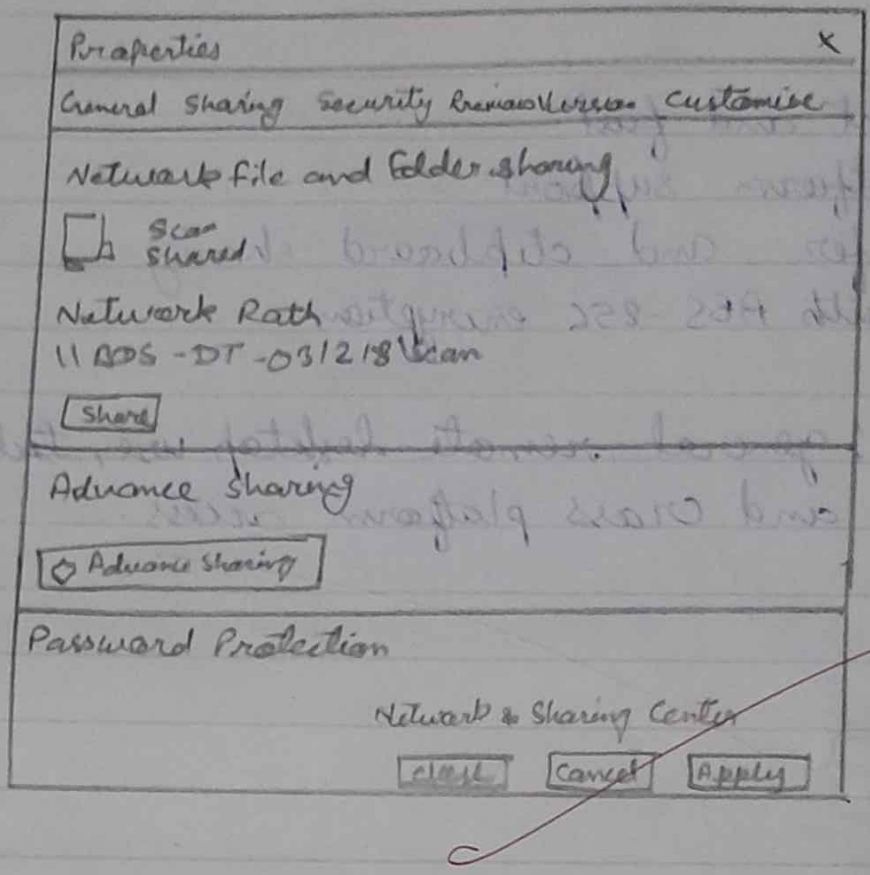
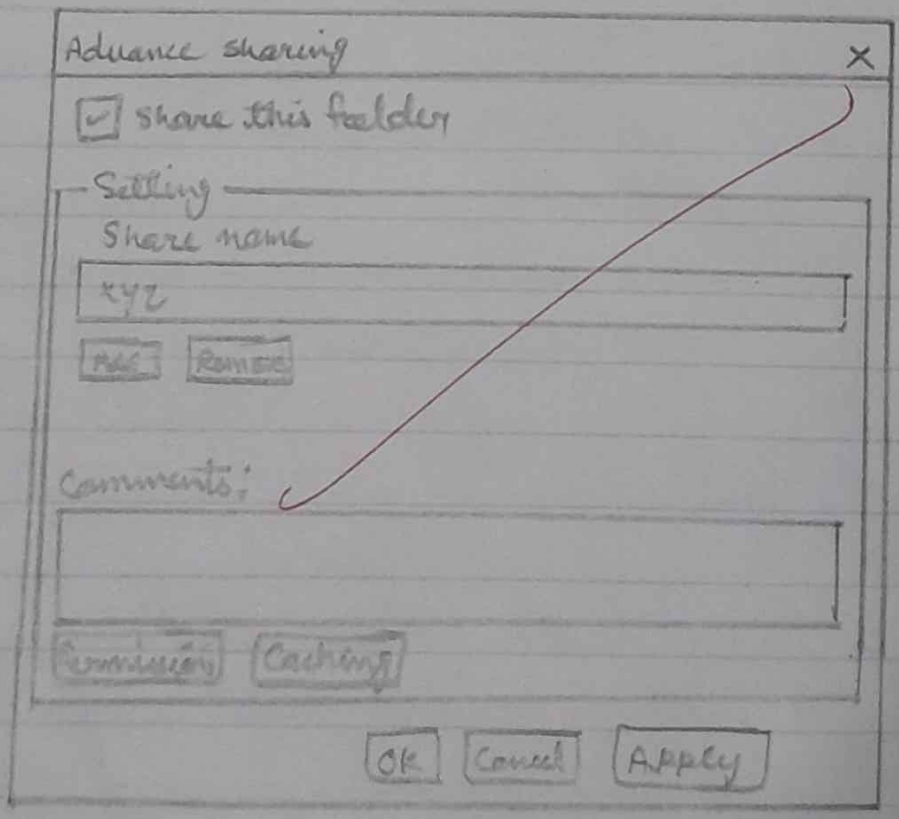

Properties
General Sharing Security Previous Versions Customize
Network file and folder sharing
Share
Network Path
Advance sharing
Advance Sharing
Password Protection
Network & Sharing Center
Cancel
Apply


Advance sharing
Share this folder
Setting
Share name
xyz
Comments:
Caching
OK
Cancel
Apply

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Program - 8

Installation and introduction of simulation tool packet tracer / GNS3

→ GNS3 (Graphical Network Simulator -3)

It is a network software simulator first released in 2008. It allows the combination of virtual and real devices used to simulate complex networks. It uses dynamips emulation software to simulate CISCO IOS.

→ Installation of Packet Tracer.

1. First search " cisco packet tracer download " in browser.
2. Now click on the next website.
3. You need a cisco netrode account. sign up if you don't have one
4. Select the appropriate ~~user~~ version for your OS.
5. locate the downloaded .exe file (eg. Packettracer.exe).
6. Double click the file to start the installation.
7. Follow the prompts:
   - Accept the license Agreement
   - Choose the installation location
   - complete the installation
8. Once installed, launch Packet tracer from the start menu or desktop shortcut.
9. Launch Packet tracer.
10. Log in
    - use your cisco Netted credentials to login
11. Guest mode (optional).

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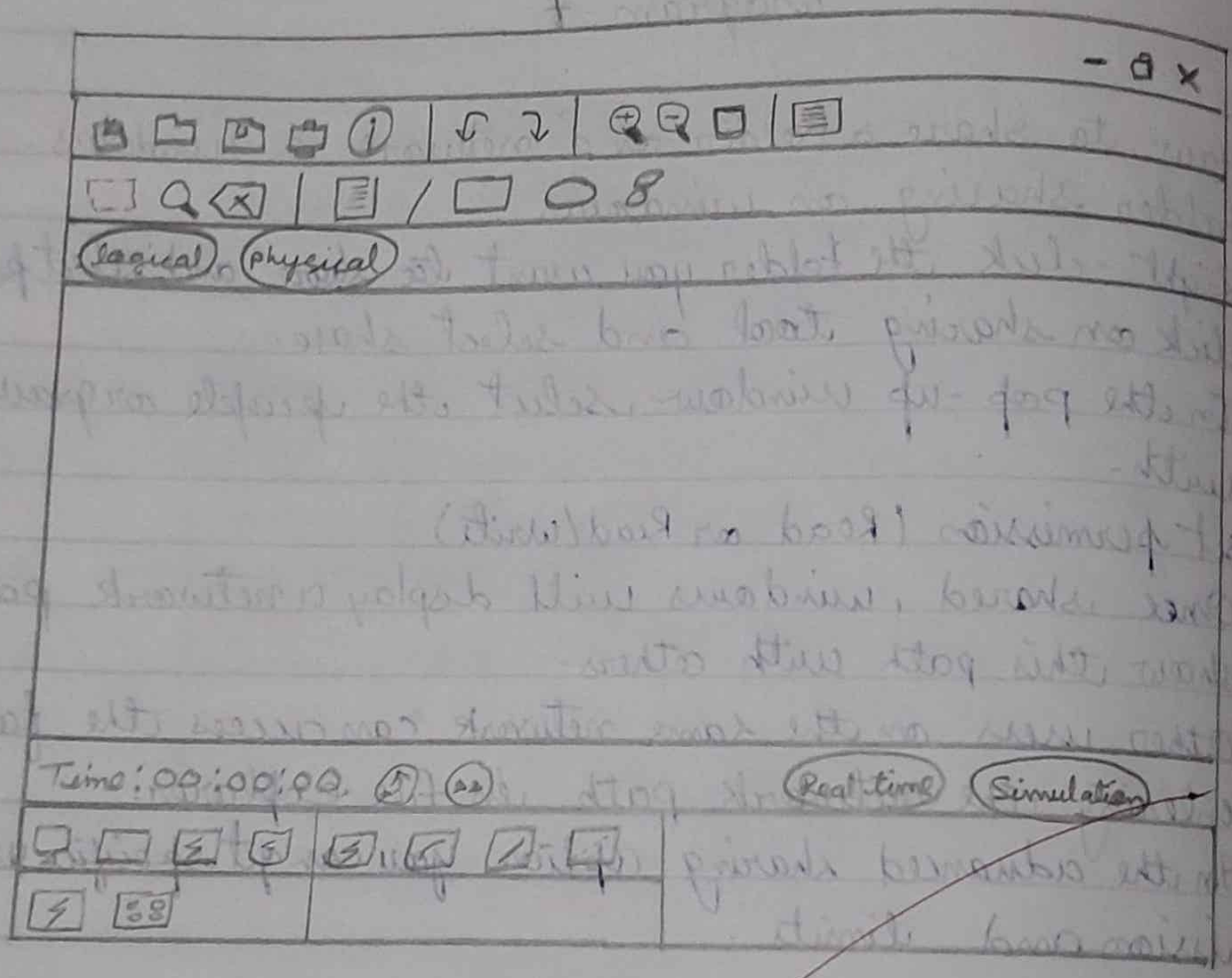
- If you don't want to login, use guest mode, through same features may be limited.

12. Create new projects, practise networking configuration and explore the tools provided.

Cisco Packet Tracer



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Program - 9

create a peer to peer connection using packet tracer. creating a peer to peer network connection in CISCO Packet Tracer includes connecting two devices directly without any intermediatry network equipment like switches or routers.

Steps to achieve this

1. Open CISCO packet tracer.
→ start CISCO packet tracer and open a new project.

2 Add devices
→ Pc 1: Drag a Pc from the device list onto the workspace.
→ Pc 2: Drag a Pc onto the workspace.
→ Ensure that both Pc's are in the same workspace for easy connection.

3 Connect the devices
→ use a cross over cable to connect the Ethernet ports of the two Pcs.
→ click on the connection icon in packet tracer.
→ select copper - cross over
→ click on Pc1 and then click on the ethernet port.
→ click on Pc2 and then click on the ethernet port.

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4. configure IP address
→ To enable communication, assign static IP addresses to both PCs.

a. config for Pc1
- click on Pc1
- Go to desktop and select IP configuration.
- set the following
  IP address: 192.168.1.1
  subnet mask: 255.255.255.0
  default gateway: leave blank.

b. config for Pc2
- click on Pc2
- go to desktop tab and select IP configuration.
- set the following
  IP address: 192.168.1.2
  subnet mask: 255.255.255.0
  default gateway: leave blank.

5. Test the connection
→ Use the command prompt on Pc1 or Pc2 to check connectivity
- click on Pc1 and go to the desktop app.
- open command prompt
- Type the following command on Pc2
  ping 192.168.1.2
→ If the connection is successful you can see replies from the 192.168.1.2

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6. Verify with a simulation

→ To make sure everything is working.

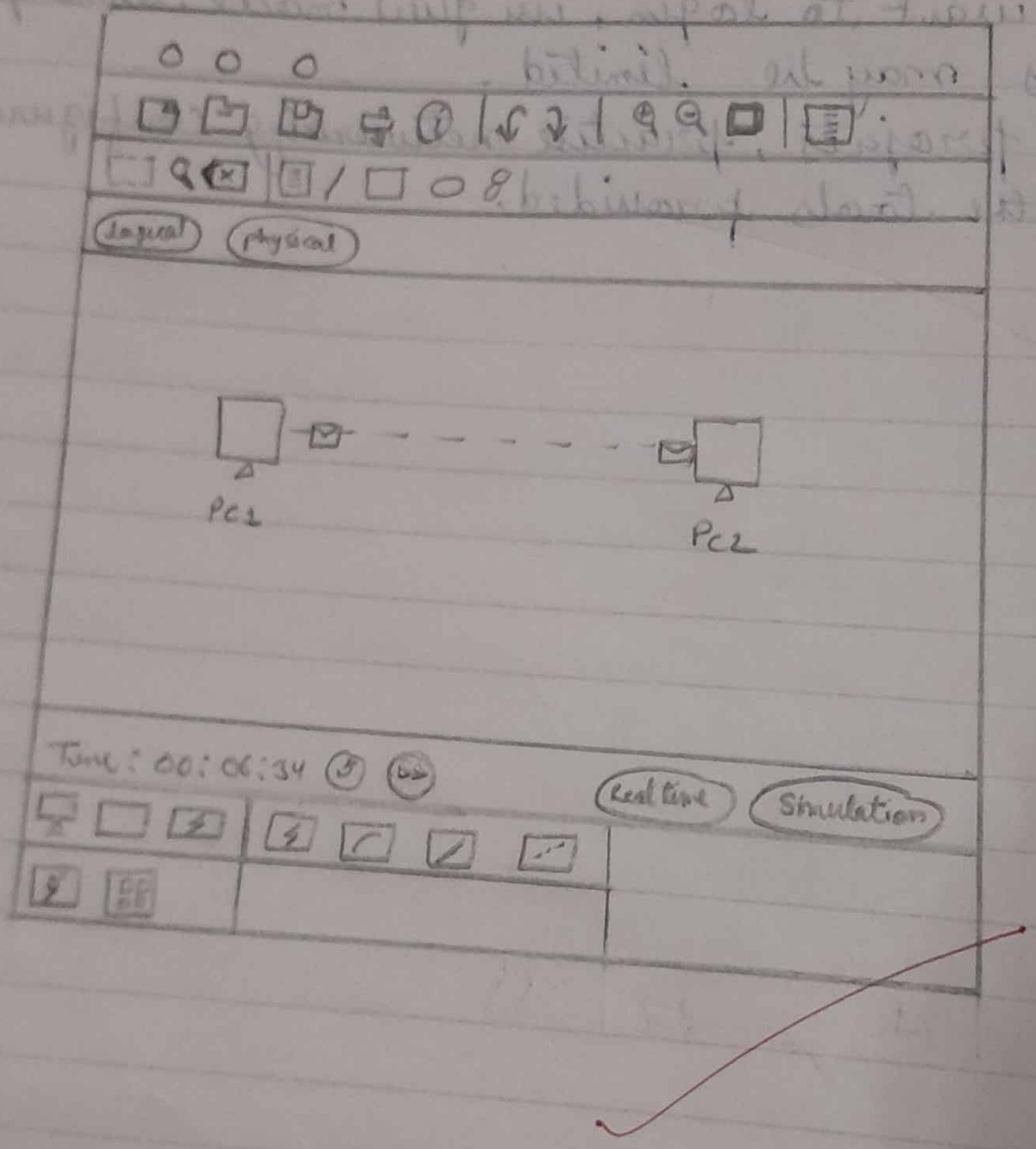
- switch to simulation mode.
- start a ping from PC1 to PC2 and watch the packet traverse.

Troubleshooting tips:

1. check cable type
2. verify IP config.
3. ping test
4. check connection

Teacher's Signature

Cisco Packet Tracer



Date

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Program - 10

Simulate a LAN using hub in packet tracer.

1. Open Packet Tracer
→ Launch Cisco Packet on your computer

2. Add Network Devices
→ Drag and drop a hub.
- from the 'Network Devices' sections, click on Hub.
- Choose a hub and place it on the workspace.

→ Add Pc's:
- from the end devices section drag and drop Pc's onto the workspace.

3. Connect Device to Hub
→ use the copper straight - Through cable.
- click on the cable icon (connection).
- select copper straight through

→ connect
- click on PC's then choose the fast Ethernet port.
- click on the Hub and connect it to an available Ethernet port

→ Repeat for all PC's to connect them to hub.

4. Assign the IP Addresses
→ Go to Each PC
- click on a PC, then click on desktop tab.
- select IP config.

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→ Assign unique IP address to each PC, in the same subnet.

5 Test Connectivity

→ uses the ping tool.

- click on the command prompt on the PC.
- Type: ping 192.168.1.x
- Ensure replies are received.

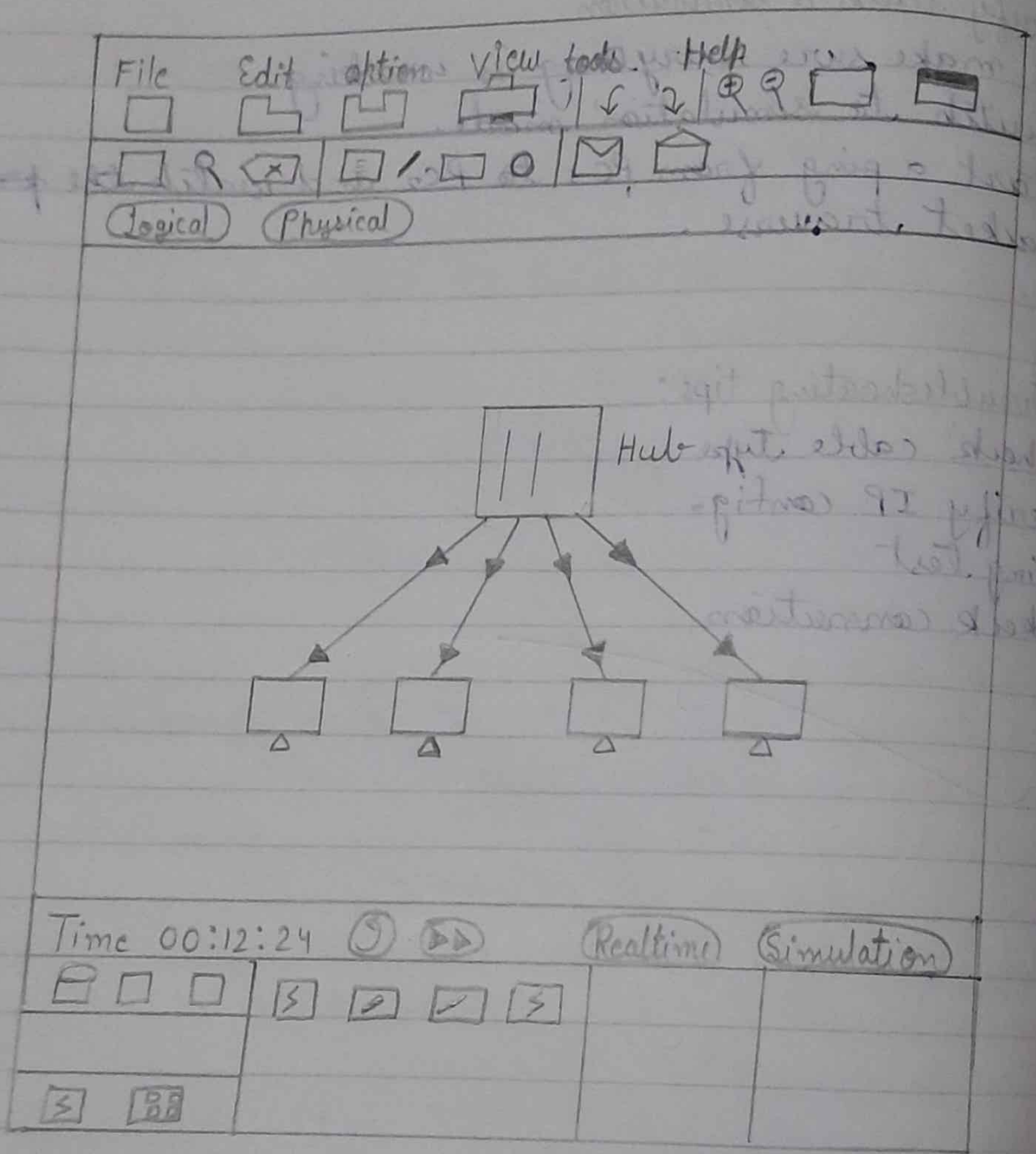
6. Observe Hub Behaviour

→ use the simulation mode.

- switch to simulation mode from the bottom-right corner
- send to ping from one PC to another.
- observe the hub broadcasting the packet to all connected PC's..

Teacher's Signature

Output


File
Edit
option
View
tools
Help
Logical
Physical
Hub
Time 00:12:24
Realtime
Simulation

Date

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Program - 11

Simulate a LAN using switch in Packet Tracer

1. Open Packet Tracer
→ Launch cisco packet tracer on your computer.

2. Add Network Devices
→ Add a switch
- from the Network devices section, select switches.
- Drag and drop a switch onto the workspace.

→ Add Pc's
- from the end devices section, drag and drop multiple PC's onto the workspace.

3. Connect devices to the switch
→ Use the copper straight-through cable
- click on the cable icon (connection)
- Select copper straight-through

→ Connect Pc's to the switch.
- click on a PC, then choose the fast Ethernet 0 port.
- click on the switch and select an available port.

→ Repeat the above step for all PC's.

4. Assign IP Addresses
→ Go to each PC.
- click on a PC, then navigate to the desktop tab.
- open IP config.

Teacher's Signature

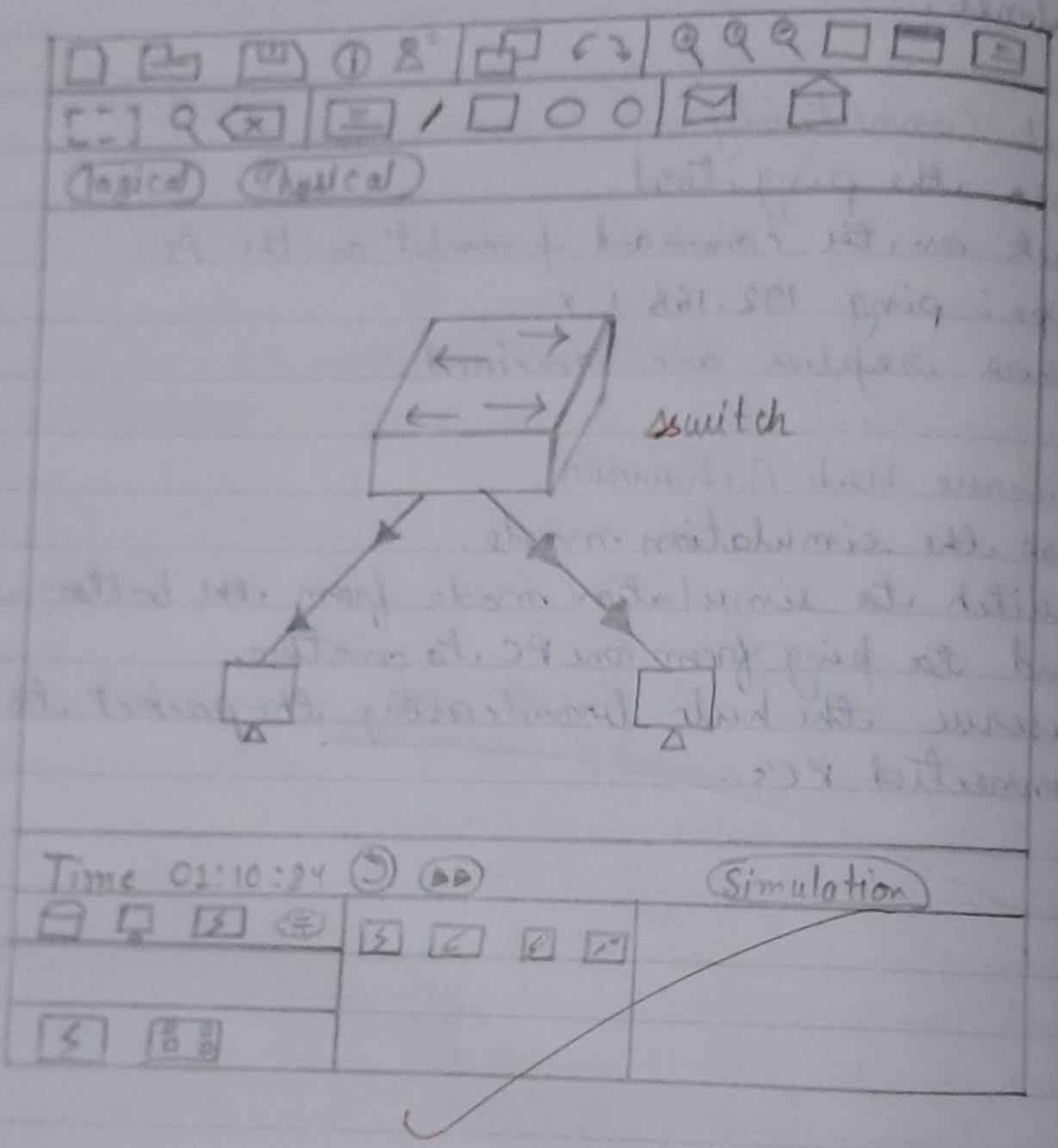
→ Assign an IP address to each PC in the same subnet.

5. Test connectivity
→ Use the ping tool
- open the command prompt from the desktop tab of a PC
- Type the following command: 192.168.1.x.
- Ensure you receive a reply ito verify connectivity.

6. Observe switch behaviour
→ switch to simulation mode.
- click on the simulation mode button.
- send a ping from one PC to another.

→ watch Packet Flow
- Observe how the switch forward packet directly to the destination PC instead of broadcasting them to all connected devices. This is the main difference b/w a hub and a switch.

Output



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Program - 12

Connect a different LANs using router in Packet traces.

1. Open pcket traces
→ Launch cisco packet tracer.

2. Add Network devices
→ Add a router
- from the network devices section, select routers
- Drag and drop a router onto the workspace.

→ Add two switches
- from the network devices, section select switches.
- Drag and drop two switches onto the workspace.

→ Add PC's for each LAN.
- from the end devices section, drag & drop PC's for each LAN.

3. Connect Devices
→ connect PC's to devices
- use copper straight through cable to connect each PC to a switch port.

→ connect switch to the router.
- use copper straight through cable.
- connect switch 1 to the router's Gigabit Ethernet 0/0 port.
- connect switch 2 to the router's Gigabit Ethernet 0/1 port.

4. Assign IP Addresses.

Teacher's Signature

→ configure LAN1
→ Go to each PC connected to switch 1.
• Open the IP config. under the desktop tab.
• Assign the following
- IP Addresses to PC's: 192.168.0.x.
- subnet mask: 255.255.255.0
- Default Gateway: 192.168.1.1.

→ config. LAN2
→ Go to each PC connected to switch 2
• open IP config. under the desktop tab.
• Assign the following
- IP Address: 192.168.2.x.
- subnet make: 255.255.255.0
- Default Gateway: 192.168.2.1.

5. Configure the Router
→ click on router to open the configuration menu.
→ Go to CLI tab and follow these steps.
1 Enter privileged Exec mode
Enable
2 ~~ena~~ enter global config. mode
configure terminal
3 configure the first interface (LAN1).
interface gigabit Ethernet 0/0
ip address 192.168.1.1 255.255.255.0

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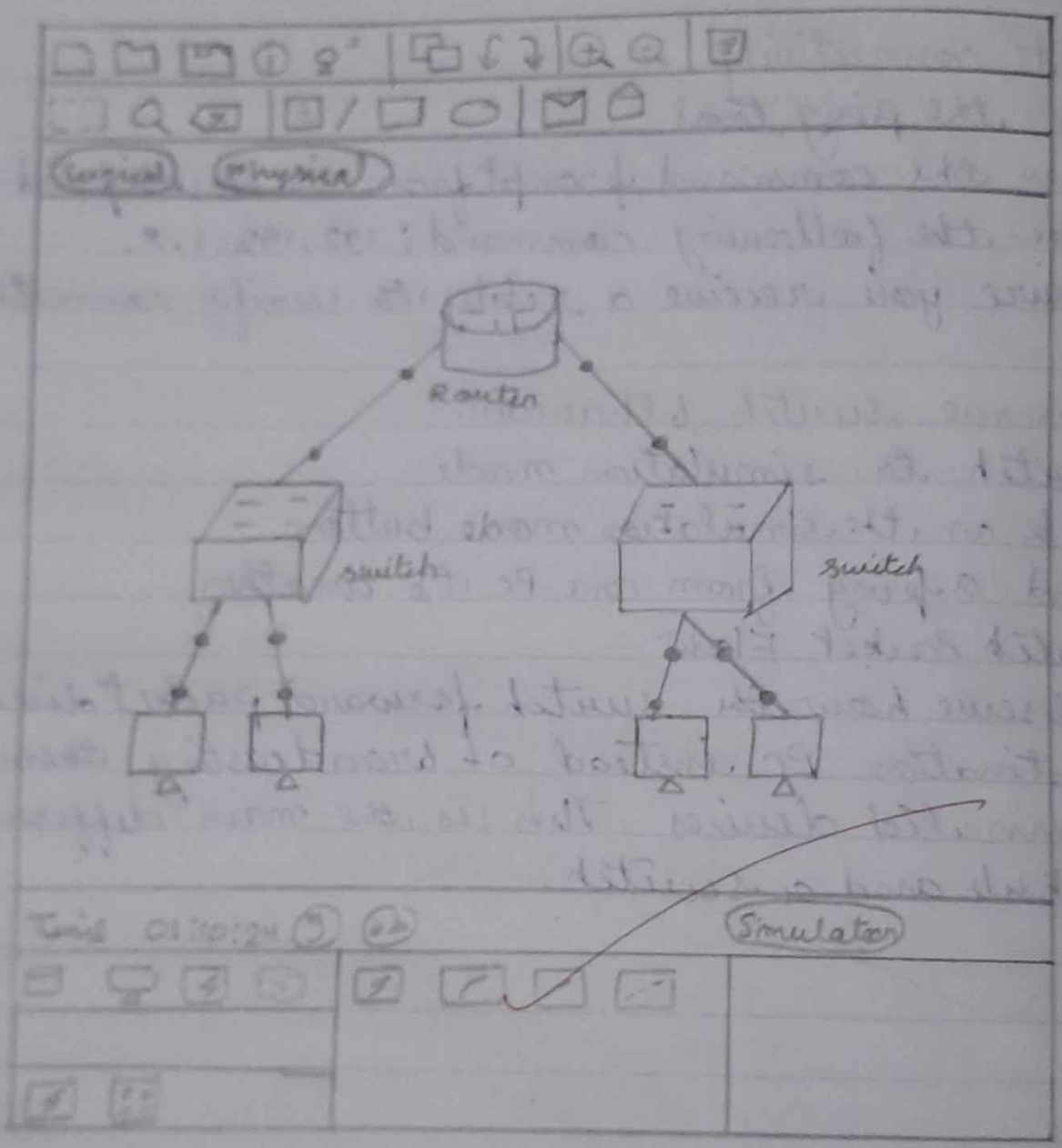
no shutdown
EXIT

4. configure the second interface (LAN2)
interface gigabitEthernet 0/1
IP address 192.168.8.2.1 255.255.255.0
no shutdown
exit

5. Exit configuration mode and save the config.
end
write memory

6. Test connectivity
→ Ping within each LAN
• Open the command prompt on any PC and test connectivity to other PC's within the same LAN using the ping command.
→ Ping between LAN.
• Test connectivity b/w PC's in different LAN.
• IP configured correctly, the ping should succeed.

Teacher's Signature


logical
physical
Router
switch
switch
Simulator

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Program - 13.

connect two different LAN using repeater in packet tracer
The cisco packet tracer, a repeater is not typically used to connect two different LAN as repeater are designed to extend the physical length of a network rather than provide inter-network communication however to simulate the connection of two LAN with a repeater follow these steps:

1. Open packet tracer
→ Launch cisco pack tracer.

2 Add network devices
→ Add two switches
- from the network devices section, select switches
- Drag and drop two switches onto the workspace.

→ Add a repeater
- from the network device section, select hub.
- Drag and drop a hub onto the workspace

→ Add PC's for each LAN.
- from the End devices section, drag & drop multiple PC's for each LAN.

3. Connect Devices
→ connect PC's to their respective switches
- use copper straight-through cable to connect each PC to a switch port.

Teacher's Signature _____

→ connect switches to the repeater.
- use copper-straight through cable to connect.
- switch 1 to one port of the hub/repeater.
- switch 2 to another port of the hub / repeater.

4. Assign IP Addresses
→ Configure IP Address for PC's in LAN 1:
- Go to each PC connected to switch 1.
- open desktop > IP configuration.
- Assign:

a. IP Address: 192.168.1.x
b. subnet mask: 255.255.255.0
c Default Gateway: leave empty or assign if needed for routing beyond this LAN.

→ Configure IP Address for PC in LAN 2:
- Go to each PC connected to switch
- open desktop > IP config.
- Assign:

a. IP Address: 192.168.1.x.
b. subnet mask: 255.255.255.0
c. default gateway: leave empty or assign if needed.

5. Test connectivity
→ Ping within the same switches.
- from a PC in LAN 1, ping another PC in the same LAN.

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→ Ping across switches.

- from a PC in LAN1, ping a PC in LAN2.
- The repeater should forward the packet b/w switches, enabling communication.

Mahima
07/12/24

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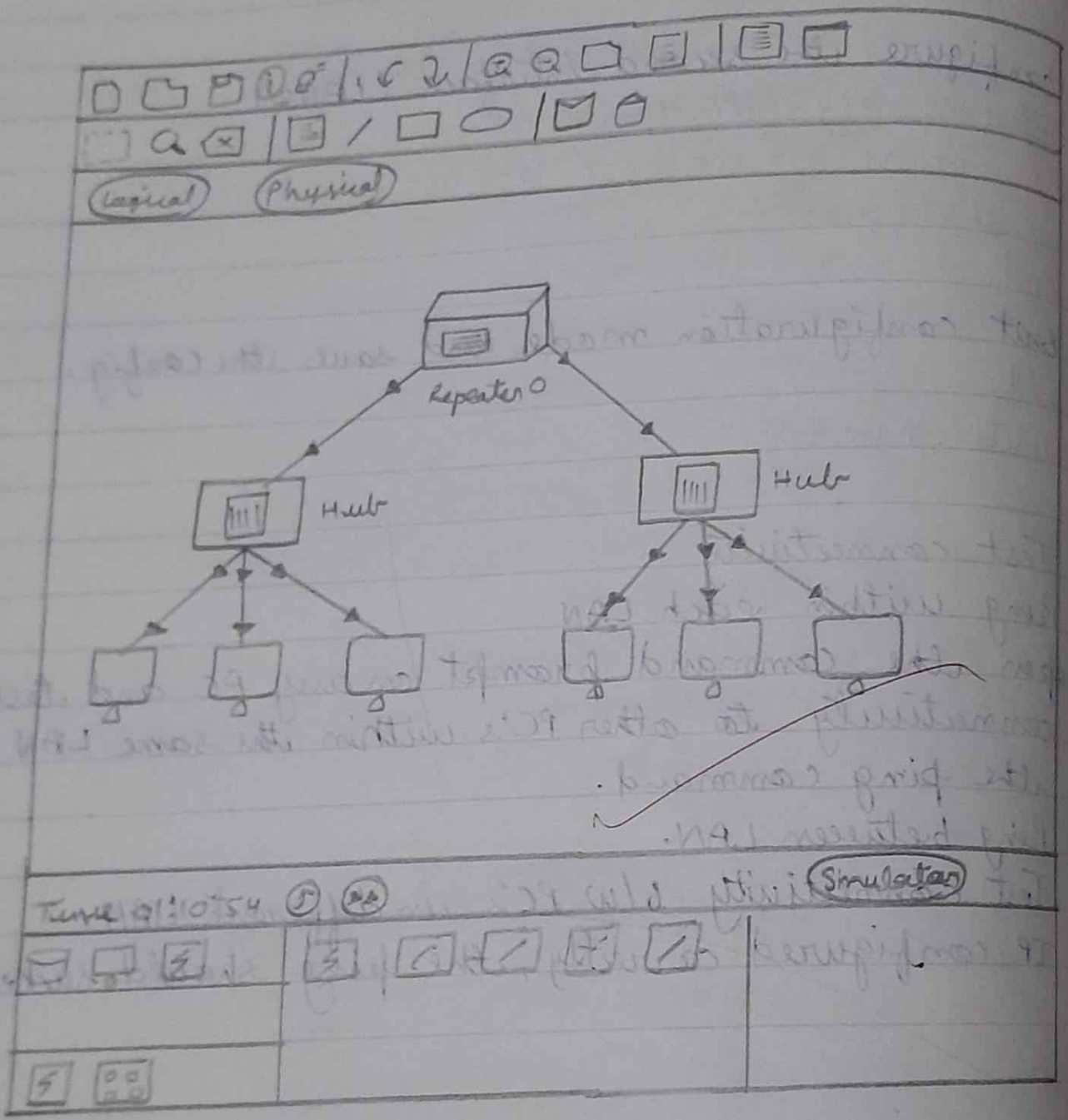
Logical
Physical
Repeater
Hub
Hub
Time 01:10:54
Simulation