Batch: A3 **Experiment Number:8**

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Aim of the Experiment: Network Design using Simulation software

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Program/ Steps:
Download and Install Cisco Packet Tracer:

- Visit the Cisco Networking Academy website to download and install the software.

Open Cisco Packet Tracer: Launch the application.

Create a New Project: Click on “File” > “New” to start a new project.

Add Devices:

- From the bottom left, drag and drop the following devices onto the workspace:
    - 1 Router
    - 1 Switch
    - 1 Access Point
    - 10 PCs (representing workstations)
    - 1 Printer
    - 1 NAS

Connect Devices:

- Use the Copper Straight-Through cable to connect:
    - Router to Switch
    - Switch to PCs
    - Switch to Printer
    - Switch to Access Point
    - Switch to NAS

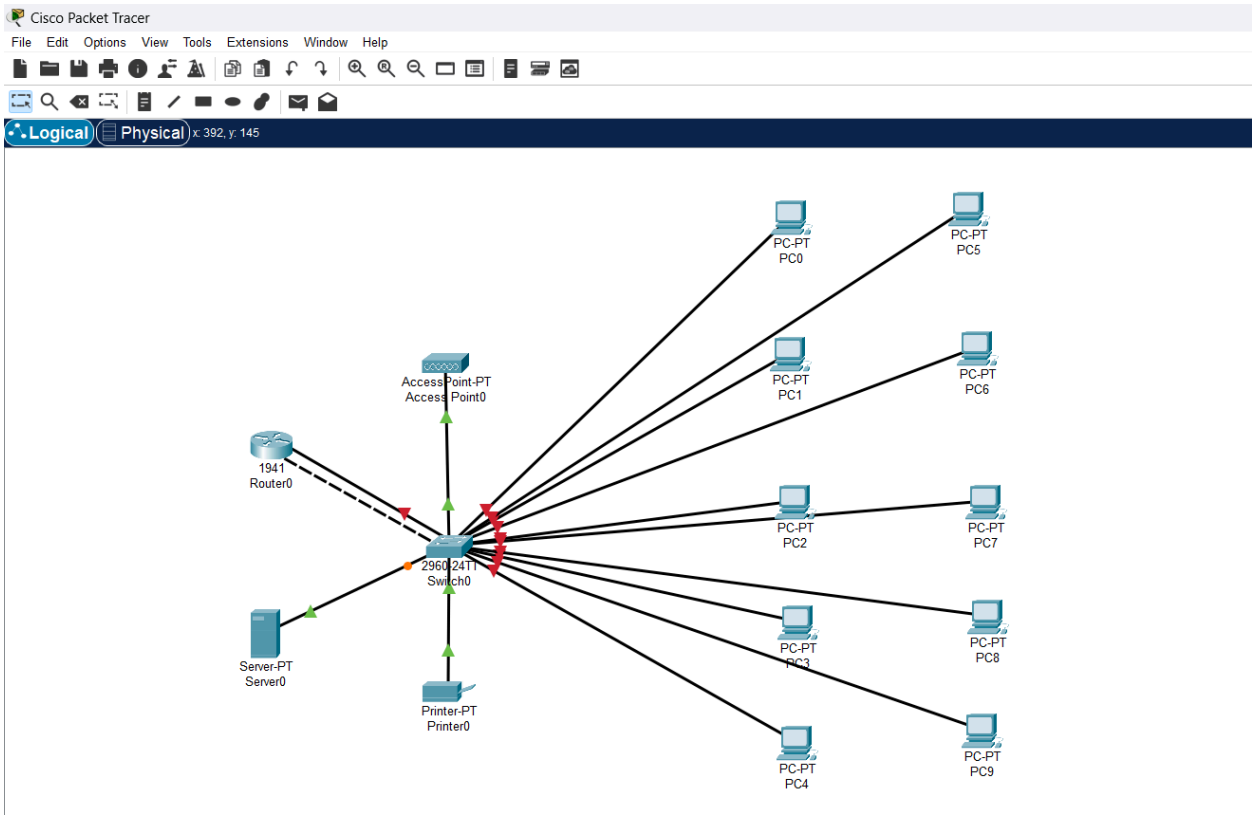
Label Devices: Click on each device and use the “Label” tool to name them (e.g., Router, Switch, PC1, Printer, NAS).

Save the Project: Click on “File” > “Save As” to save your project.

Export Diagram: If you need a PDF, take a screenshot or use the “Export” feature if available.

Review: Ensure all connections are clear and correctly labeled

Output/Result:



Problem Statement

Design a network for a small office environment consisting of 10 employees. The network should support secure internet access, facilitate internal communication, and enable file sharing. The architecture must include a router for internet connectivity, a switch to connect multiple devices, and an access point to provide wireless connectivity. Additional components such as a networked printer and a network-attached storage (NAS) device should also be included for enhanced functionality. The design should ensure efficient operation and security for the office network.

Outcomes:

CO3: Build the skills of subnetting and routing mechanisms.

Conclusion (based on the Results and outcomes achieved):

Successfully designed the network using Cisco Packet Tracer.

References:

Books/ Journals/ Websites:

- Cisco Packet Tracer