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Department of Electronics and Telecommunication Engineering

Semester	T.E. Semester VI – EXTC Engineering
Subject	Computer Communication Network (CCN)
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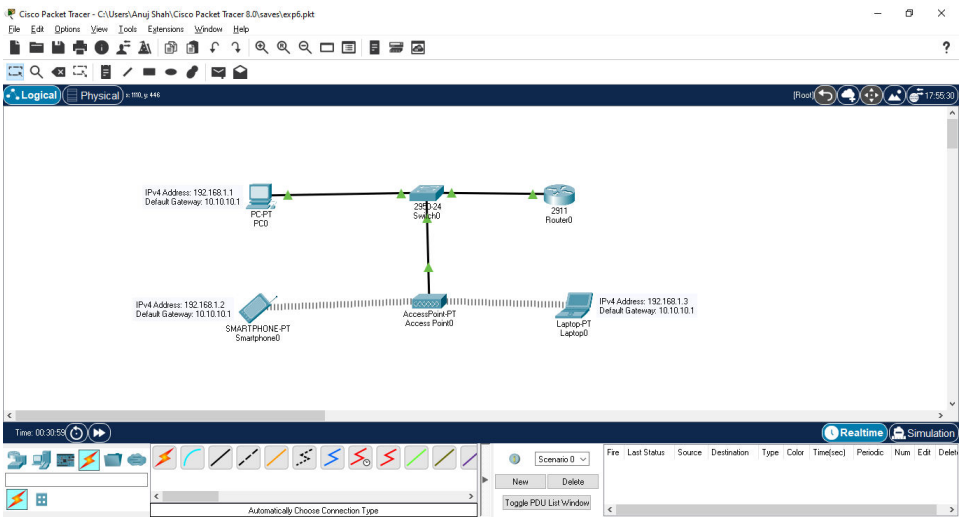
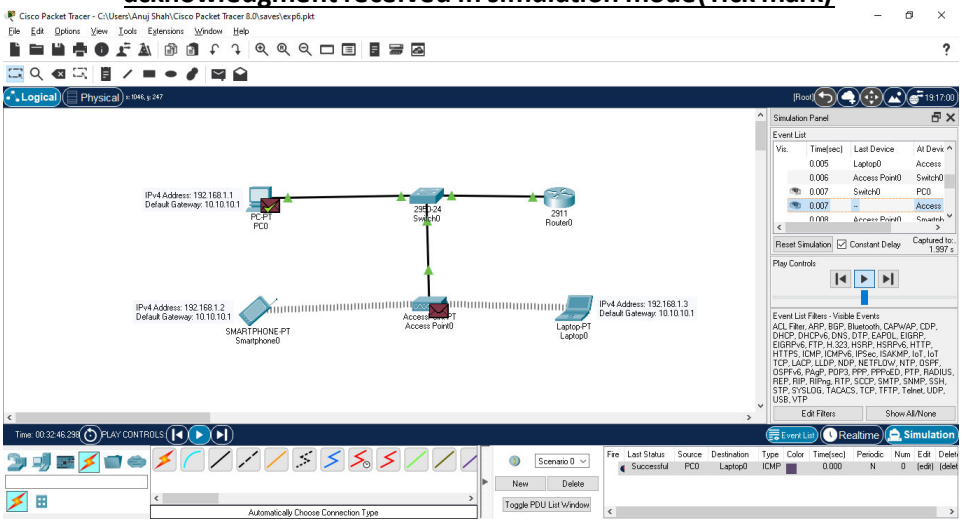
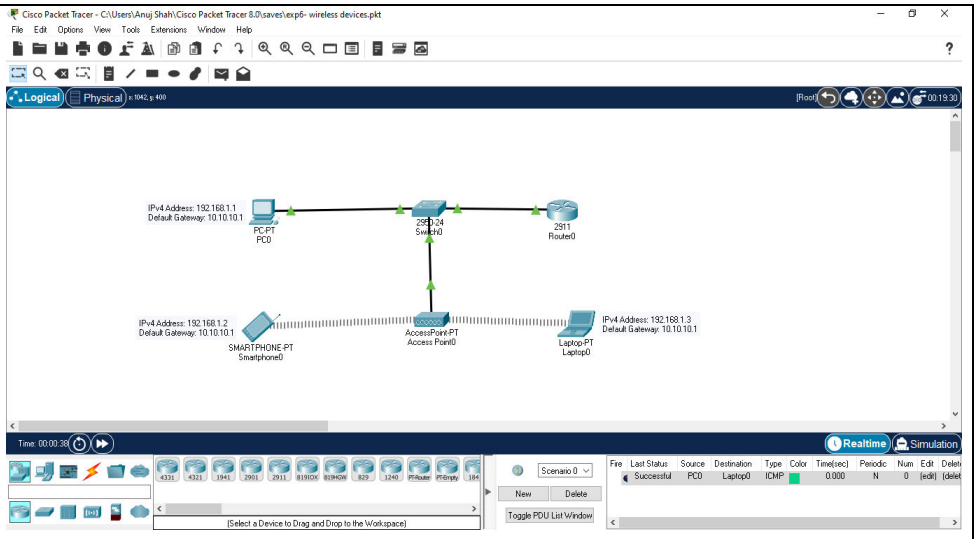
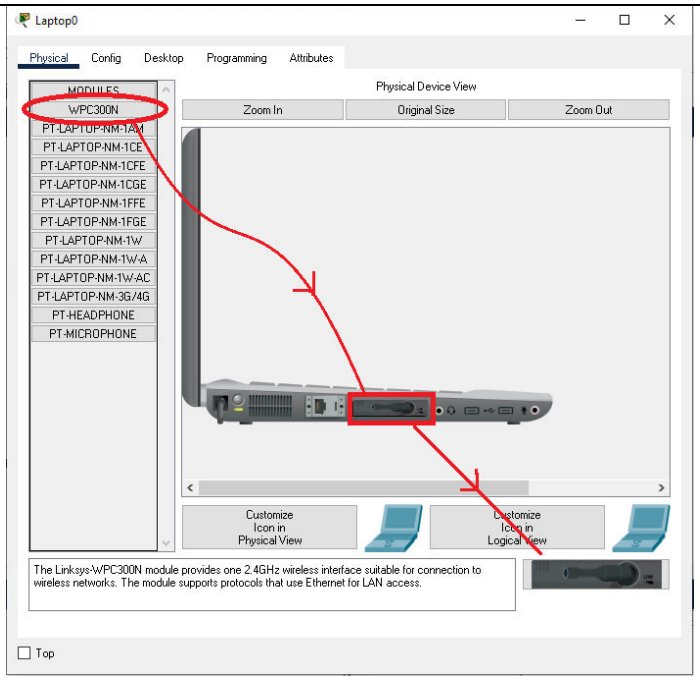
Grade and Subject Teacher's Signature		

Experiment Number	06	
Experiment Title	To set up network using wired and wireless devices using CISCO packet tracer	
Aim	To set up a network using wired and wireless devices using CISCO packet tracer Establish transmission of packets from one node to the other node and verify its successful transmission	
Resources / Apparatus Required	Hardware: Internet Connected PC	Software: Cisco Packet Tracer
Theory:	Packet Tracer is a cross-platform visual simulation program designed by Cisco Systems that allows users to create network topologies and imitate modern computer networks. The software allows users to simulate the configuration of Cisco routers and switches using a simulated command line interface. Packet Tracer makes use of a drag and drop user interface, allowing users to add and remove simulated network devices as they see fit. Various devices can be connected in Cisco packet tracer using Access point(AP).The AP needs to be configured with name and WEP Key and all the devices should be connected using these credentials for wireless access	
Procedure :	1. Open cisco packet tracer. 2. Select the required end devices such as PC, Laptop, router 3. Select the required wireless devices such as Laptop and smartphone etc 4. Connect Network using automatic connections 5.Configure the AP giving the name and WEP key 6. Configure the router and the devices for wired and wireless connections 7.Observe that the entire network has turned from red to green and also the wireless connection has been established 7. Choose the packet from tools and select its source and destination.. 8. Click Start simulation. 9. Packet will be transmitted from source to destination and response will be shown as successful	

Screenshots of the Output(Response)	**Network with wired and wireless connections active**  **Successful transmission of packet from source to destination with acknowledgment received in simulation mode(Tick mark)**  **In real time mode message of successful tranmission of packet between two networks**

	
Conclusion:	In this experiment, we learned how to set up wireless networks, using an AP (access point). We also learned about the SSID (service set identifier) and WEP (wired equivalent privacy) key.
Post Lab Questions:	1. What is AP in cisco packet tracer? 2.Briefly explain how the Laptop in the experiment was configured for wireless connection. **Access point** A Wireless Access Point (WAP) is a networking device that allows wireless-capable devices to connect to a wired network. Instead of using wires and cables to connect every computer or device in the network, installing WAPs is a more convenient, more secure, and cost-efficient alternative. Source: "Set up a Wireless Network using a Wireless Access Point" by CISCO https://www.cisco.com/c/en/us/support/docs/smb/wireless/cisco-small-business-100-series-wireless-access-points/smb5530-set-up-a-wireless-network-using-a-wireless-access-point-wap.html **Laptop configuration**



Firstly, we turn off the laptop. Then, we remove its old module (highlighted in the red square). We then replace it by a new, wireless module (WPC300N).