Experiment - 3

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Aim   :   To setup and configuration of wireless access point (AP)

#Theory

➤ Wireless

The word wireless is dictionary defined as "having no wires". In networking terminology, wireless is the term used to describe any computer network where there is no physical wired connection between sender and receiver, but rather the network is connected by radio waves and/or microwaves to maintain communications. Wireless networking utilizes specific equipment such as NICs, APs and routers in place of wires (copper or optical fiber) for connectivity.

Benefits of wireless

Immersive experiences on mobile are becoming the new normal. Add the explosion of IoT and mobile devices, and not only does your network need to be secure, it must be fast and reliable. With access points and wireless controllers that support the Wi-Fi 6 standard, Cisco provides an intent-based architecture to meet customer expectations and scale for growing business demand.

Comprehensive security

Cisco wireless has features that monitor the network and locate and mitigate security threats, giving you peace of mind.

Data-optimized intelligence

The intelligence and data gathered by Cisco products helps optimize your network and boost its efficiency.

Built for IoT

Through classification and segmentation, Cisco keeps IoT devices separate from your enterprise network.

Reliability beyond the standard

Cisco support for Wi-Fi 6 and new technologies allows for better experiences and fewer interruptions.

➤ Wireless Access Point (AP)

A wireless access point (wireless AP) is a network device that transmits and receives data over a wireless local area network (WLAN). The wireless access point serves as the interconnection point between the WLAN and a fixed wire network. Conceptually, an AP is like an Ethernet hub, but instead of relaying LAN frames only to other 802.3 stations, an AP relays 802.11 frames to all other 802.11 or 802.3 stations in the same subnet. When a wireless device moves beyond the range of one AP, it is handed over to the next AP.Devices with systems that exploit J2ME are already available and are expected to become even more available in the next few years.
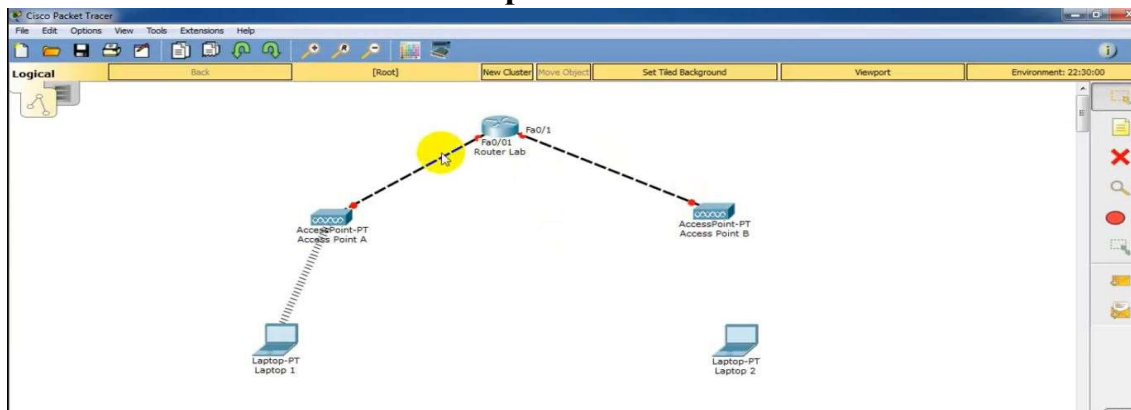
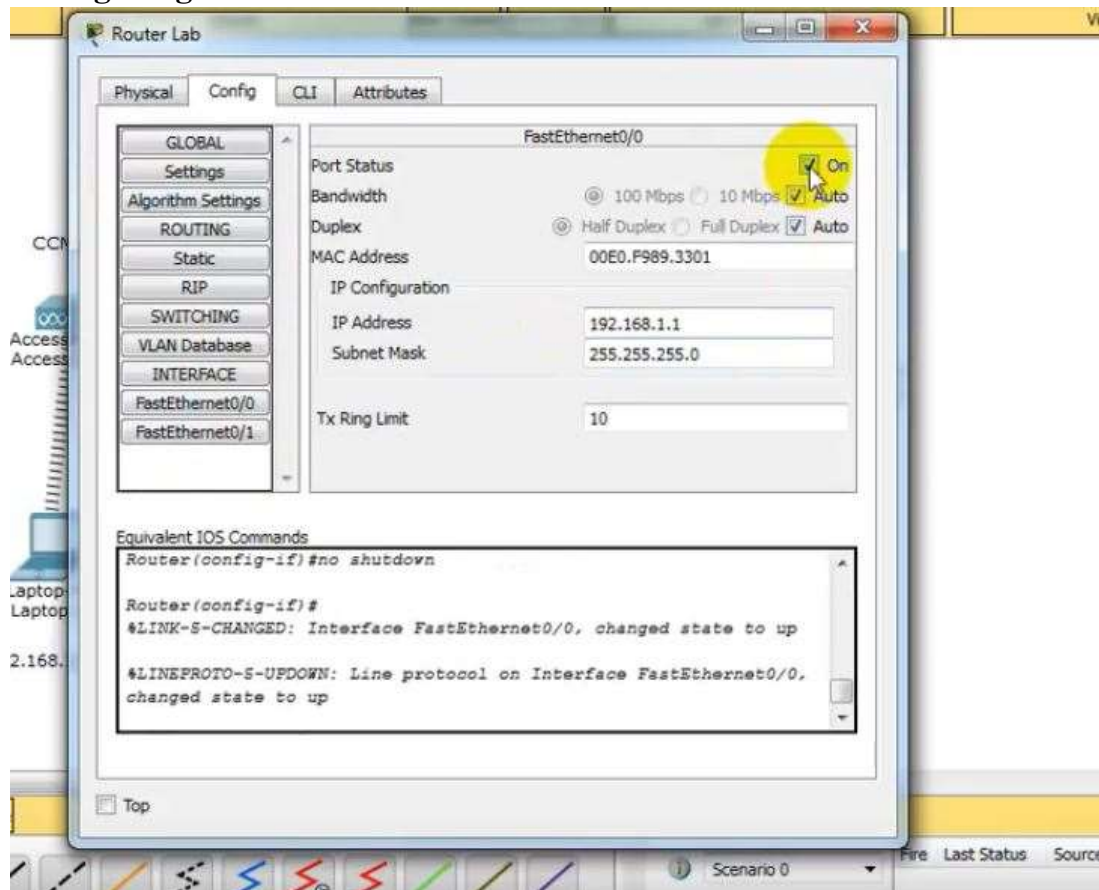## ➢ Placing router, access point, laptop devices
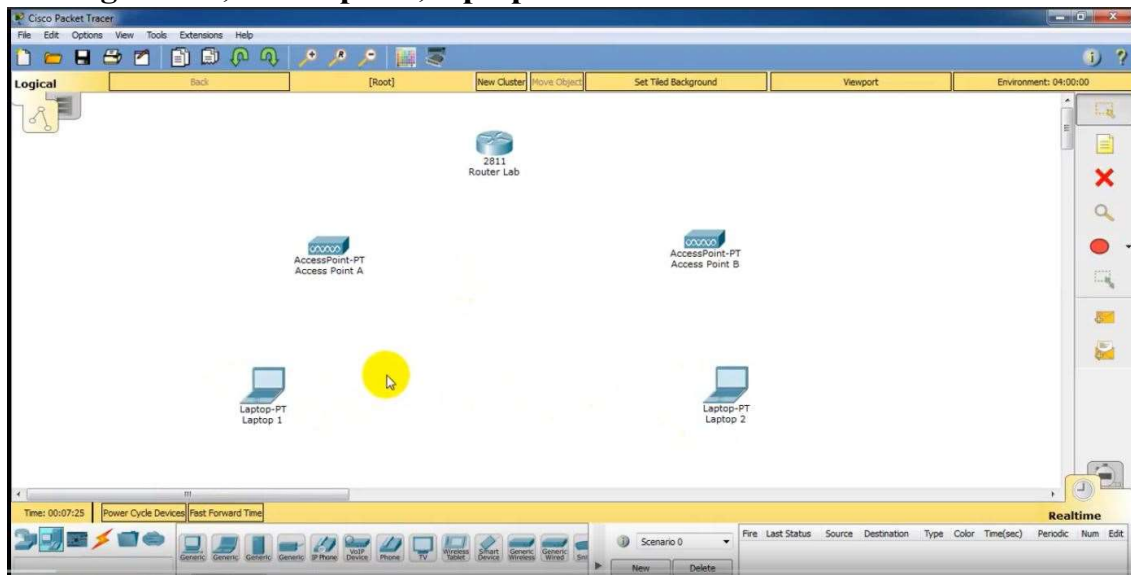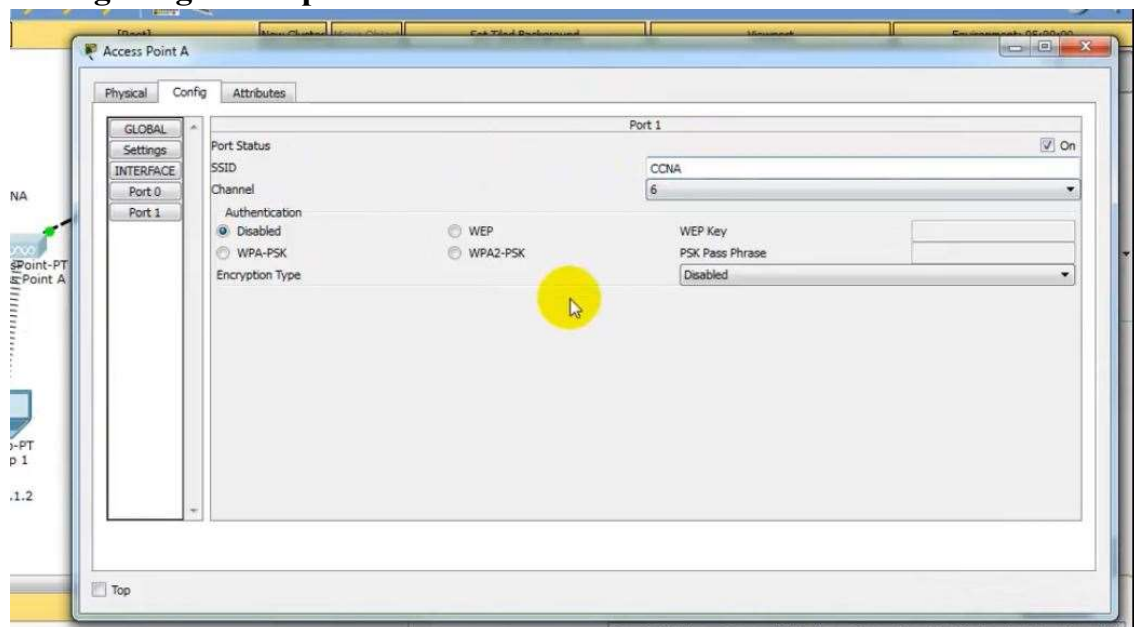

➢ Configuring laptop network interfaces
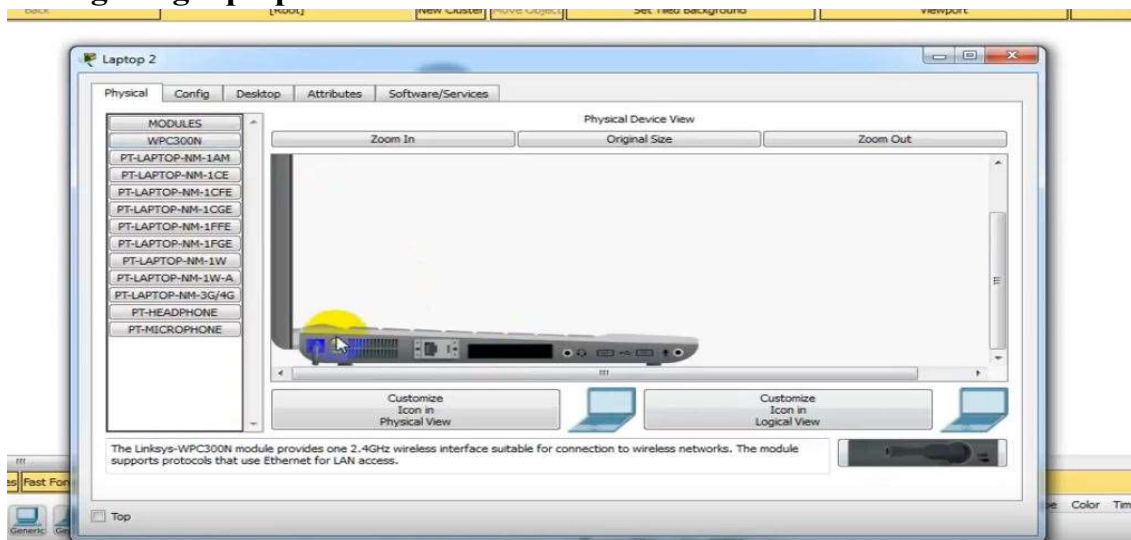
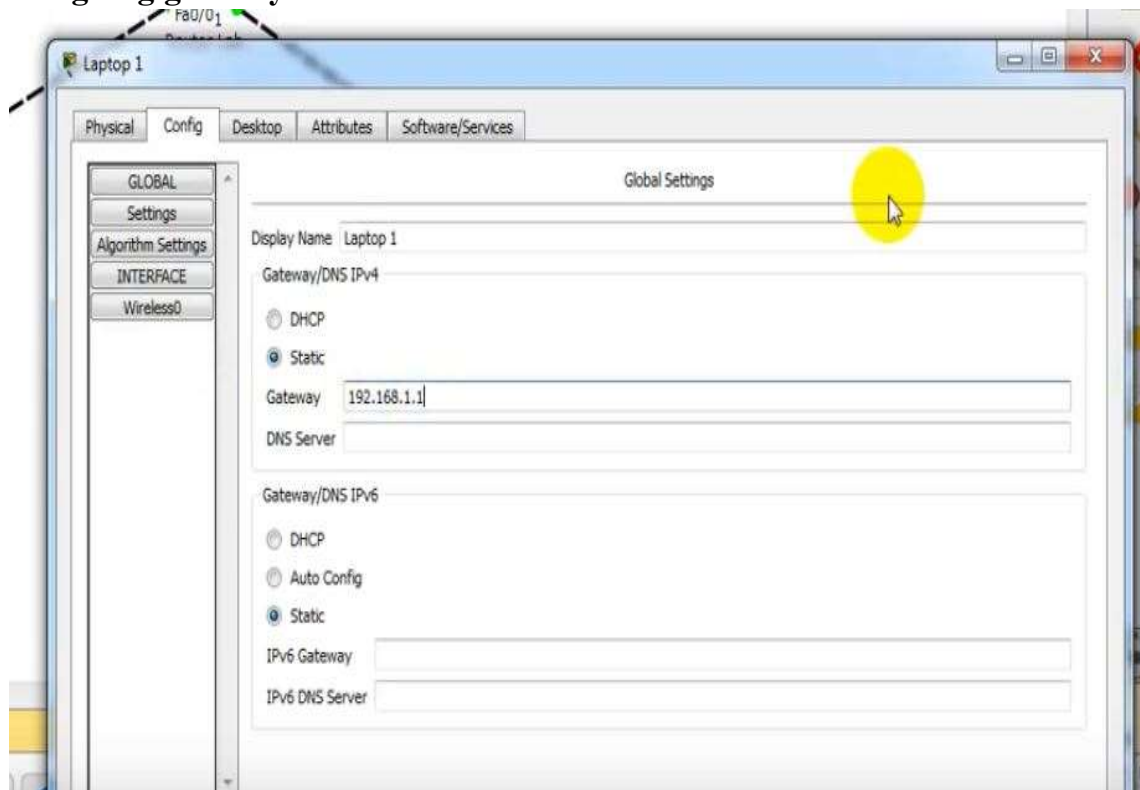## ➢ Connection of router with access point

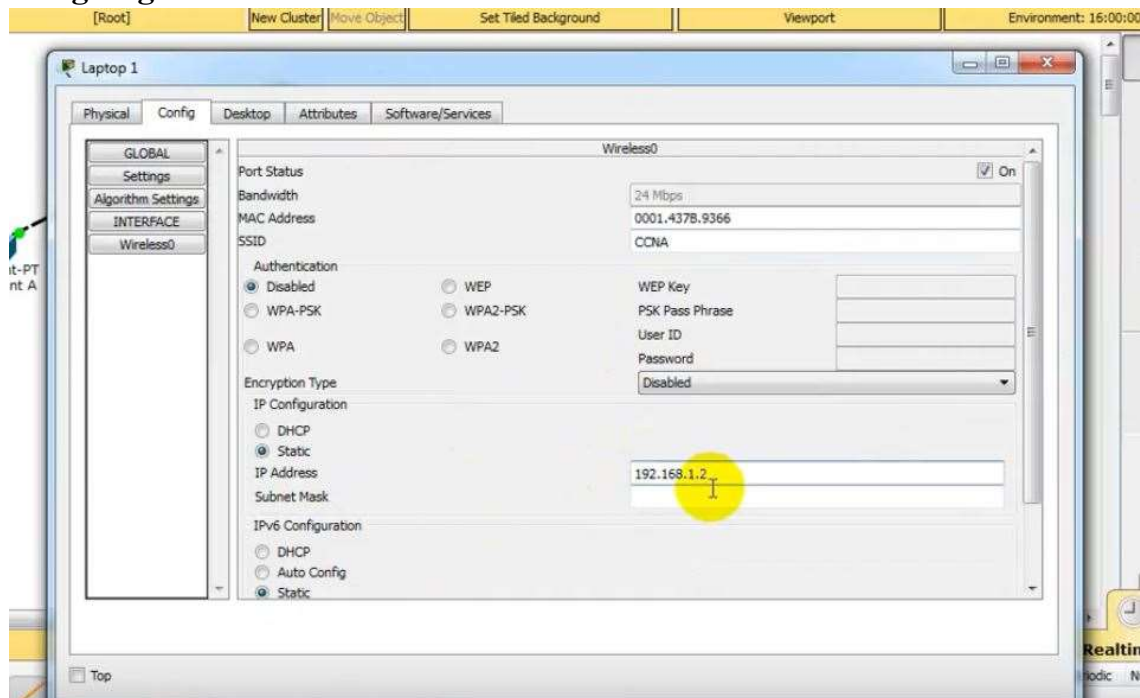## ➢ Configuring router fast ethernet's
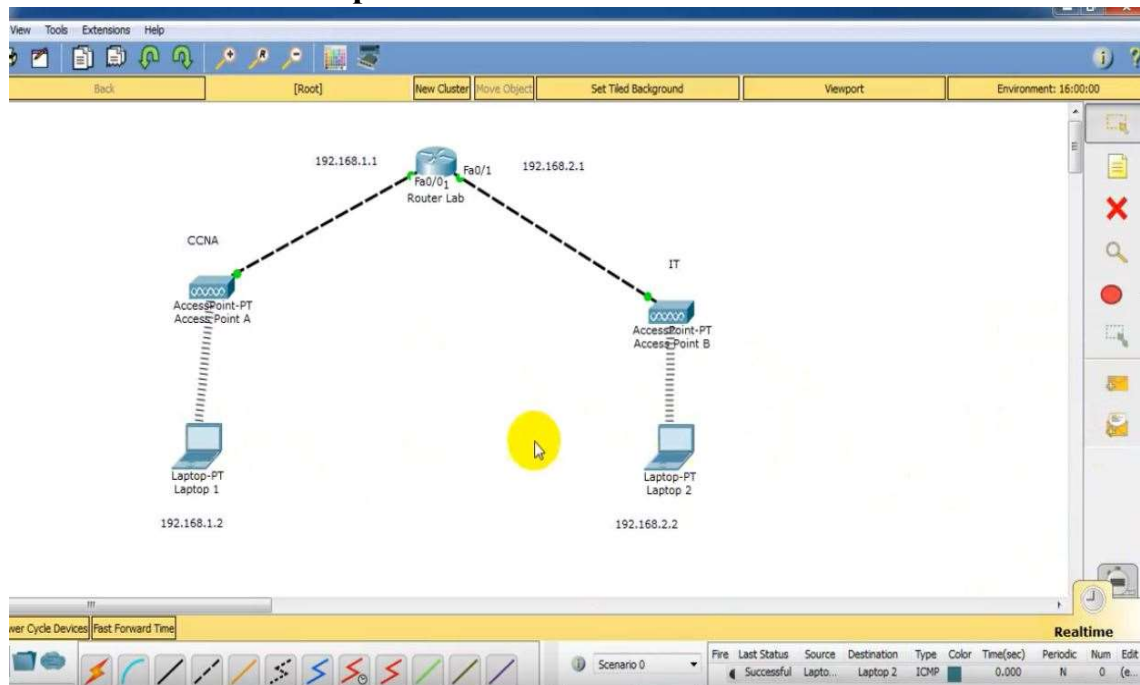

➢ Configuring access point

➤ **Assigning gateway to end devices**

➤ **Assigning ssid to end device**

> **Simulation of network packet transfer from one device to another**

> **Illustration of ping**