

Lab 3

Constructing Wireless Network

1. What is the meaning of Wireless Connection?

Wireless is an adjective that describes any **network or device that does not need a wired connection to transmit information or perform tasks**. Instead of physical wires (copper or optical fiber), wireless networks and devices use light waves or radio frequencies to function.

2. Wireless Networks

Wireless networks use radio waves to connect devices such as laptops to the Internet, the business network and applications. When laptops are connected to Wi-Fi hot spots in public places, the connection is established to that business's wireless network.

There are four main types of wireless networks:

- **Wireless Local Area Network (LAN):** Links two or more devices using a wireless distribution method, providing a connection through access points to the wider Internet.
- **Wireless Metropolitan Area Networks (MAN):** Connects several wireless LANs.
- **Wireless Wide Area Network (WAN):** Covers large areas such as neighboring towns and cities.
- **Wireless Personal Area Network (PAN):** Interconnects devices in a short span, generally within a person's reach.

Wireless Devices

There are many types of wireless devices such as smartphones, tablet, WIFI computers, and WIFI printers. All wireless devices use wireless media to send and receive data

Aim of This Lab

- The aim of this Lab is to show how to construct wireless network and how to configure wireless devices using cisco packet tracer.

- After this Lab, the Student can know how to work with wireless networks and how to configure it by using cisco packet tracer.

Experiment Procedure

1. Design the network which consist of

- a) PC.
- b) Wireless Router.
- c) Wireless Access Point.
- d) Laptop.
- e) Tablet.
- f) Smartphone.

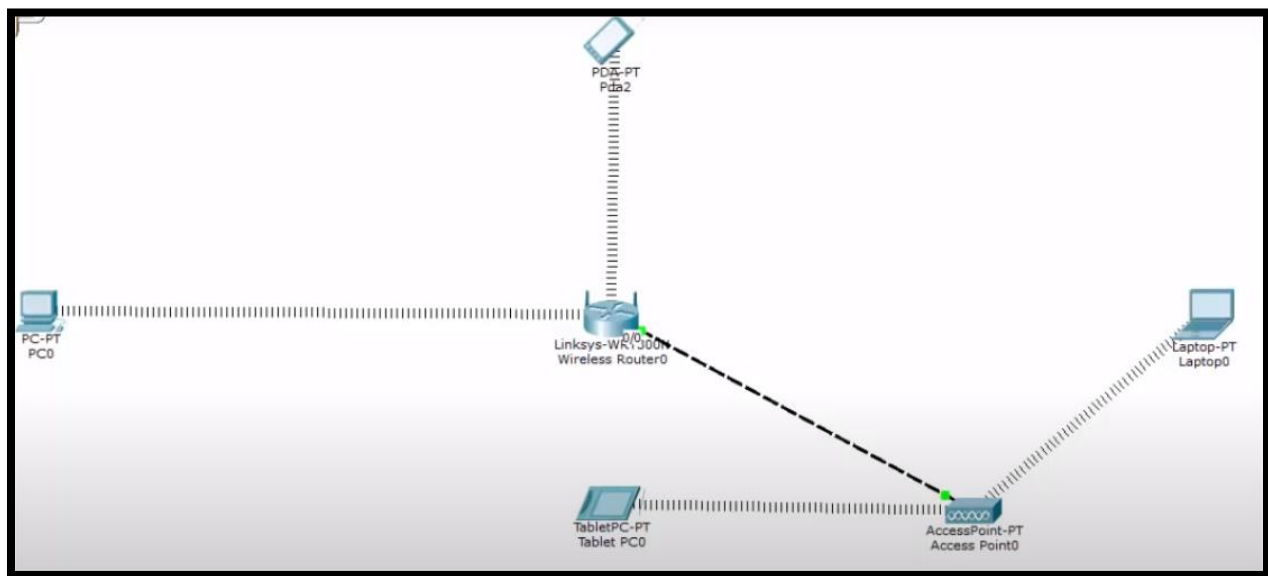


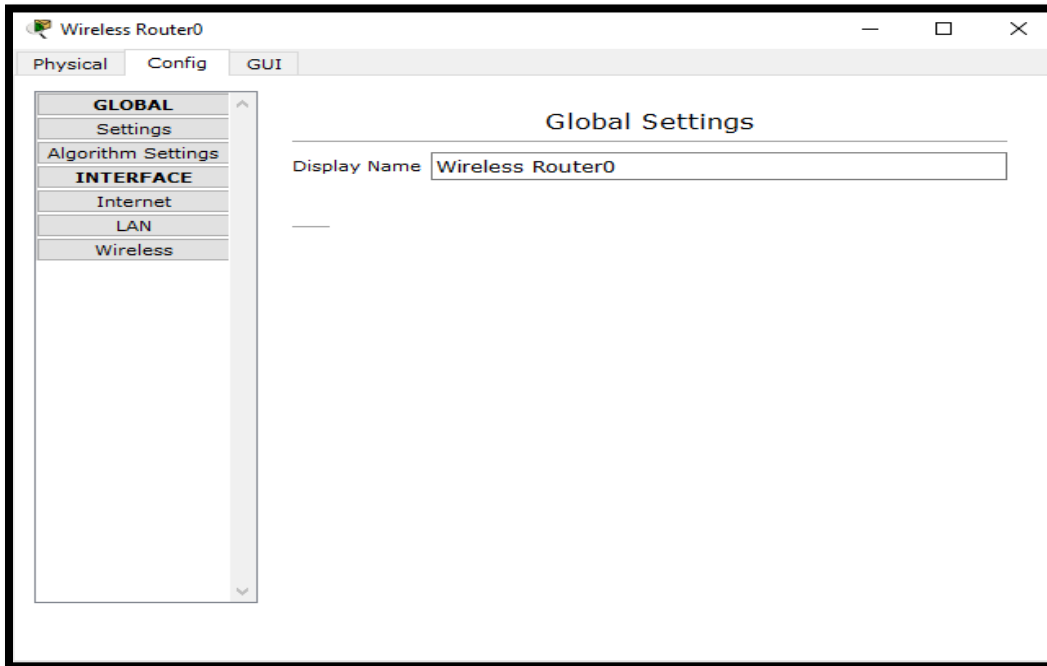
Figure 1

Requirements:

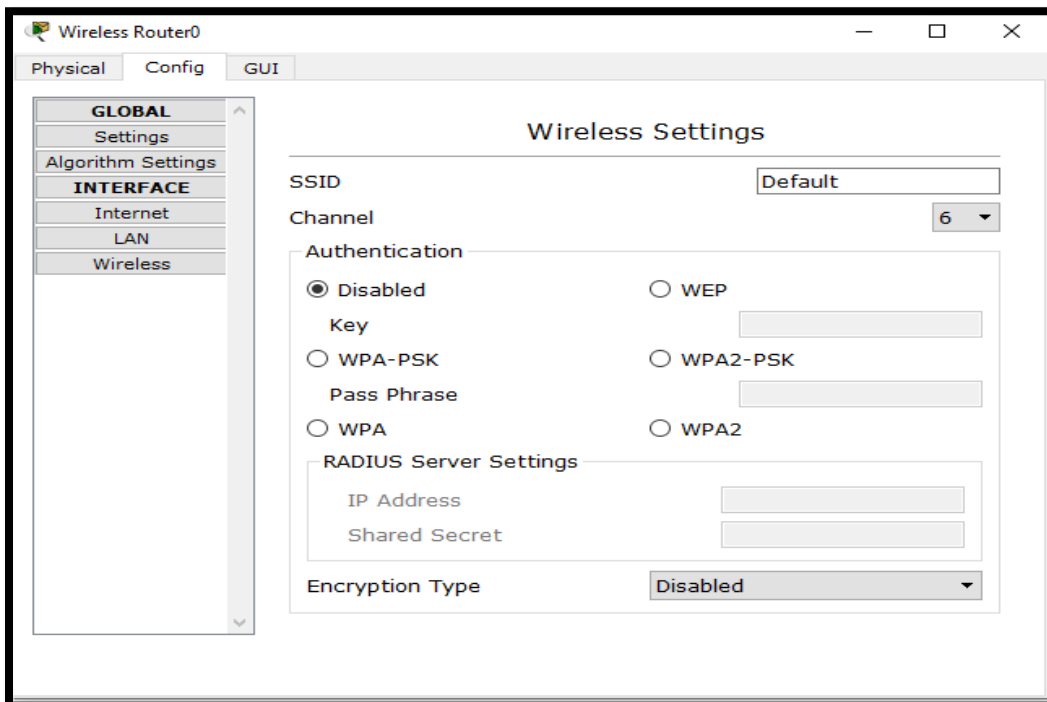
1. Connect laptop to the access point.
2. Connect tablet to the access point.
3. Connect smartphone to the router.
4. Connect the PC to the router using wire.

1. Configure the wireless router

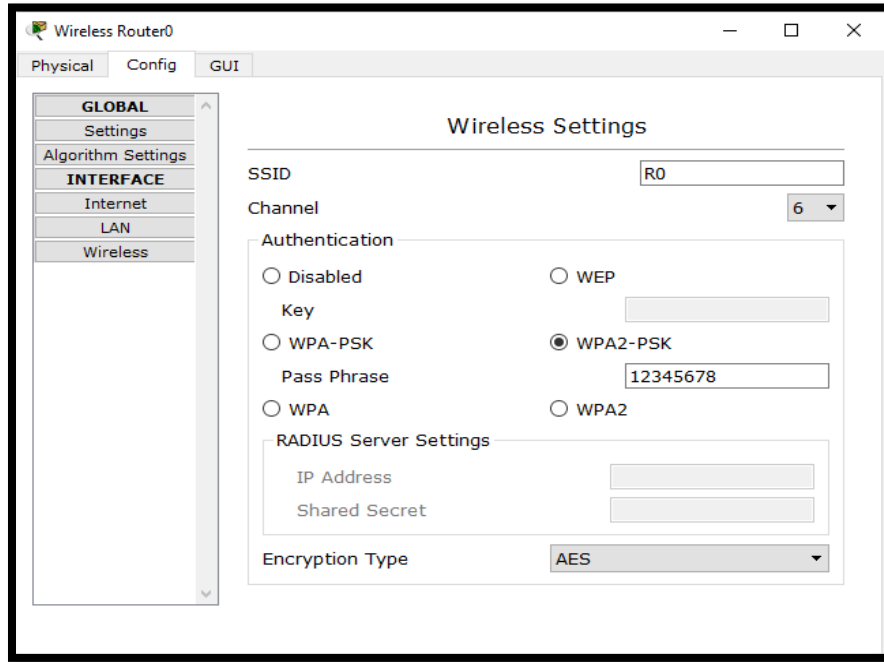
- Click on the router and go to **Config**.



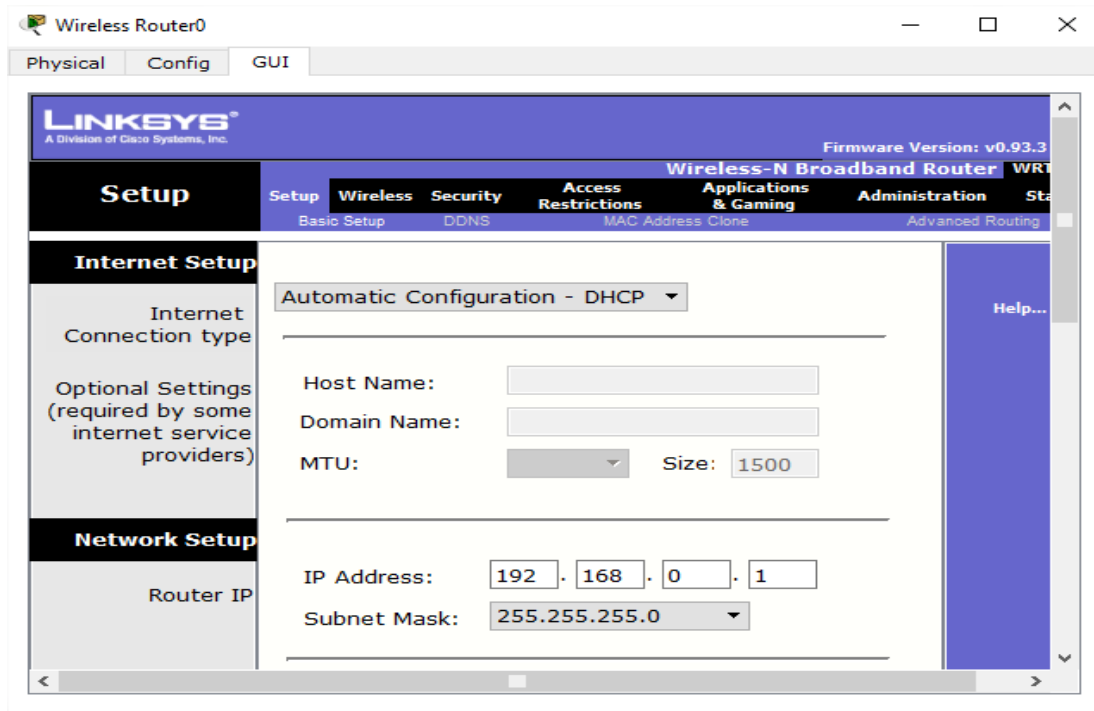
- Select Wireless form the left side menu



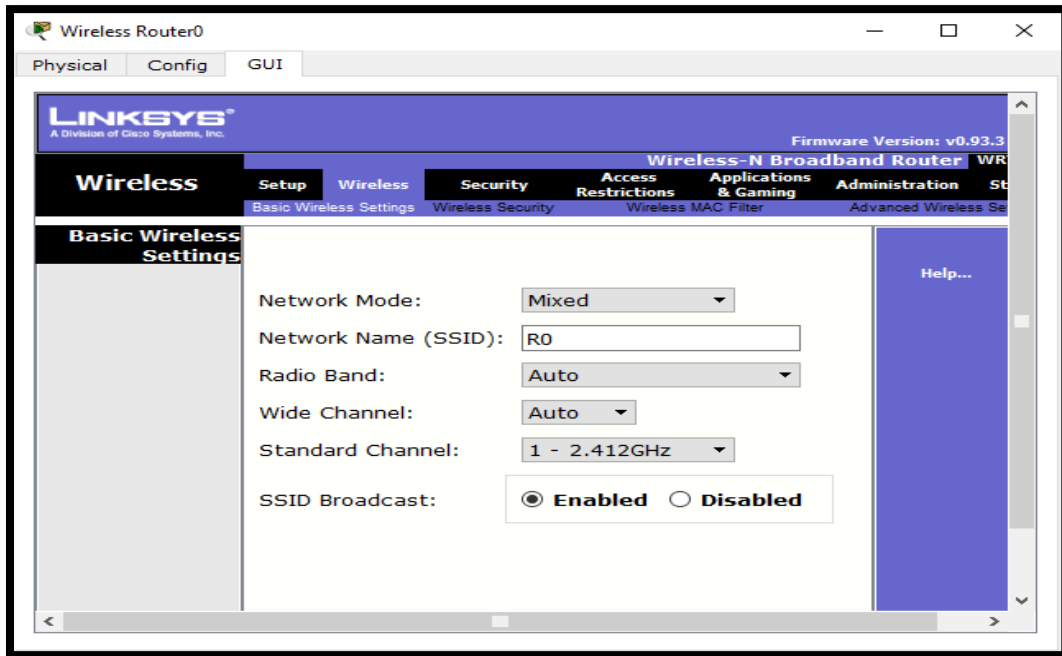
- a) Give name to the SSID of the router.
- b) Select the security method
- c) Give password
- d) Remove the screen



- **Select the GUI from the router Main Menu as shown below**

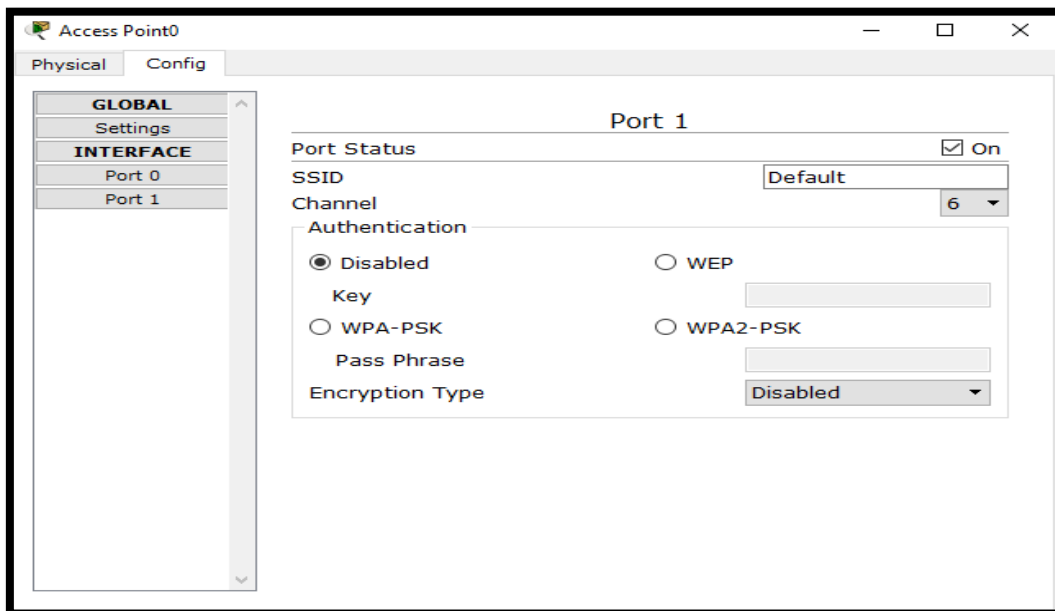


- a) From the **SETUP** make the DHCP Auto as show up
- b) From the **WIRELESS** make the broadcast enable as shown below
- c) Go to the end and press save



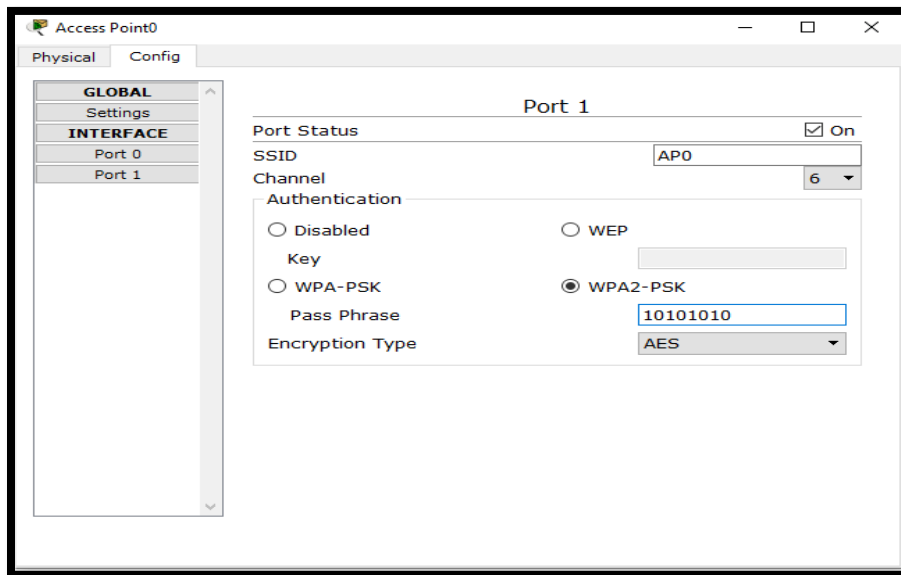
2. Configure the Access Point

- Click on the access point
- From the top menu select the Config
- From the left side menu select port 1



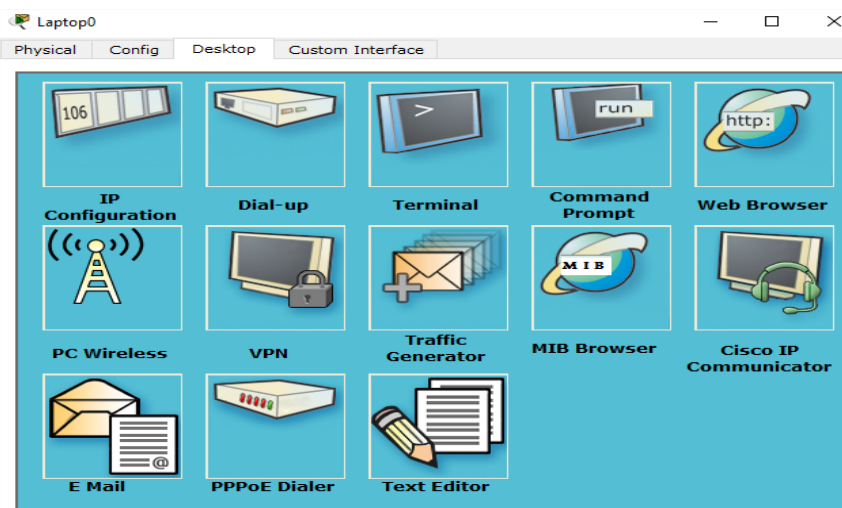
On Port 1 menu

- Put SSID name to the access point
- Select the security method
- Put the password
- Exit

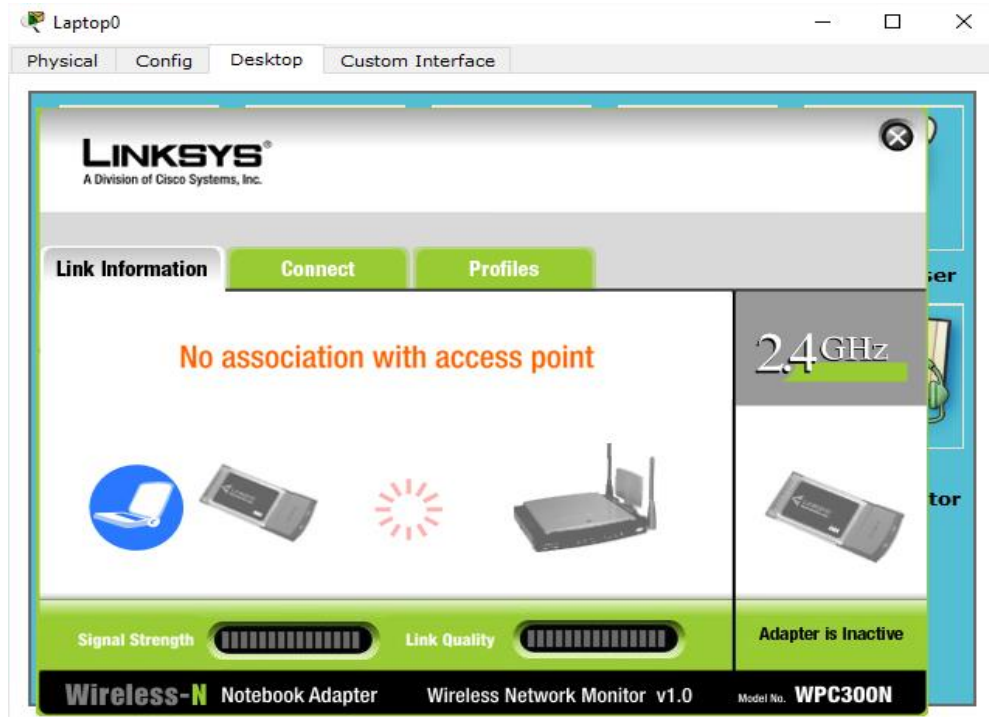


3. Configure the laptop

- Click on the laptop
- Select Desktop from the top menu



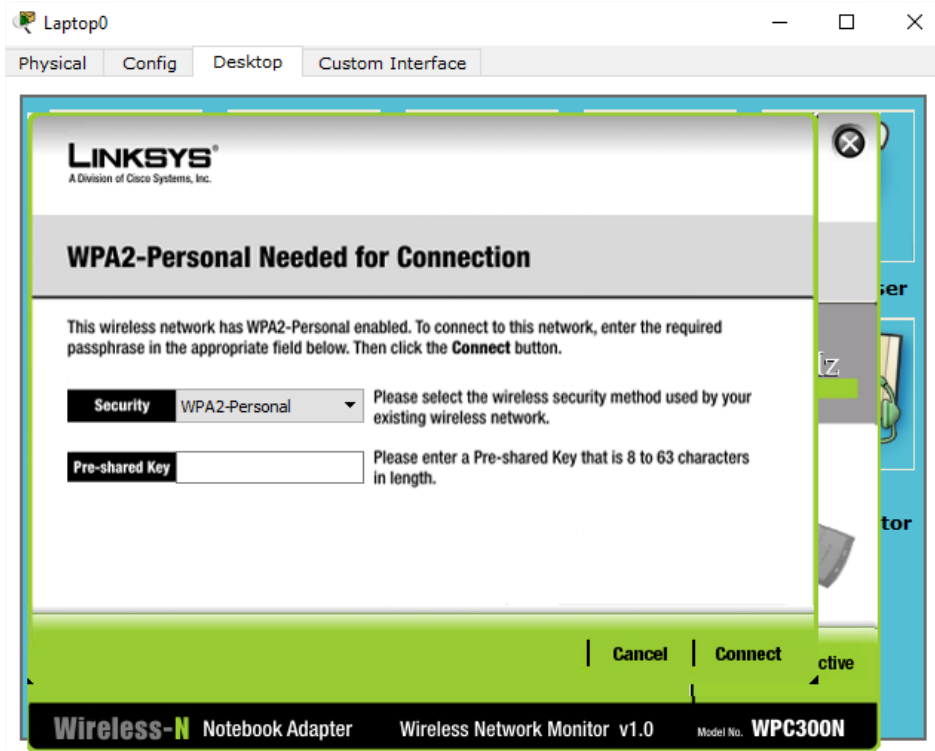
- Select PC wireless



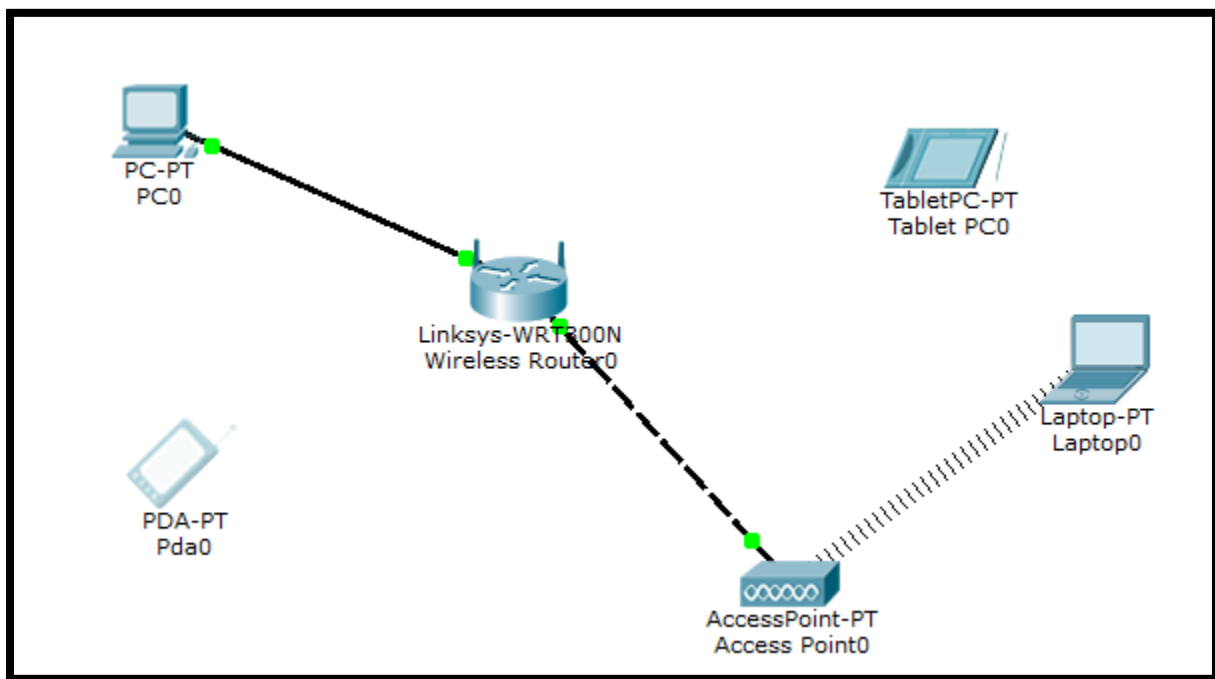
- Select connect and make refresh



- Choose the access point SSID name and click connect

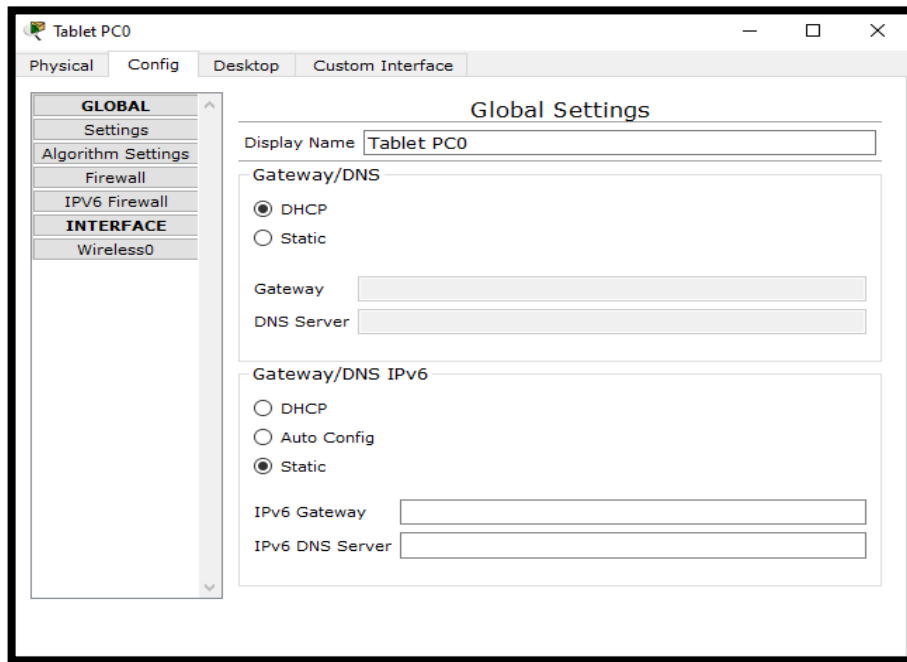


- Enter the password of the access point and click connect you will see that the laptop connect to the access point as shown below



4. Configure the tablet

- Click on the tablet and select config from the top menu



- Select wireless from the left side menu
- Give the name of access point and the password

