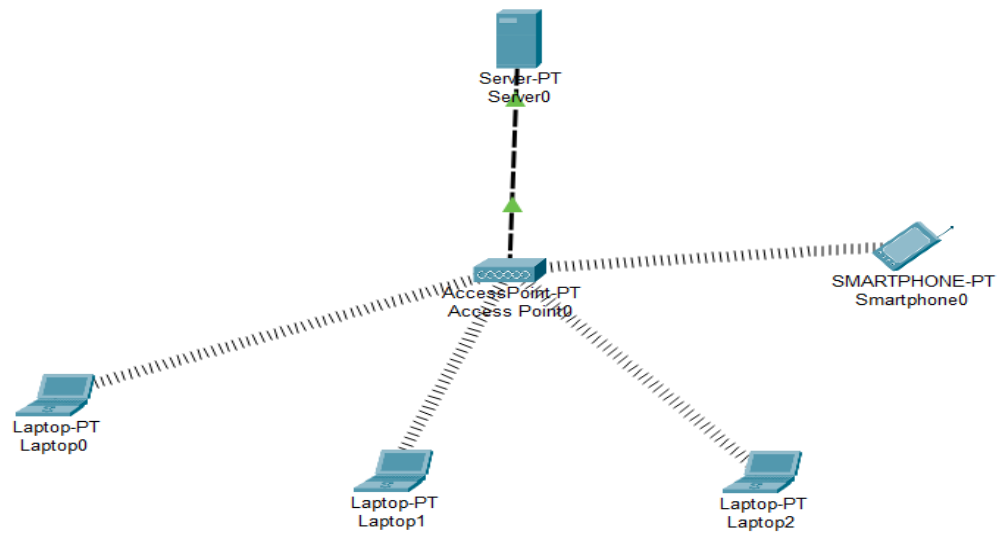


- ***Abubakkar Abdullah***
- ***20P-0045***
- ***Lab Task 7***
- ***BCS-5B***
- ***Computer Networks
Lab***

TASK

**This is our whole server
based connection on
which we are going to
perform our Task.**



SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

DHCP

Interface **FastEthernet0** Service ☒ On ☐ Off

Pool Name serverPool

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

Start IP Address : 192 168 1 0

Subnet Mask: 255 255 255 0

Maximum Number of Users : 255

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add

Save

Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	0.0.0.0	0.0.0.0	192.16...	255.25...	255	0.0.0.0	0.0.0.0

Server0

Physical Config Services **Desktop** Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.1.1

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::260:70FF:FE7E:699D

Default Gateway

Laptop0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.1.4

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::260:70FF:FE7E:699D

Laptop2

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

Wireless0

IP Configuration

☒ DHCP

☐ Static

IPv4 Address

192.168.1.2

Subnet Mask

255.255.255.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

Physical Config Desktop Programming Attributes

Command Prompt

X

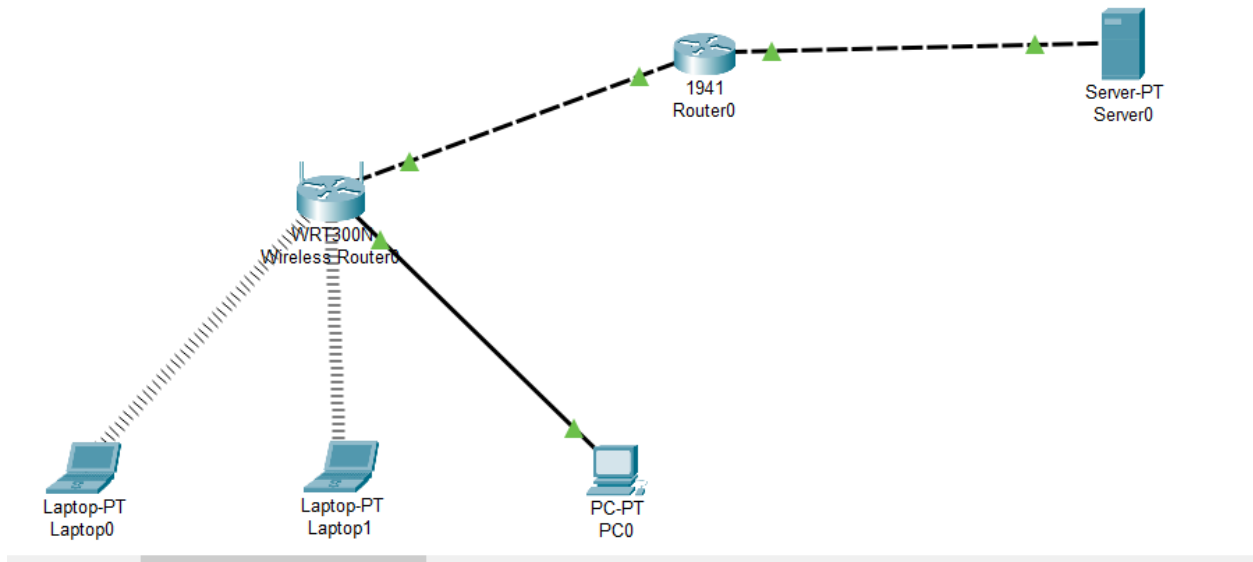
```
Cisco Packet Tracer PC Command Line 1.0
C:\>
ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=47ms TTL=128
Reply from 192.168.1.2: bytes=32 time=48ms TTL=128
Reply from 192.168.1.2: bytes=32 time=47ms TTL=128
Reply from 192.168.1.2: bytes=32 time=54ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 47ms, Maximum = 54ms, Average = 49ms

C:\>|
```



Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Setup Setup Wireless Security Access Restrictions Applications & Gaming Administration

Basic Setup DDNS MAC Address Clone Advanced Setup

Internet Setup

Internet Connection type: Automatic Configuration - DHCP

Optional Settings (required by some internet service providers):

Host Name:

Domain Name:

MTU: Size: 1500

Network Setup

Router IP: IP Address: 192 . 168 . 0 . 1 Subnet Mask: 255.255.255.0

DHCP Server Settings: DHCP Server: ☒ Enabled ☐ Disabled DHCP Reservation

Help...

Wireless Router0

Physical Config GUI Attributes

Administration Setup Wireless Security Access Restrictions Applications & Gaming Administration

Management

Router Access Router Password: Re-enter to confirm:

Web Access Web Utility Access: ☒ HTTP ☐ HTTPS Web Utility Access via Wireless: ☐ Enabled ☐ Disabled

Remote Access Remote Management: ☐ Enabled ☒ Disabled

Help...

Configuration 1:

Laptop1

Physical Config Desktop Programming Attributes

IP Configuration X

Interface Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.0.101

Subnet Mask 255.255.255.0

Default Gateway 192.168.0.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::20D:BDFF:FE38:7C71

Default Gateway

DNS Server

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface Wireless0 ▾

IP Configuration

☒ DHCP☐ Static

IPv4 Address

192.168.0.100

Subnet Mask

255.255.255.0

Default Gateway

192.168.0.1

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic☒ Static

IPv6 Address

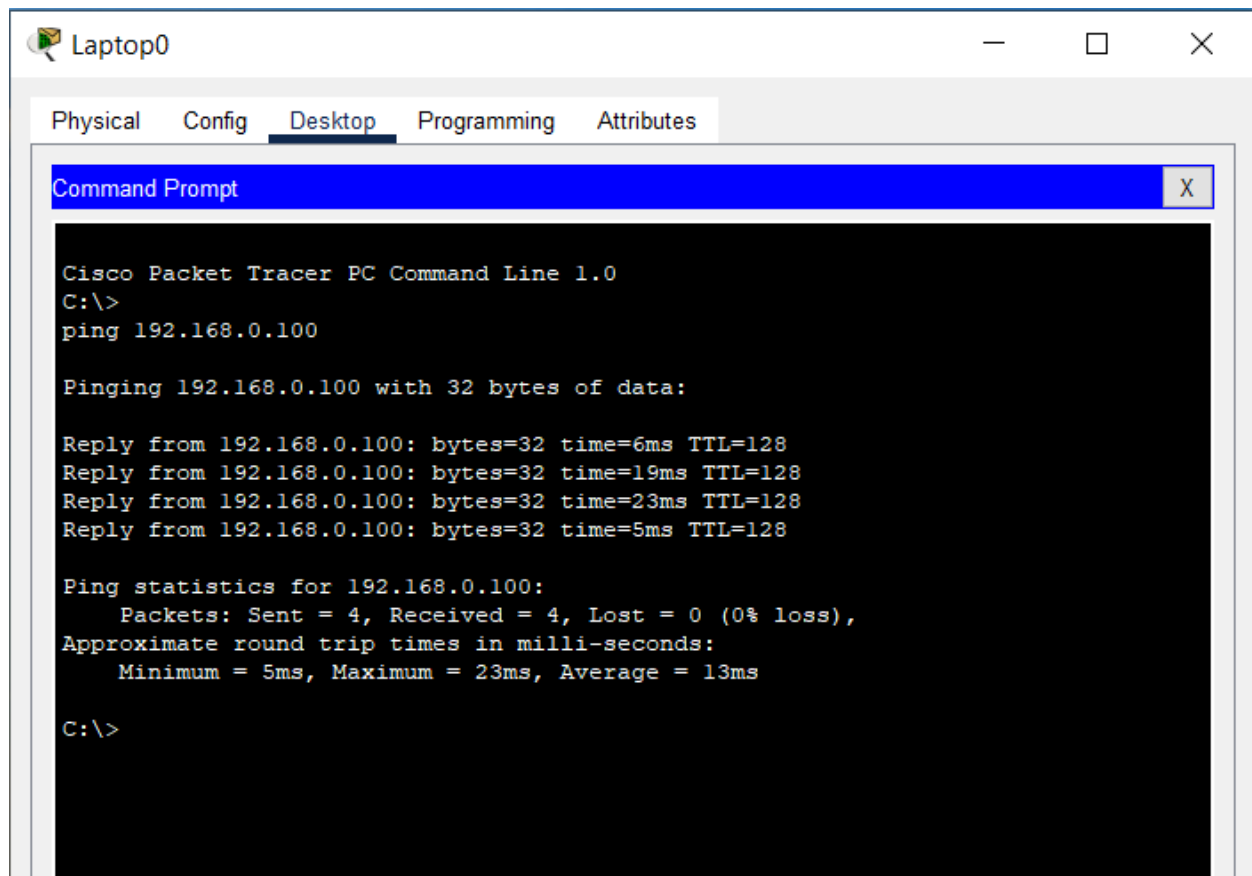
 /

Link Local Address

FE80::20B:BEFF:FED0:4449

Default Gateway

DNS Server



Adding wire less security

Wireless Router0

Physical Config **GUI** Attributes

Wireless Setup Wireless Security Access Restrictions Applications & Gaming Administration

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter Advance

Basic Wireless Settings

Network Mode: Mixed

Network Name (SSID): Lab 7

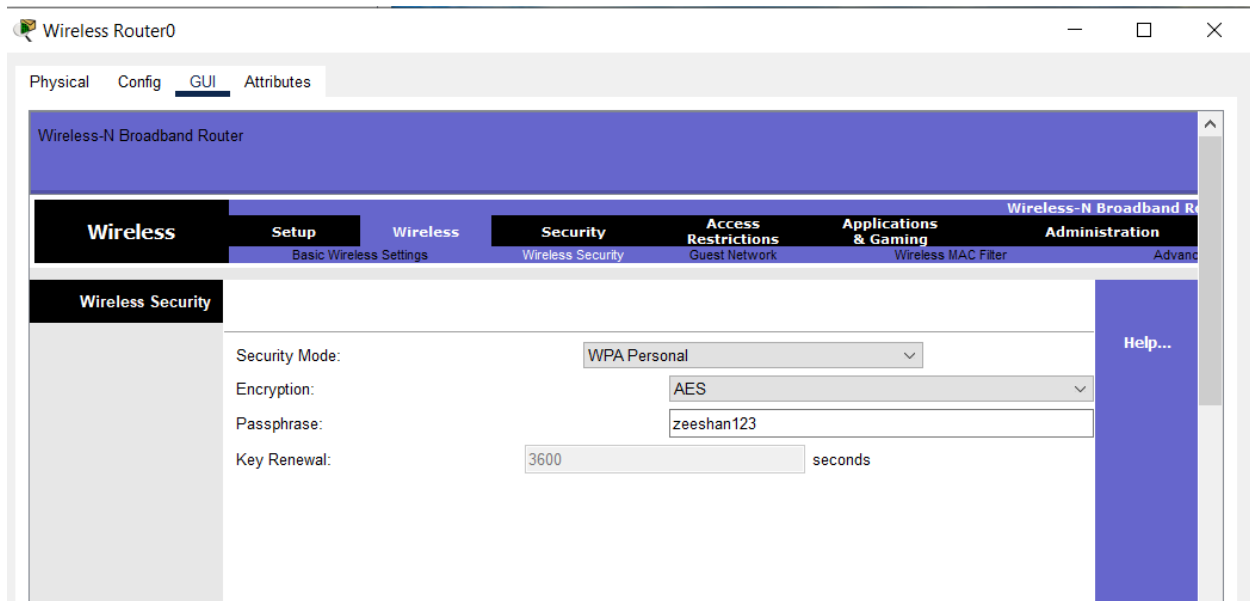
Radio Band: Auto

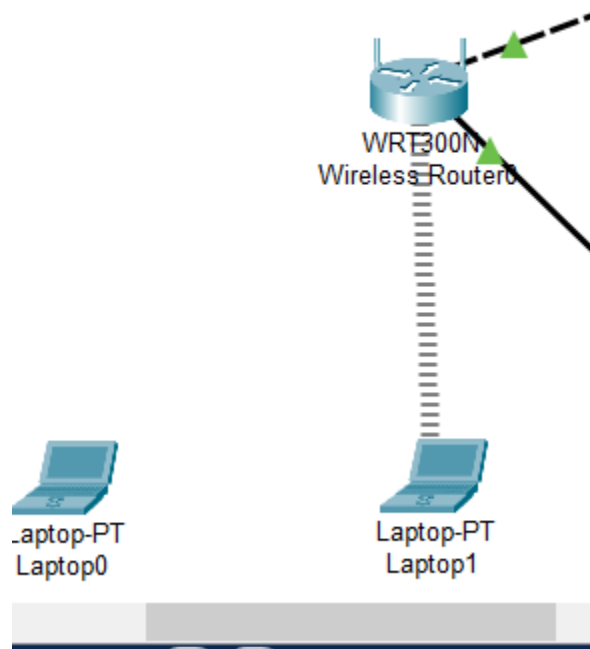
Wide Channel: Auto

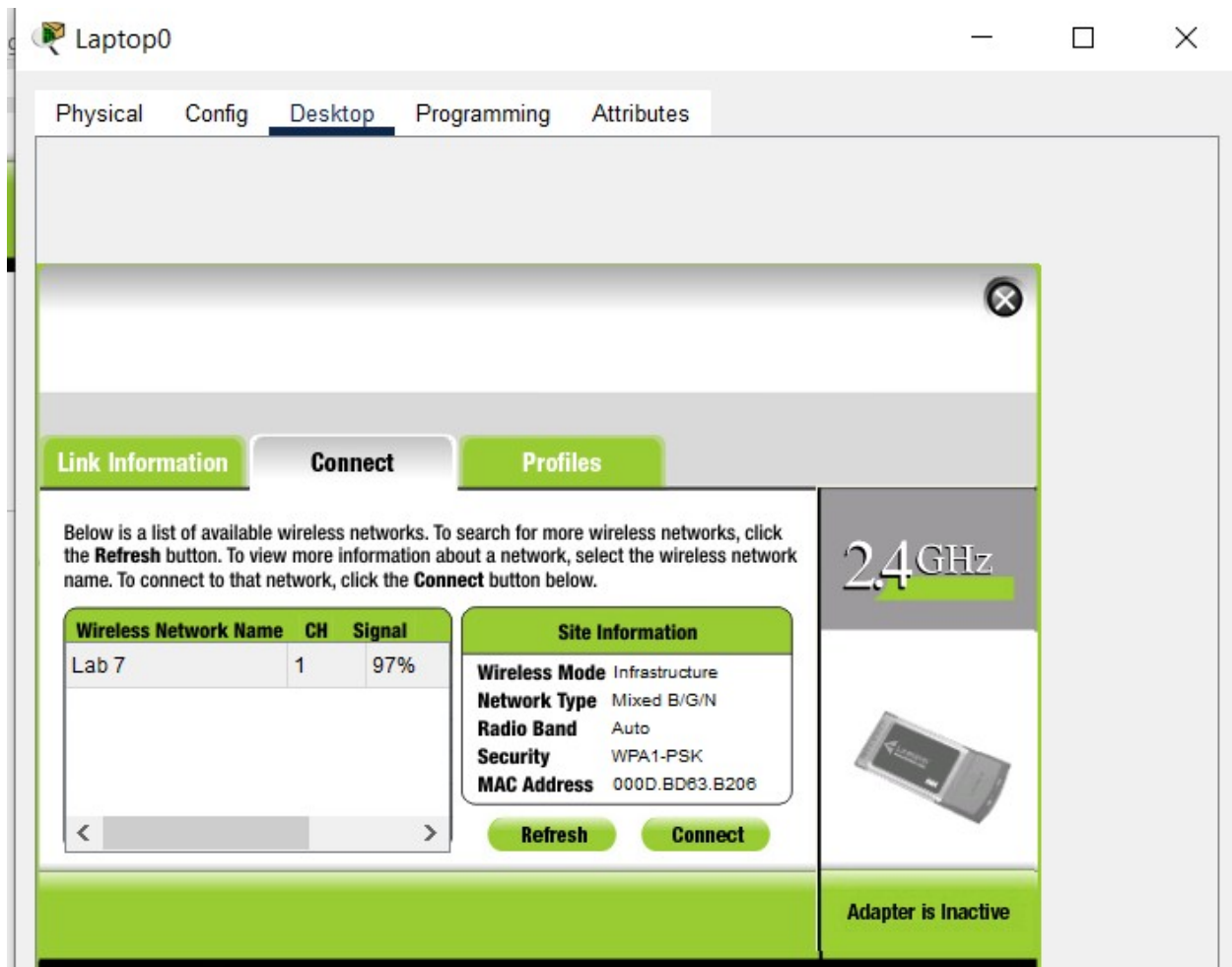
Standard Channel: 1 - 2.412GHz

SSID Broadcast: ☒ Enabled ☐ Disabled

Help...







Configuration 2:

Physical Config **Desktop** Programming Attributes

WPA-Personal Needed for Connection

This wireless network has WPA-Personal, also known as Pre-Shared Key, enabled. To connect to this network, select the encryption type. Enter the required Pre-Shared Key in the appropriate field below. Then click the **Connect**.

Security WPA-Personal ▾

Please select the wireless security method used by your existing wireless network.

Encryption AES ▾

Please select an encryption type used to protect your wireless data transmissions.

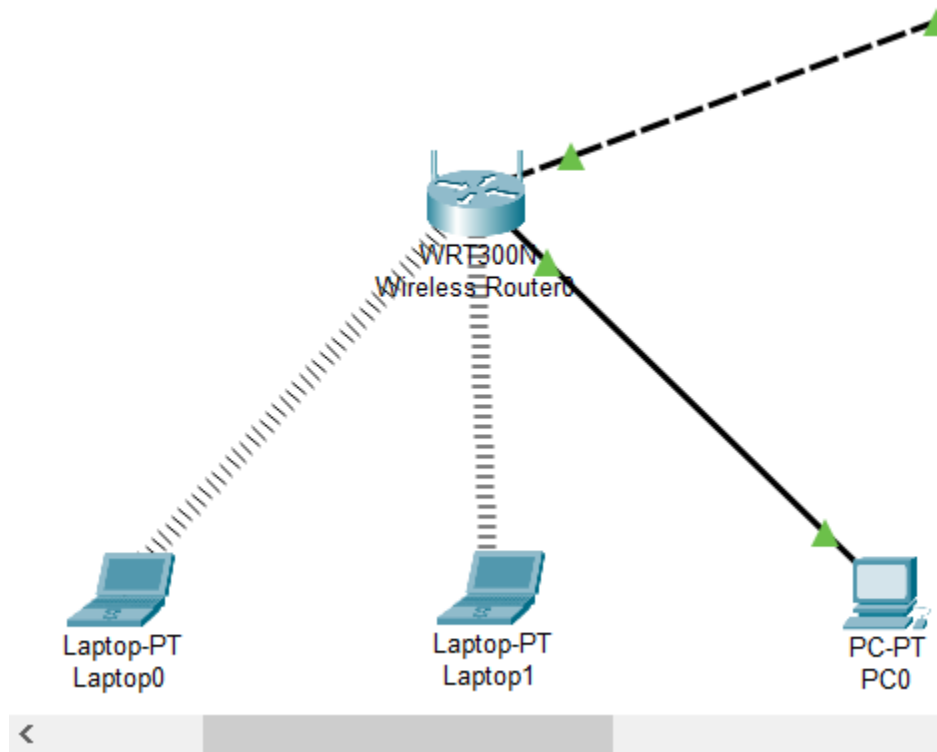
Pre-shared Key

Please enter a Pre-shared Key that is 8 to 63 characters in length.

Cancel

Connect

ctive



Enable isp router to assign public ip

First configure IP addresses and a DHCP server on ISP router.

```
Router(config)#interface GigabitEthernet0/0
Router(config-if)#
Router(config-if)#
Router(config-if)#ip add 155.21.21.1 255.255.0.0
Router(config-if)#no shut
Router(config-if)#
```

```
Router(config)#interface GigabitEthernet0/1
Router(config-if)#ip add 200.0.0.1 255.255.0.0
Router(config-if)#default-router 155.21.21.1
^
```

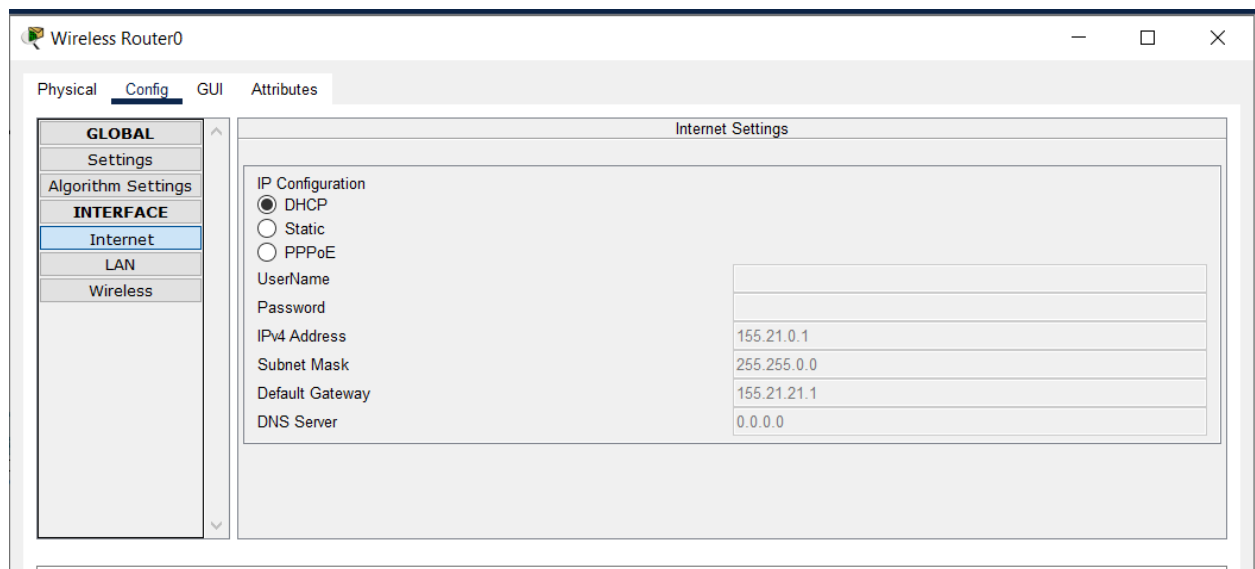
% Invalid input detected at '^' marker.

```
Router(config-if)#no shut
```

```
Router(config-if)#no shut
Router(config-if)#exit
Router(config)#ip dhcp pool mypool
Router(dhcp-config)#net 155.21.0.0 255.255.0.0
Router(dhcp-config)#default-router 155.21.21.1
Router(dhcp-config)#dns-server 0.0.0.0
Router(dhcp-config)#
```

```
Router(dhcp-config)#ex
Router(config)#ip route 192.168.0.0 255.255.255.0 fa0/0
```

Now make the internet interface a DHCP client by enabling DHCP on it.



The screenshot shows the configuration interface for a device named "Wireless Router0". The interface has a sidebar on the left with a tree view containing "GLOBAL" (with sub-items "Settings" and "Algorithm Settings") and "INTERFACE" (with sub-items "Internet", "LAN", and "Wireless"). The "Internet" item is selected. The main area is titled "Internet Settings" and contains the following fields:

Internet Settings	
IP Configuration	
<input checked="" type="radio"/> DHCP	
<input type="radio"/> Static	
<input type="radio"/> PPPoE	
UserName	
Password	
IPv4 Address	155.21.0.1
Subnet Mask	255.255.0.0
Default Gateway	155.21.21.1
DNS Server	0.0.0.0