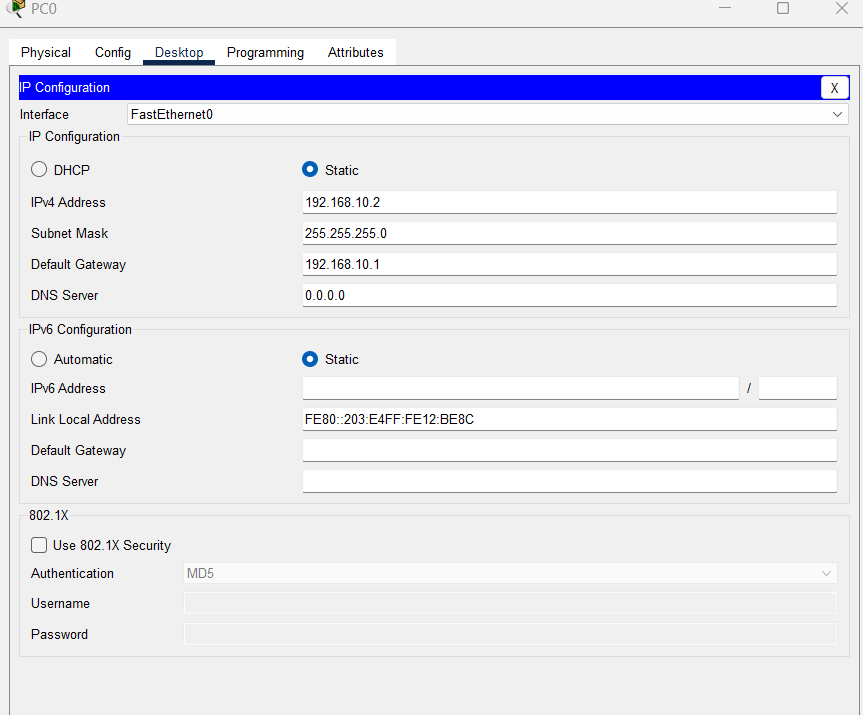
Task-7

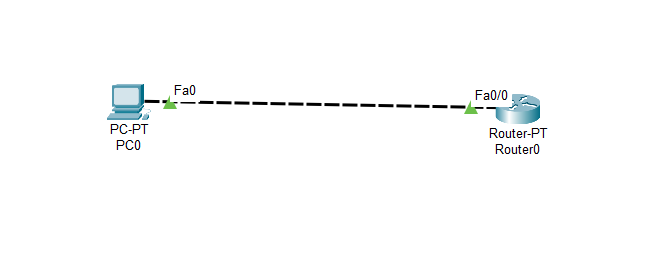
7a). Configure and implementation of a Router within a Network using Packet Tracer.

**Step 1: Set Up the Network Topology**

1. **Open Packet Tracer**: Launch Cisco Packet Tracer.
2. **Add Devices**:
   * Drag and drop a router (e.g., 2911 or any suitable model) onto the workspace.
   * Add a couple of PCs (end devices) for testing connectivity.
   * Optionally, you can add switches if you need to connect multiple PCs.
   * Need to provide Default Gateway(i.e. Router interface IP address)

(The **default gateway** is the node that forwards the packet from the source to other **networks)**



1. **Connect Devices**:
   * Use the connection tool (cable icon) to connect the devices. For example, connect the PCs to a switch and the switch to the router.
   * Use appropriate cables 

**Step 2: Configure the Router**

1. **Access the Router CLI**:
   * Click on the router and go to the "CLI" tab.
2. **Enter Configuration Mode**:

Configure ip address of pc🡪192.168.10.2

Router>en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#int Fa0/0

Router(config-if)#ip address 192.168.10.1 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router#en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#enable secret griet1234

Router(config)#login

Router(config)#no ip domain-lookup

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#line console 0

Router(config-line)#password 1234

Router(config-line)#login

Router(config-line)#exit

Router(config)#line vty 0 4

Router(config-line)#password g1234

Router(config-line)#login

Router(config-line)#exit

Router(config)#

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#exit

Router con0 is now available

Press RETURN to get started.

**Step 3: To test the console and enable secret passwords**

User Access Verification

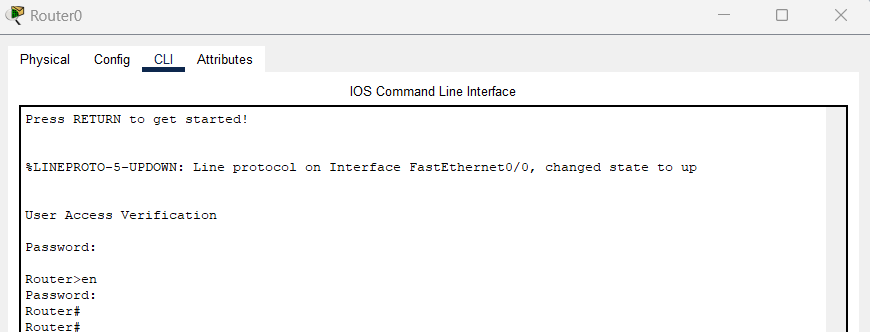
Password: 1234

Router>en

Password: griet1234

Router#exit

**Note:** To verify password, need to exit from all commands and enter into user mode

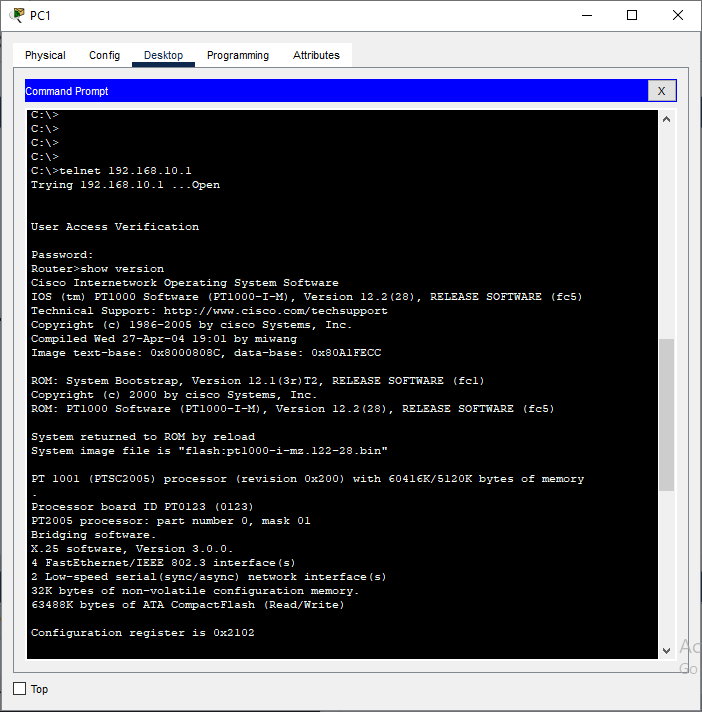


**Step 4: To test vty password**

Goto pc ->command prompt

Need to give password of Vty

telnet 192.168.10.1(this is router ip)



**Sub-task:**

**Same as above to implement PC to PC communication using Router**

A diagram of a network

Description automatically generated

**Configure ip address of pc🡪192.168.10.2**

**Configure router below steps**

Router>en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#int Fa0/0

Router(config-if)#ip address 192.168.10.1 255.255.255.0

Router(config-if)#no shutdown

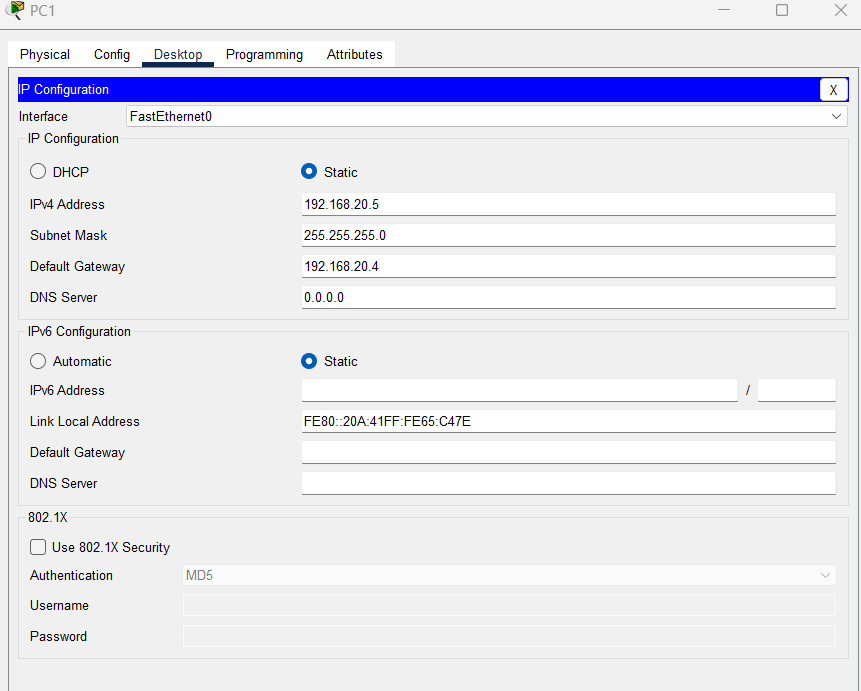
Router(config-if)#

%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

-------------------------------------------------------------------------------------------------

**[optional to add**

****

**Router(config-if)#exit**

**Router(config)#int Fa1/0**

**Router(config-if)#ip address 192.168.20.2 255.255.255.0**

**Router(config-if)#no shutdown**

**Router(config-if)#**

**%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up**

**Router(config-if)#exit**

**Router(config)#exit**

**Router#**

**%SYS-5-CONFIG\_I: Configured from console by console**

**Router#**

**%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up**

**]**

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Router#en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#enable secret griet1234

Router(config)#login

Router(config)#no ip domain-lookup

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#line console 0

Router(config-line)#password 1234

Router(config-line)#login

Router(config-line)#exit

Router(config)#line vty 0 4

Router(config-line)#password g1234

Router(config-line)#login

Router(config-line)#exit

Router(config)#

Router(config)#exit

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#exit

Router con0 is now available

Press RETURN to get started.

**To test the console and enable secret passwords**

A screenshot of a computer

Description automatically generated

User Access Verification

Password: 1234

Router>en

Password: griet1234

Router#exit

**To test vty password**

A screenshot of a computer program

Description automatically generated

Goto pc ->command prompt

telnet 192.168.10.1(this is router ip)

**Test Connectivity**

* **Ping** from one PC to another (e.g., from **PC0** to **PC1**) to ensure static routing is functioning properly.

A computer screen shot of a program

Description automatically generated