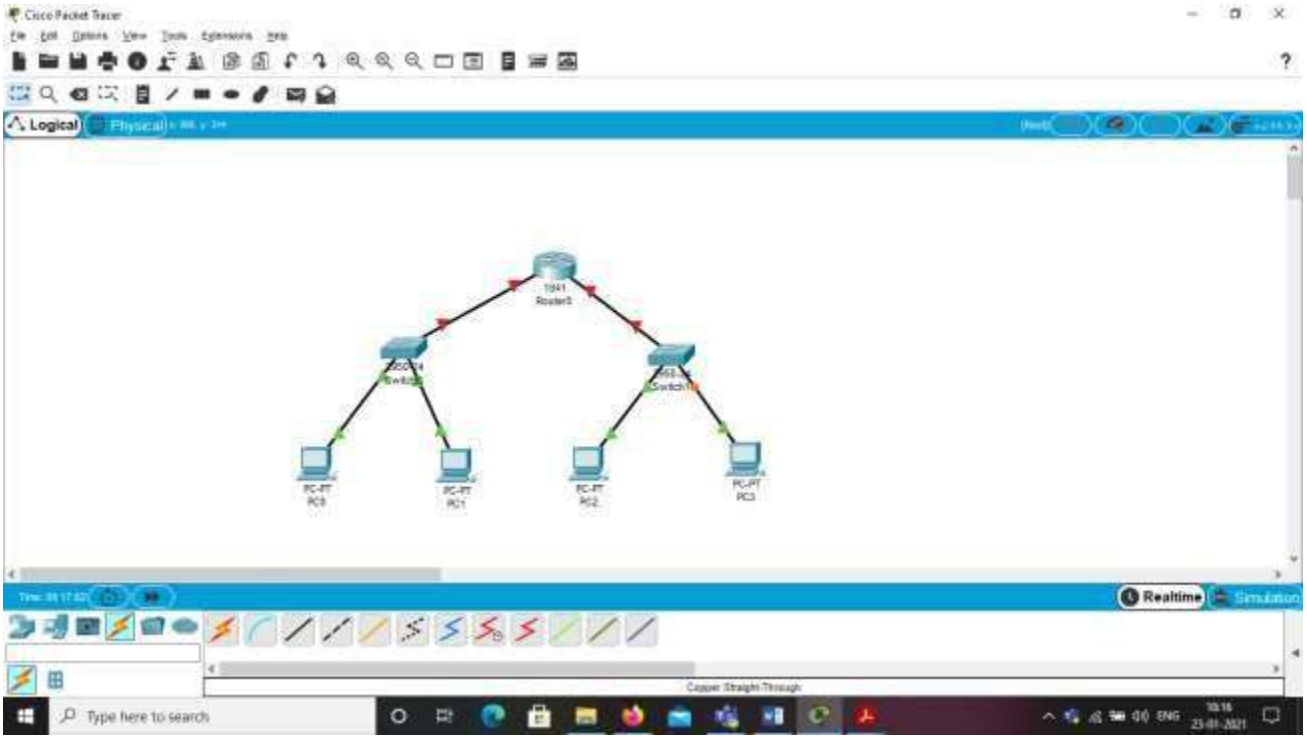
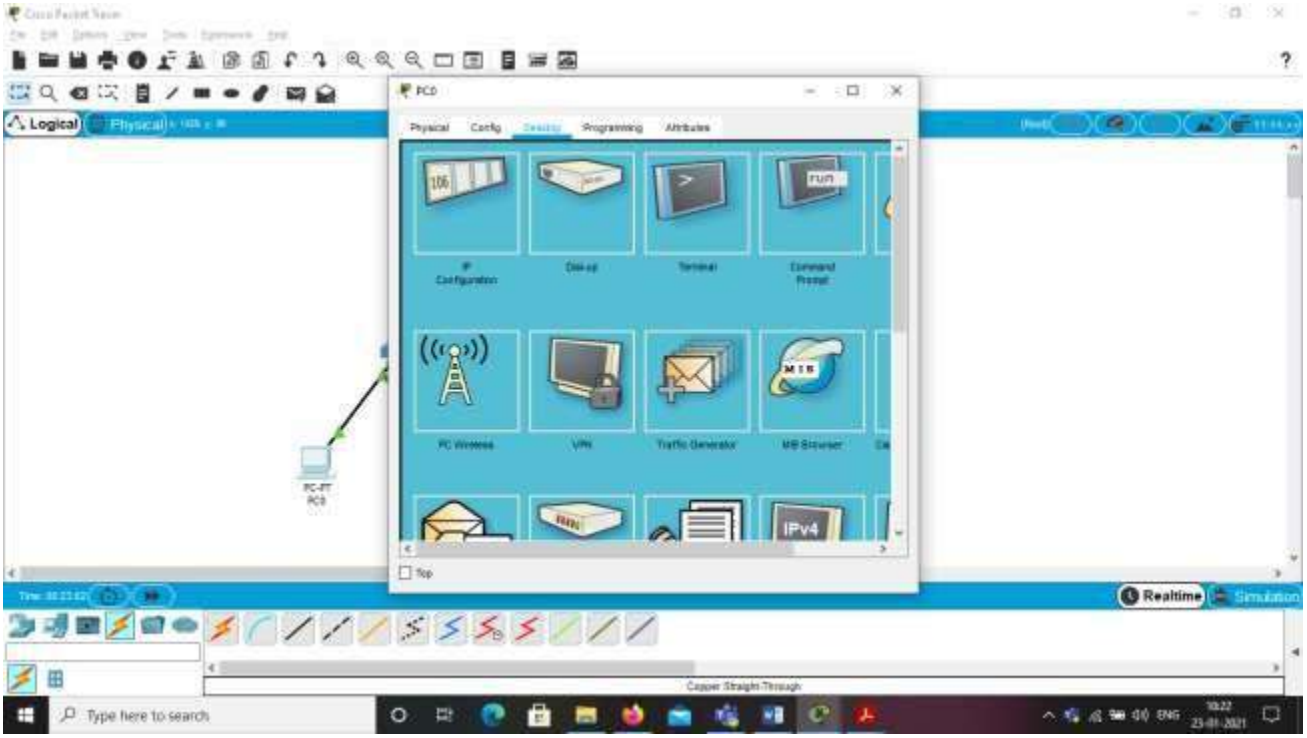
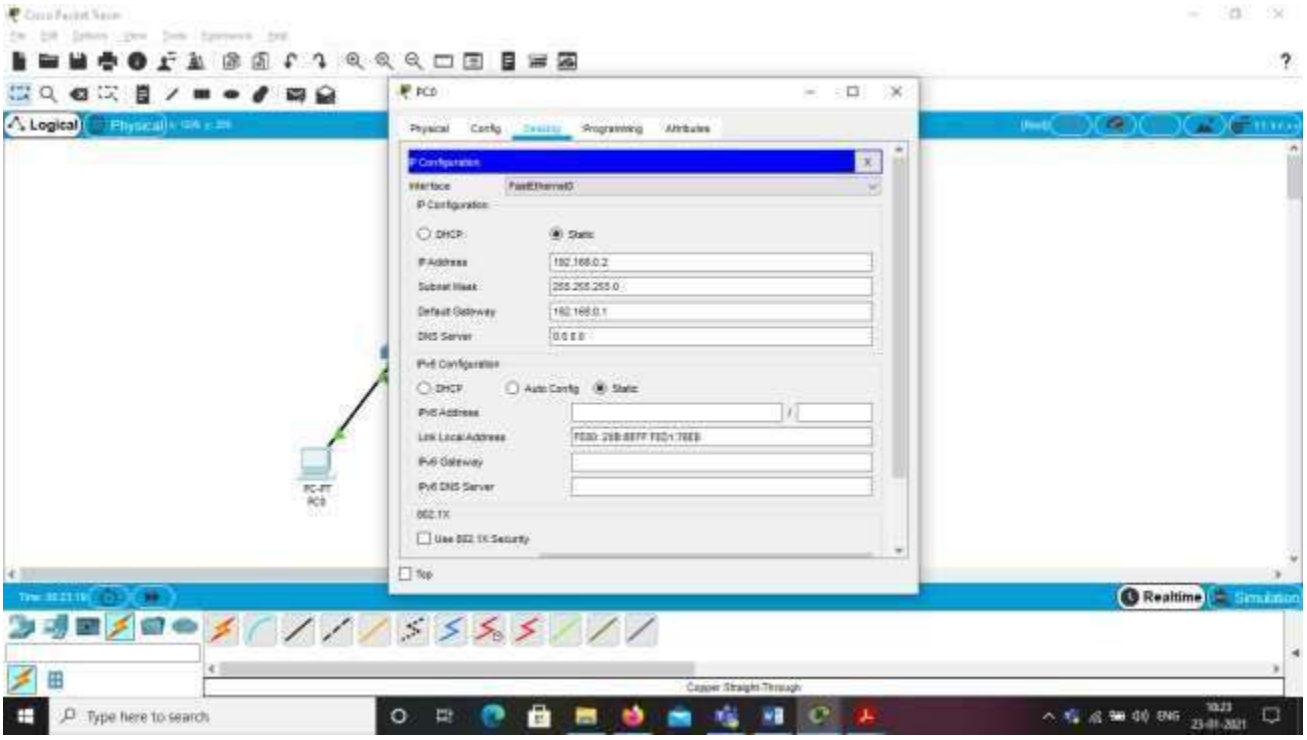
Exp 2(a): Configuration of Router using cisco packet tracer

Step 1: Construct the topology



Step 2: Assign IP addresses to all PC's.

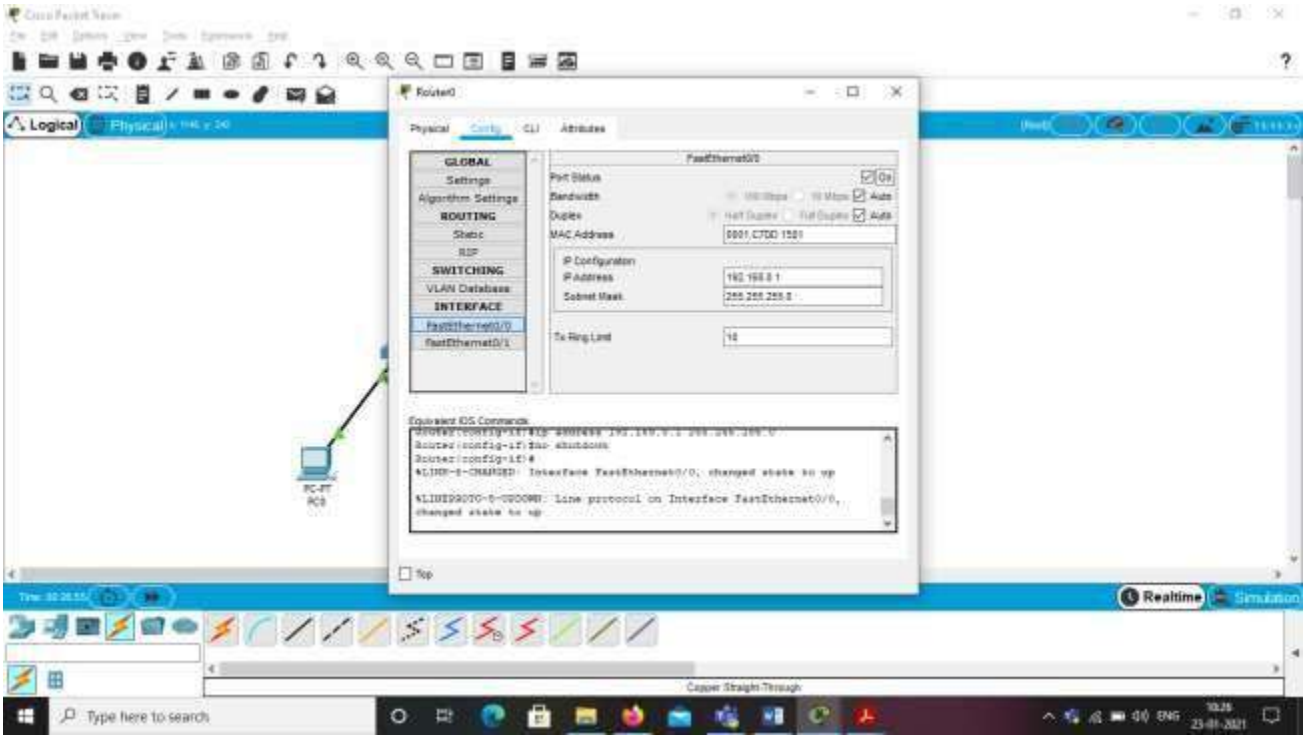




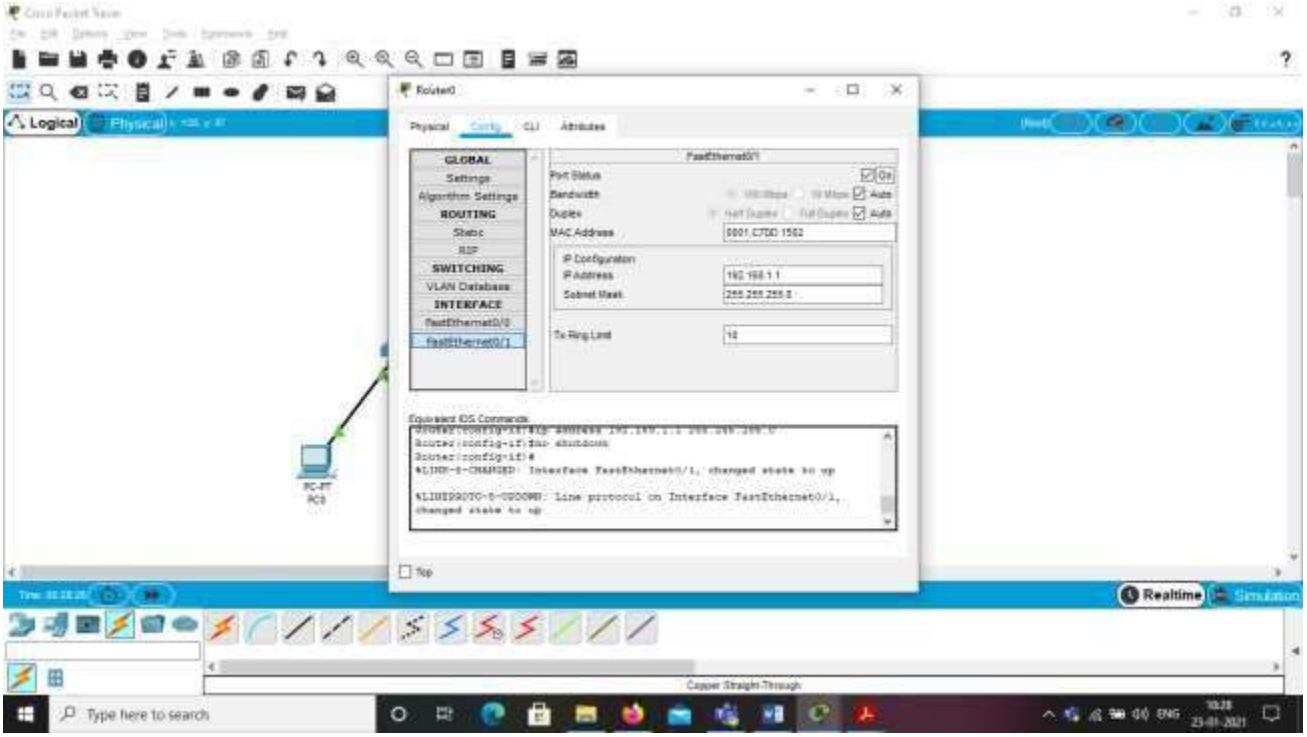
Use another network address for second network.

Step 3: Assign the IP address for router

Assign the gateway address of 1st network and don't forget to turn on the port status

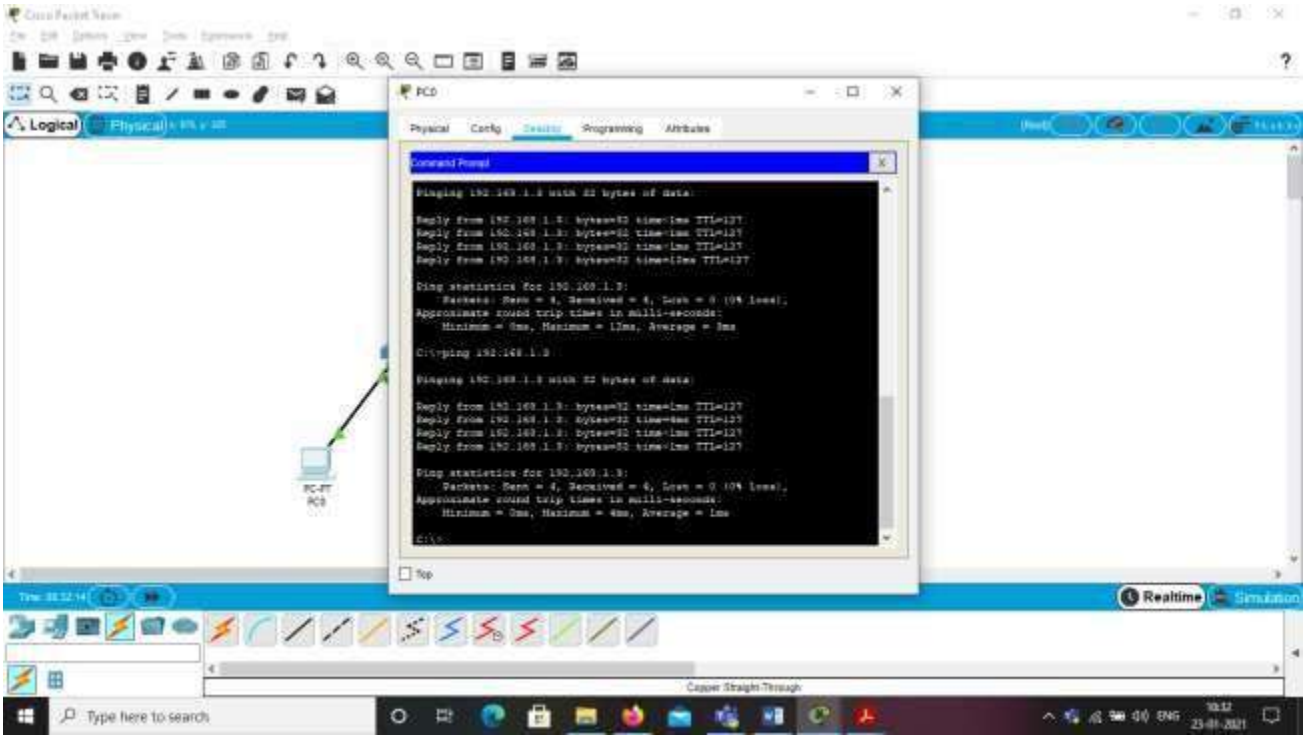


Assign the gateway address of 2nd network for FastEthernet0/1 interface

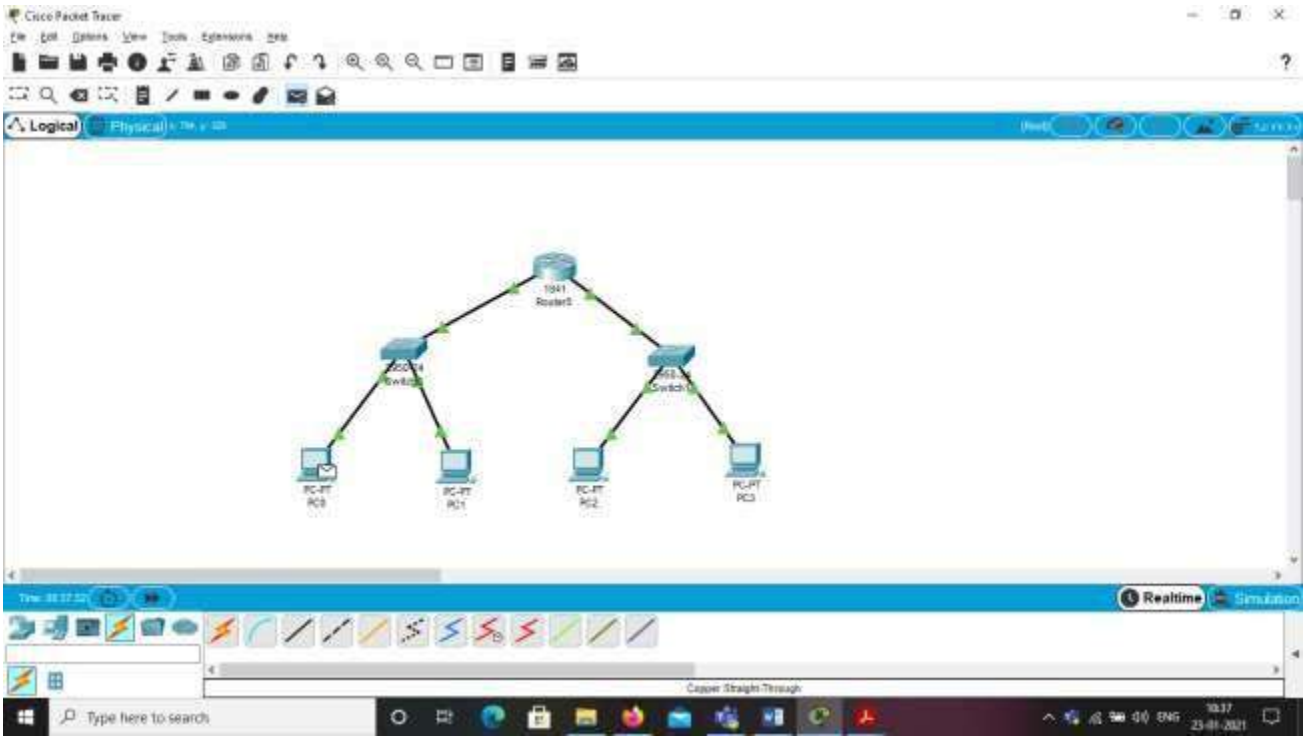


Step 3: Check the connectivity from one network to another network

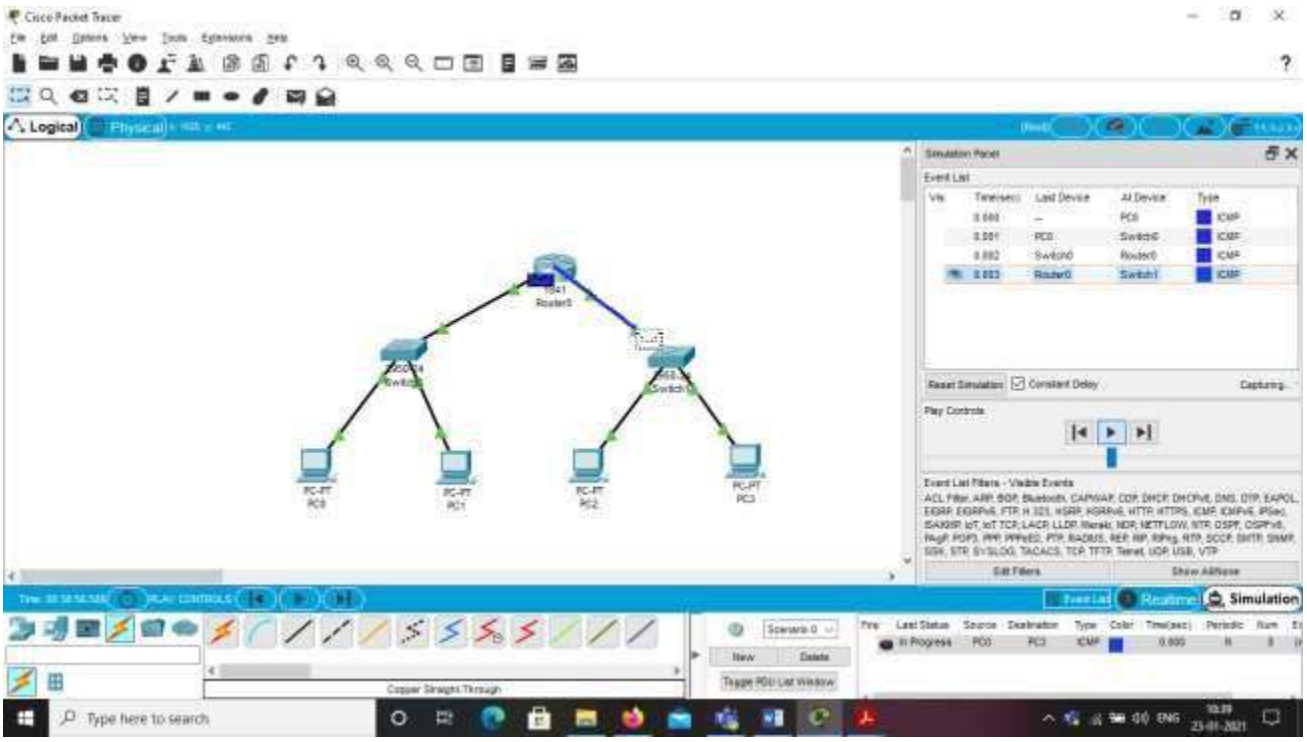
Select any PC from 1st network go to Desktop tab->Command Prompt->execute ping command for the 2nd network.



Step 4: Send Simple PDU.



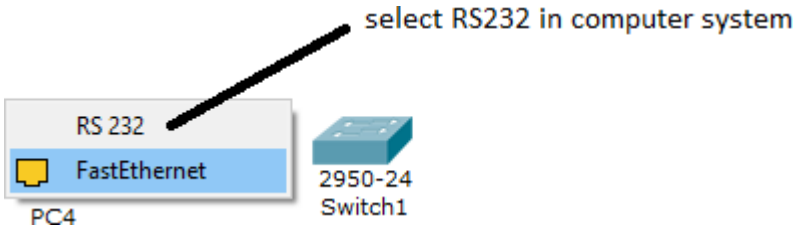
Step 5: Check in simulation mode


Cisco Packet Tracer
Logical
Physical
Simulation Panel
Event List
Reset Simulation
Constant Delay
Play Controls
Edit Filters
Show All/None
Realtime
Simulation
Copper Straight-Through
Type here to search

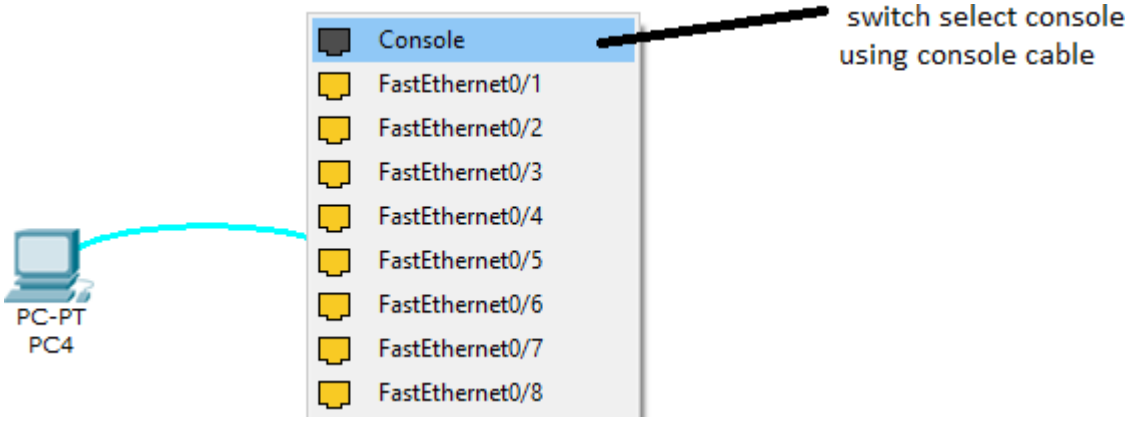
Exp 2(b): Configuration of Switch using cisco packet tracer

Step 1:

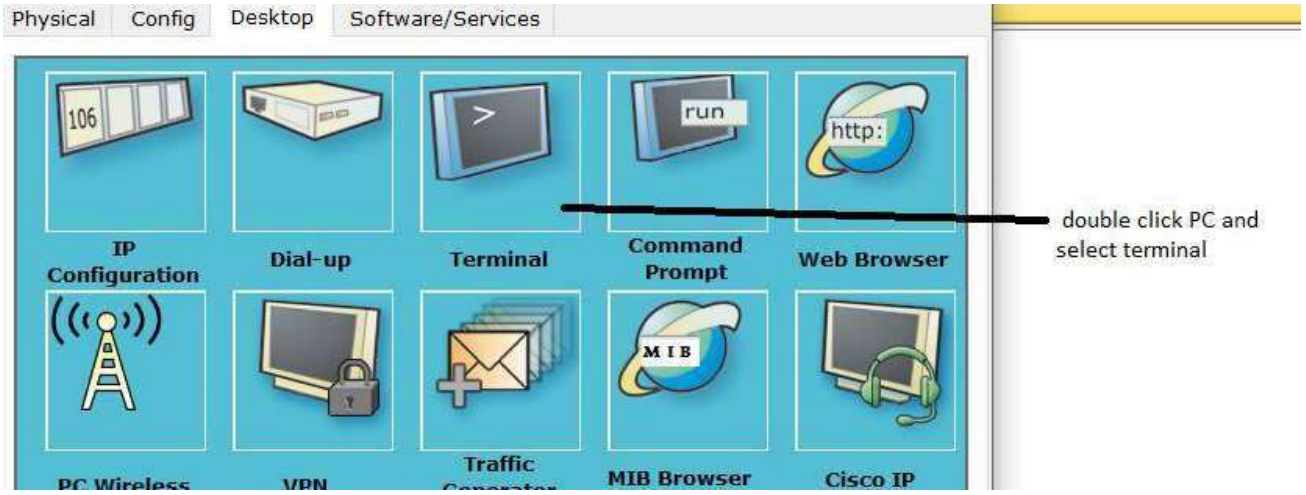
Step 2:

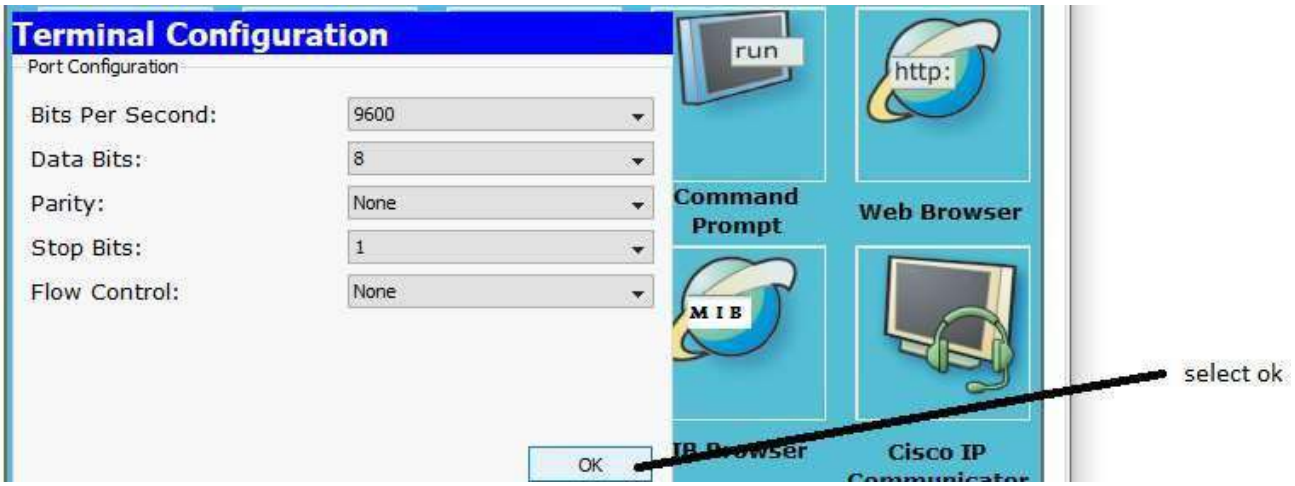


Step 3:



Step 4:





Basic commands:

switch> ---> User Mode

switch>enable --> Enters into the Privilege mode

switch# --> Privilege mode

switch# configure terminal (or) conf t --> Enable Configuration Mode

switch(config)# --> Configuration Mode

Helping commands

switch> ? --> Help to list the available commands in this mode

switch>te? --> Lists all the commands starts with "tel"

switch# ? --> Help

Step 1: Erase the startup configuration file from NVRAM.

Type the erase startup-config command to remove the startup configuration from nonvolatile random access memory (NVRAM).

Switch # erase startup-config

Erasing the nvram filesystem will remove all configuration files! Continue? [confirm]

[OK]

Erase of nvram: complete

Router#

Step 2: Reload the switch.

Issue the reload command to remove an old configuration from memory. When prompted to Proceed with reload, press Enter to confirm the reload. Pressing any other key will abort the reload.

switch# reload

Proceed with reload? [confirm]

*Nov 29 18:28:09.923: %SYS-5-RELOAD: Reload requested by console. Reload Reason: Reload Command.

Note: You may receive a prompt to save the running configuration prior to reloading the router. Respond by typing no and press Enter.

System configuration has been modified. Save? [yes/no]: no

Step 3:

Use the show flash command to determine if any VLANs have been created on the switch.

Switch# show flash

Directory of flash:/

2 -rwx 1919 Mar 1 1993 00:06:33 +00:00 private-config.text

3 -rwx 1632 Mar 1 1993 00:06:33 +00:00 config.text

4 -rwx 13336 Mar 1 1993 00:06:33 +00:00 multiple-fs

5 -rwx 11607161 Mar 1 1993 02:37:06 +00:00 c2960-lanbasek9-mz.150-2.SE.bin

6 -rwx 616 Mar 1 1993 00:07:13 +00:00 vlan.dat

32514048 bytes total (20886528 bytes free)

Switch#

Step 4

Switch#

Switch> show version

Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE, RELEASE SOFTWARE (fc1)

Technical Support: http://www.cisco.com/techsupport

Copyright (c) 1986-2012 by Cisco Systems, Inc.

Compiled Sat 28-Jul-12 00:29 by prod_rel_team

ROM: Bootstrap program is C2960 boot loader

BOOTLDR: C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(53r)SEY3, RELEASE SOFTWARE

(fc1)

Switch uptime is 2 minutes

System returned to ROM by power-on

System image file is "flash://c2960-lanbasek9-mz.150-2.SE.bin"

<output omitted>

Which IOS image version is currently in use by your switch?

Step 5 : Configure the clock.

As you learn more about networking, you will see that configuring the correct time on a Cisco switch can be helpful when you are troubleshooting problems. The following steps manually configure the internal clock of the switch.

a. Display the current clock settings.

Switch> **show clock**

*00:30:05.261 UTC Mon Mar 1 1993

b. Configure the clock setting. The question mark (?) provides help and allows you to determine the expected input for configuring the current time, date, and year. Press Enter to complete the clock configuration.

Switch# **clock set ?**

hh:mm:ss Current Time

Switch# **clock set 15:08:00 ?**

<1-31> Day of the month

MONTH Month of the year

Switch# **clock set 15:08:00 Oct 26 ?**

<1993-2035> Year

Switch# **clock set 15:08:00 Oct 26 2012**

Switch#

*Oct 26 15:08:00.000: %SYS-6-CLOCKUPDATE: System clock has been updated from 00:31:43

UTC Mon Mar 1 1993 to 15:08:00 UTC Fri Oct 26 2012, configured from console by

console.

c. Enter the show clock command to verify that the clock setting has updated.

Switch# **show clock**

15:08:07.205 UTC Fri Oct 26 2012

Step 6 : Give the switch a name.

Use the hostname command to change the switch name to S1.

Switch(config)# hostname S1

S1(config)#

Step 7:Enter a login MOTD banner.

A login banner, known as the message of the day (MOTD) banner, should be configured to warn anyone accessing the switch that unauthorized access will not be tolerated. The banner motd command requires the use of delimiters to identify the content of the banner message. The delimiting character can be any character as long as it does not occur in the message. For this reason, symbols, such as the #, are often used.

S1(config)# banner motd #

Enter TEXT message. End with the character '#'

Unauthorized access is strictly prohibited and prosecuted to the full extent

of the law. #

S1(config)# exit

S1#

Step 8: Save the configuration.

Use the copy command to save the running configuration to the startup file on non-volatile random access memory (NVRAM).

S1# copy running-config startup-config

Destination filename [startup-config]? [Enter]

Building configuration...

[OK]

S1#

Step 9 : Display the current configuration.

The show running-config command displays the entire running configuration, one page at a time. Use the spacebar to advance paging.

S1# show running-config

Building configuration...

Current configuration : 1409 bytes

!

! Last configuration change at 03:49:17 UTC Mon Mar 1 1993

Step 10 : Display the status of the connected interfaces on the switch.

To check the status of the connected interfaces, use the show ip interface brief command. Press the spacebar to advance to the end of the list.

S1# **show ip interface brief**

Interface IP-Address OK? Method Status Protocol
Vlan1 unassigned YES unset up up
FastEthernet0/1 unassigned YES unset up up
FastEthernet0/2 unassigned YES unset down down
FastEthernet0/3 unassigned YES unset down down
FastEthernet0/4 unassigned YES unset down down
FastEthernet0/5 unassigned YES unset down down
FastEthernet0/6 unassigned YES unset up up
FastEthernet0/7 unassigned YES unset down down
FastEthernet0/8 unassigned YES unset down down
FastEthernet0/9 unassigned YES unset down down

Step 11: Show vlan:

Show vlan command will display the VLANs. For administrative purpose, switch automatically create VLAN 1 and assign all its interfaces to it. You can create custom VLANs from global configuration mode and then the assign them to interference