Lab 2

Title: Basic Router Configuration

Objective:

a) To understand the use of Packet Tracer.

b) To be familiarize with different versions of routers and how they are configured.

c) To do basic router configuration.

Software requirements

SN	Software	Specification
1.	Cisco Packet Tracer	Version above 7.0
2.	Windows OS	Windows 10

Related theory

Packet Tracer is a cross-platform visual simulation tool designed by Cisco Systems that allows users to create network topologies and imitate modern computer networks. The software allows users to simulate the configuration of Cisco routers and switches using a simulated command line interface. Packet Tracer makes use of a drag and drop user interface, allowing users to add and remove simulated network devices as they see fit. The software is mainly focused towards Certified Cisco Network Associate Academy students as an educational tool for helping them learn fundamental CCNA concepts.

Basic router configuration can be done with the help of packet tracer. It includes giving router ip address, gateway address, connecting it with computers and switches, powering it on and off. Once the configuration is completed, the packet from one computer should be transmitted to other computer without any problem.

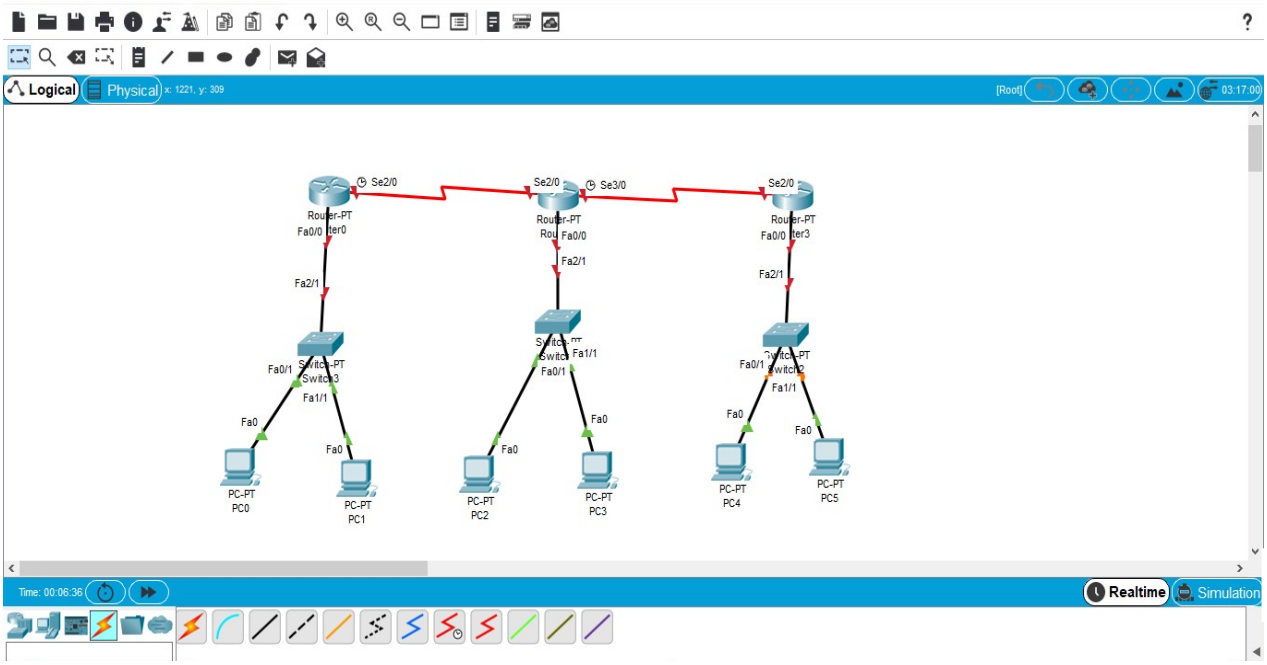
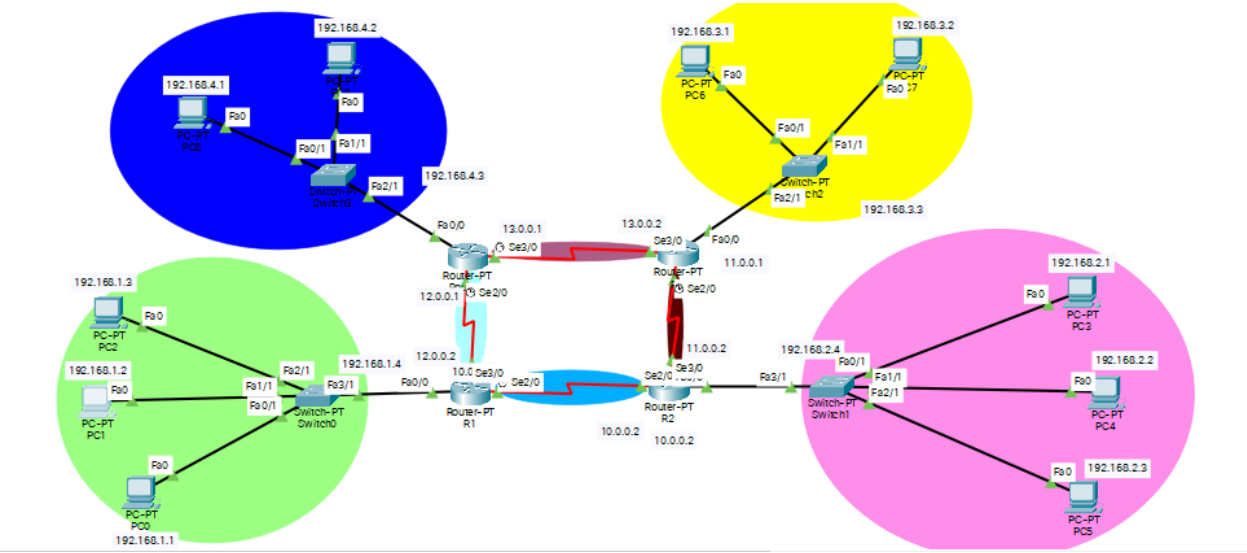


Fig: Packet tracer interface

Procedure

1. Just drag and drop the router, switch and pc in the open area.
2. Connect appropriate router with switch and computers with appropriate cables.
3. Give host name to each component.
4. Give each computers ip address and default gateway (ip address of port connected with router).
5. Similarly, give ip addresses to each port of the router.
6. Turn the router on.
7. Ping the router with the computers.

Observation:



<u>Codes being used:-</u>

Router> en => Privileged mode

Router# conf t => Configuration Mode

Router(config)# hostname R1 => Rename the host to R1

R1(config)#enable password 1234 => set password to enter Privileged Mode (Stores password without hash)

R1(config)#exit => Exit Configuration Mode

R1#exit=> Exit Privileged mode

R1(config)#enable secret 12345 => set password to enter Privileged Mode(Stores password with hash)

To configure we have to go to interface of Fast Ethernet or serial or other

R1(config)#interface fa0/0 => Joining that interface port

R1(config-if)#ip address 192.168.1.4 255.255.255.0 => Giving Ip address to that port

R1(config-if)#no shutdown => Turn on the port note for new address we have to give other address such as 10.0.0.1

R1# show running-config => Show all of the set configuration

R1#show ip route => To show routing table

R1(config)#ip route 192.168.2.0 255.255.255.0 10.0.0.2 => Add to the routine table

Router#copy running-config startup-config => to save

R1>show version => shows the version of the router

If we forgot password, we can reset it by going to rommon mode

After entering Rommon mode

rommon 1 > confreg 0x2142

rommon 2< reset

Router(config)#config-register 0x2102 =>Get old configuration from other register

Router#copy run start => load startup configuration\

Router#reload => restart router

Conclusion:

Hence, a basic router configuration is done using static routing.