Name: Dodda Sumanth Reg.No:18BCI0067

Lab Assignment-2

1.Using 2 routers:

Steps:

R0(config)#interface fastethernet 0/0
R0(config-if)#ip address 192.168.1.1 255.255.255.0
R0(config-if)#no shutdown

Configure the Serial 0/0/0 interface with the IP address 192.168.2.1/24.

R0(config-if)#interface serial 0/0/0
R0(config-if)#ip address 192.168.2.1 255.255.255.0
R0(config-if)#clock rate 64000
R0(config-if)#no shutdown

**Use the next hop interface on R2 as the path to this network.*

R0(config)#ip route 192.168.3.0 255.255.255.0 192.168.2.2
R0(config)#ip route 0.0.0.0 255.255.255.0 192.168.2.1

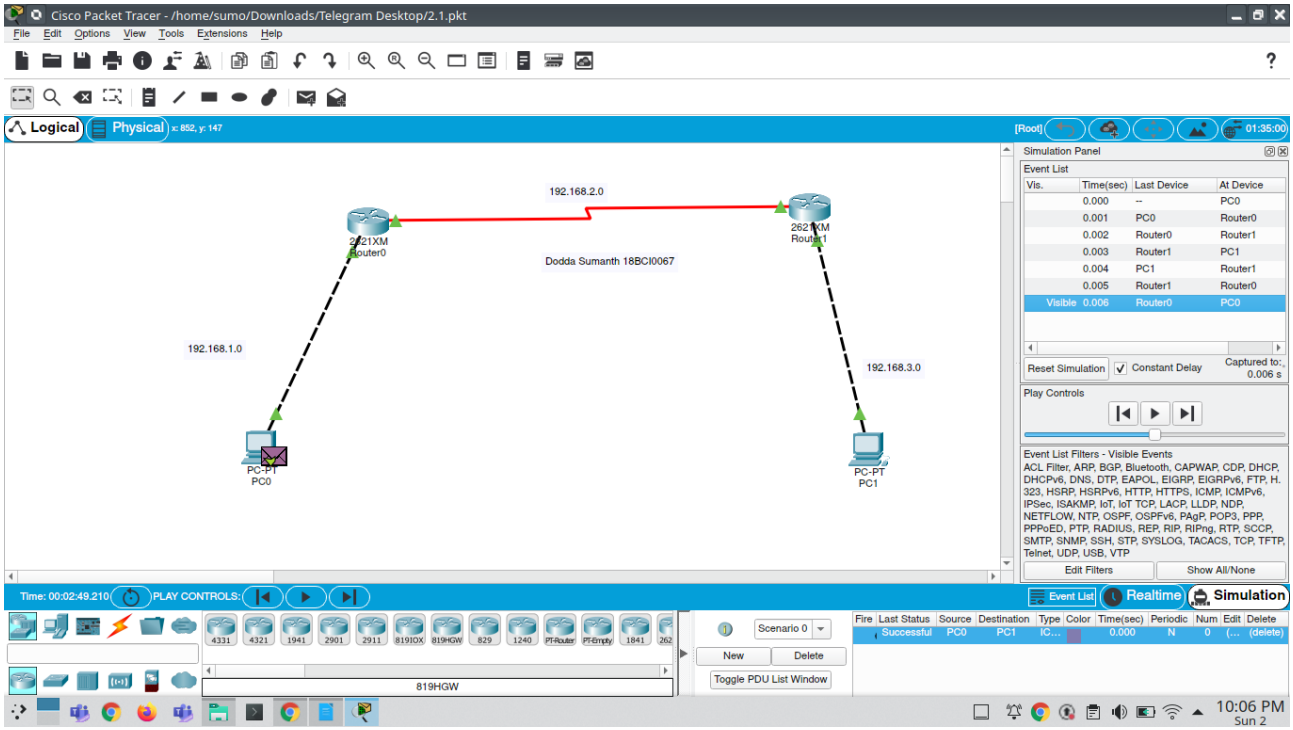
**we need to configure router 1 and add routing table accordingly*
**The routers has to be connected serial port using HCWIC-2T*

IP Table:

Interface	Device	IP address	Subnet	Gateway
Router 0	Router 0		255.255.255.0	
Router 1	Router 1		255.255.255.0	
PC 0	PC 0	192.168.1.2	255.255.255.0	192.168.1.1
PC 1	PC 1	192.168.3.2	255.255.255.0	192.168.3.1
Serial 0/0	Serial 0/0	192.168.2.1	255.255.255.0	-
Serial 0/1	Serial 0/1	192.168.2.2	255.255.255.0	-

Routing table:

Network	Mask	Next Hop
0.0.0.0	255.255.255.0	192.168.2.1
192.168.3.0	255.255.255.0	192.168.2.2



2.Using 4 Routers

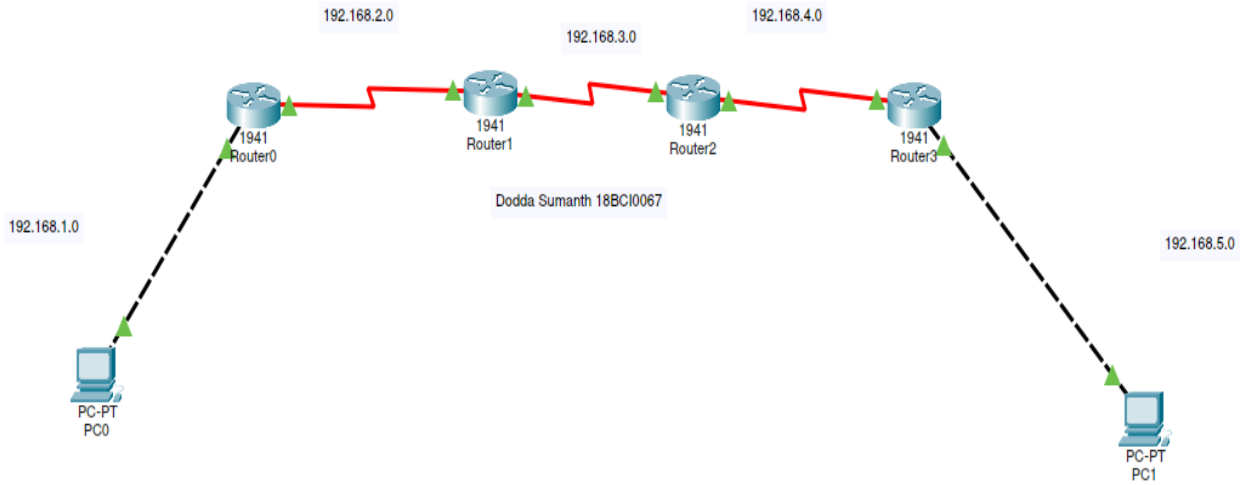
Steps:

R0(config)#interface fastethernet 0/0
R0(config-if)#ip address 192.168.1.1 255.255.255.0
R0(config-if)#no shutdown

Configure the Serial 0/1/0 interface with the IP address 192.168.2.1/24.

R0(config-if)#interface serial 0/1/0
R0(config-if)#ip address 192.168.2.1 255.255.255.0
R0(config-if)#clock rate 64000
R0(config-if)#no shutdown
R0(config)#ip route 192.168.3.0 255.255.255.0 192.168.2.2
R0(config)#ip route 192.168.4.0 255.255.255.0 192.168.2.2
R0(config)#ip route 192.168.5.0 255.255.255.0 192.168.2.2

**Configure R1 R2 and R3 and add routing table accordingly.*



IP Table:

Interface	Device	IP address	Subnet	Gateway
Router 0	Router 0	192.168.1.1	255.255.255.0	-
Router 1	Router 1	192.168.5.1	255.255.255.0	-
PC 0	PC 0	192.168.1.2	255.255.255.0	192.168.1.1
PC 1	PC 1	192.168.5.2	255.255.255.0	192.168.5.1
Serial 0/1/0(R0)	Serial 0/1/0	192.168.2.1	255.255.255.0	-
Serial 0/1/0(R1)	Serial 0/1/0(R1)	192.168.2.2	255.255.255.0	-
Serial 0/1/1(R1)	Serial 0/1/1(R1)	192.168.3.1	255.255.255.0	-
Serial 0/1/0(R2)	Serial 0/1/0(R2)	192.168.4.1	255.255.255.0	-
Serial 0/1/1(R2)	Serial 0/1/1(R2)	192.168.3.2	255.255.255.0	-
Serial 0/1/0(R3)	Serial 0/1/0(R3)	192.168.4.2	255.255.255.0	-

Routing table(R0):

Network	Mask	Next Hop
192.168.3.0	255.255.255.0	192.168.2.2
192.168.4.0	255.255.255.0	192.168.2.2
192.168.5.0	255.255.255.0	192.168.2.2

Routing table(R1):

Network	Mask	Next Hop
192.168.1.0	255.255.255.0	192.168.2.1
192.168.3.0	255.255.255.0	192.168.2.2
192.168.4.0	255.255.255.0	192.168.3.2
192.168.5.0	255.255.255.0	192.168.3.2

Routing table(R2):

Network	Mask	Next Hop
192.168.1.0	255.255.255.0	192.168.3.1
192.168.5.0	255.255.255.0	192.168.4.2

Routing table(R3):

Network	Mask	Next Hop
0.0.0.0	255.255.255.0	192.168.4.1

Network	Mask	Next Hop
192.168.3.0	255.255.255.0	192.168.2.2