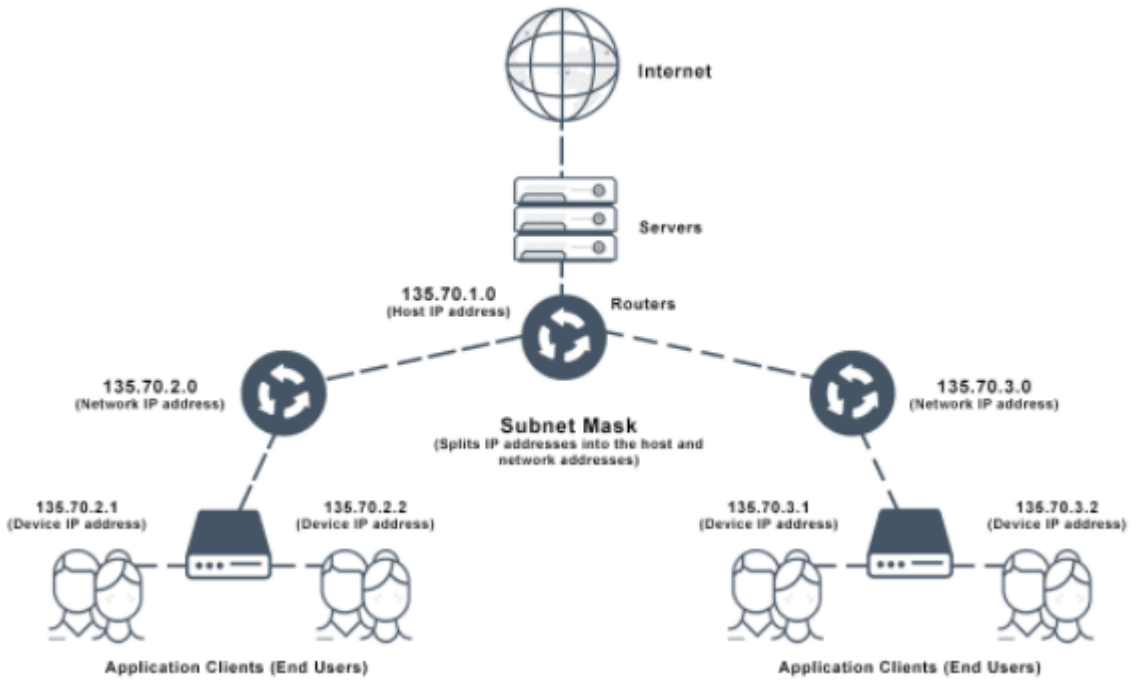
VIT-AP UNIVERSITY

School of Computer Science and Engineering

CSE3003- Computer Networks Lab

Ex No. 10	Demonstration of Subnet masking
Date	6-06-2021
Name	Taran Mamidala
Reg No.	19BCE7346
Slot	L23+L24

Demonstration of Subnet masking

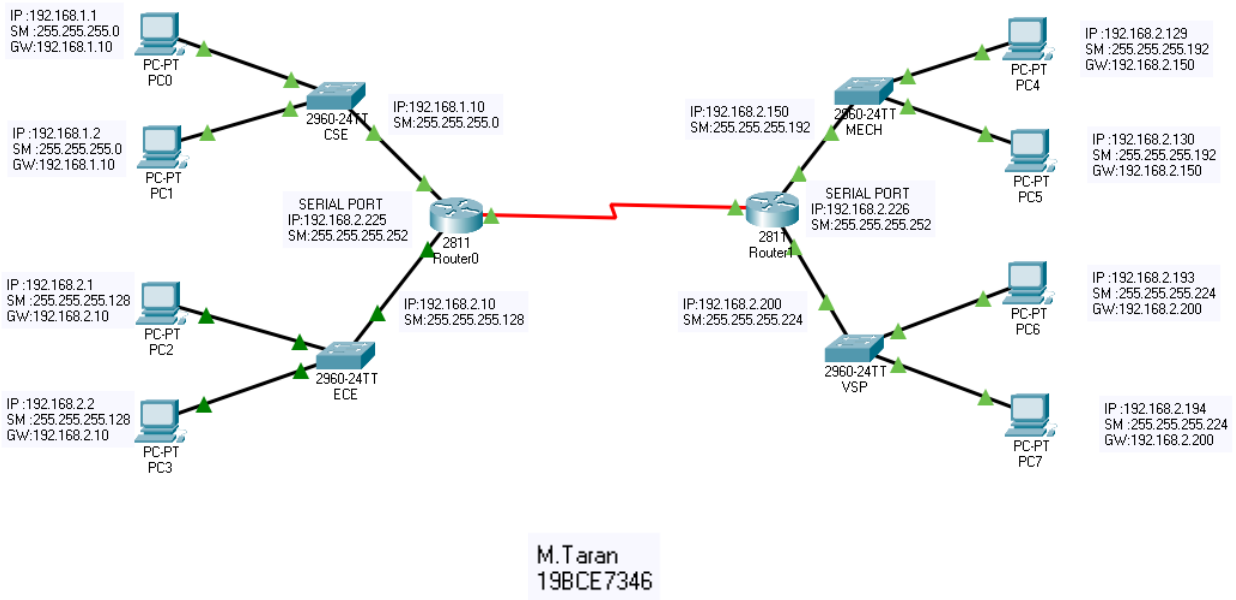


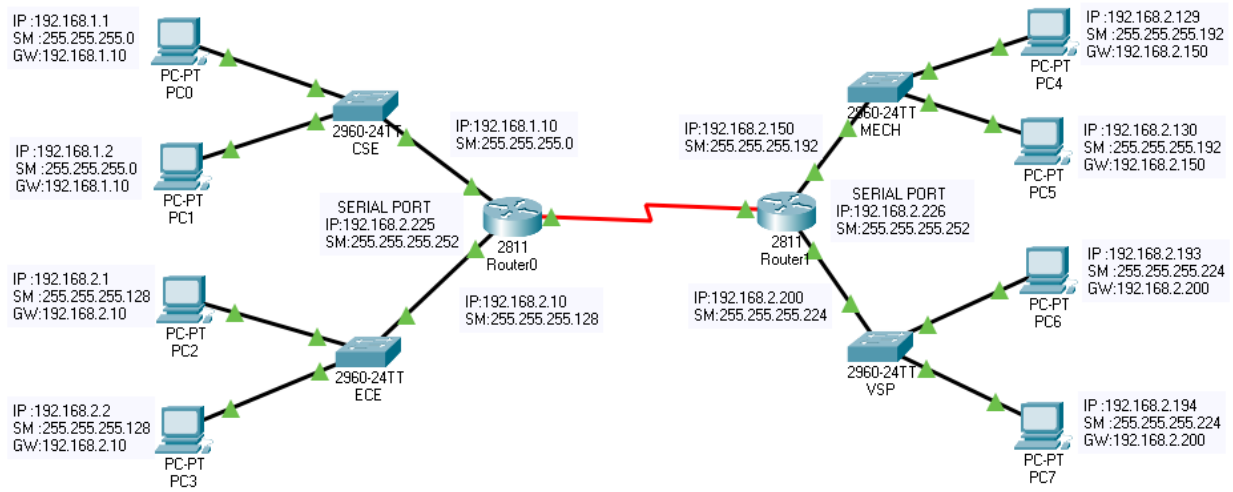
A subnet mask is a 32-bit number created by setting host bits to all 0s and setting network bits to all 1s. In this way, the subnet mask separates the IP address into the network and host addresses.

They are not shown inside the data packets traversing the Internet. They carry the destination IP address, which a router will match with a subnet.

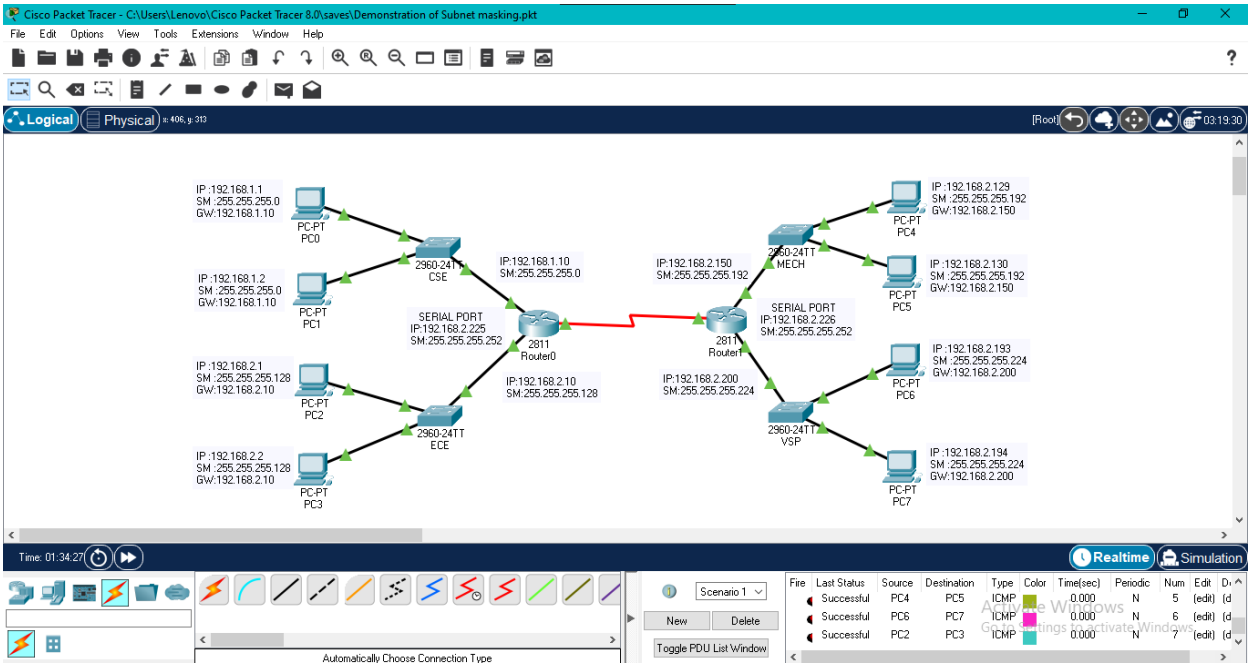
Steps :

Step 1: Create a Network of different departments attached with their respective switches
Step 2: Connect the routers with serial DCE cable
Step 3: Assign IP address and different Gateway for different network of Pc's
Step 4: Assign serial IP address and subnet mask for Router in series
Step 5: Assign Gateway of pc's in at network as IP address for Router in that network
Step 6: Check the packet transmission through different PC's, Routers.

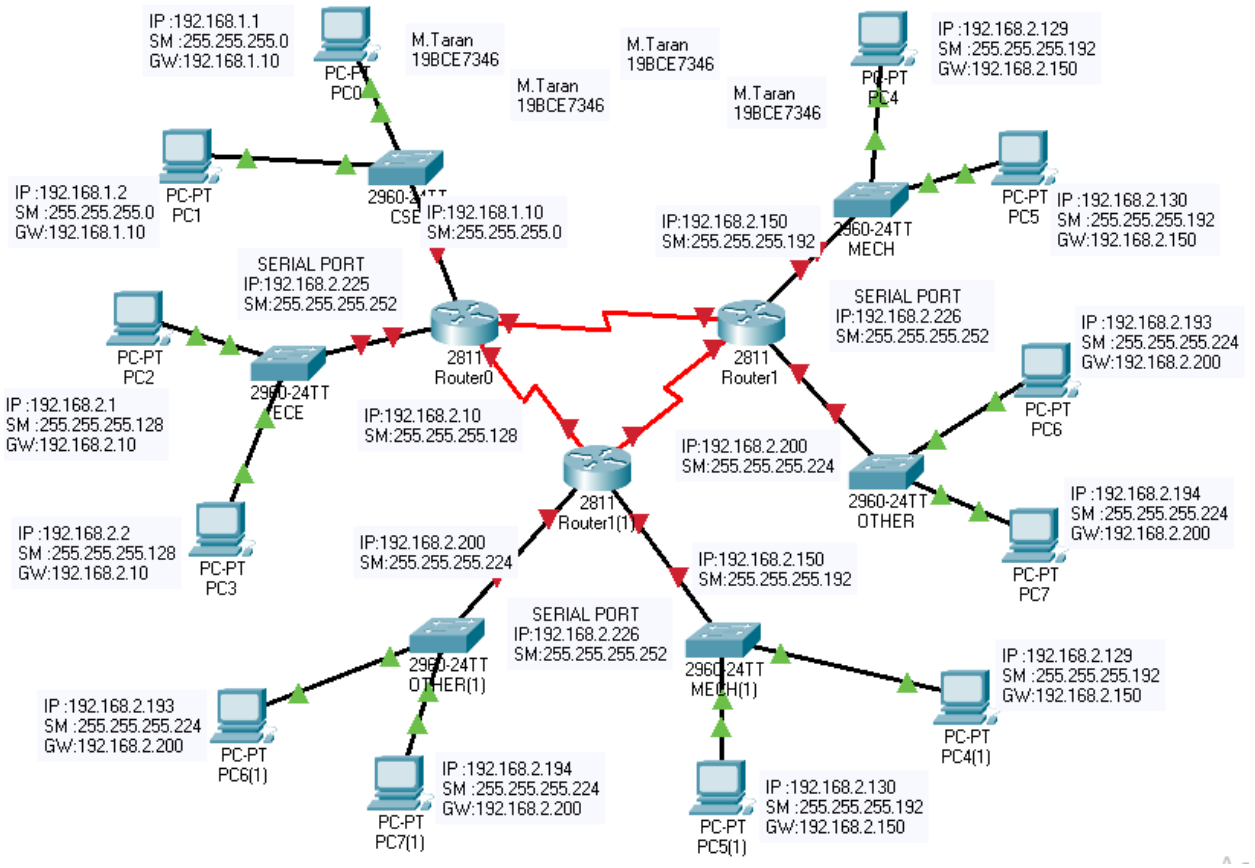


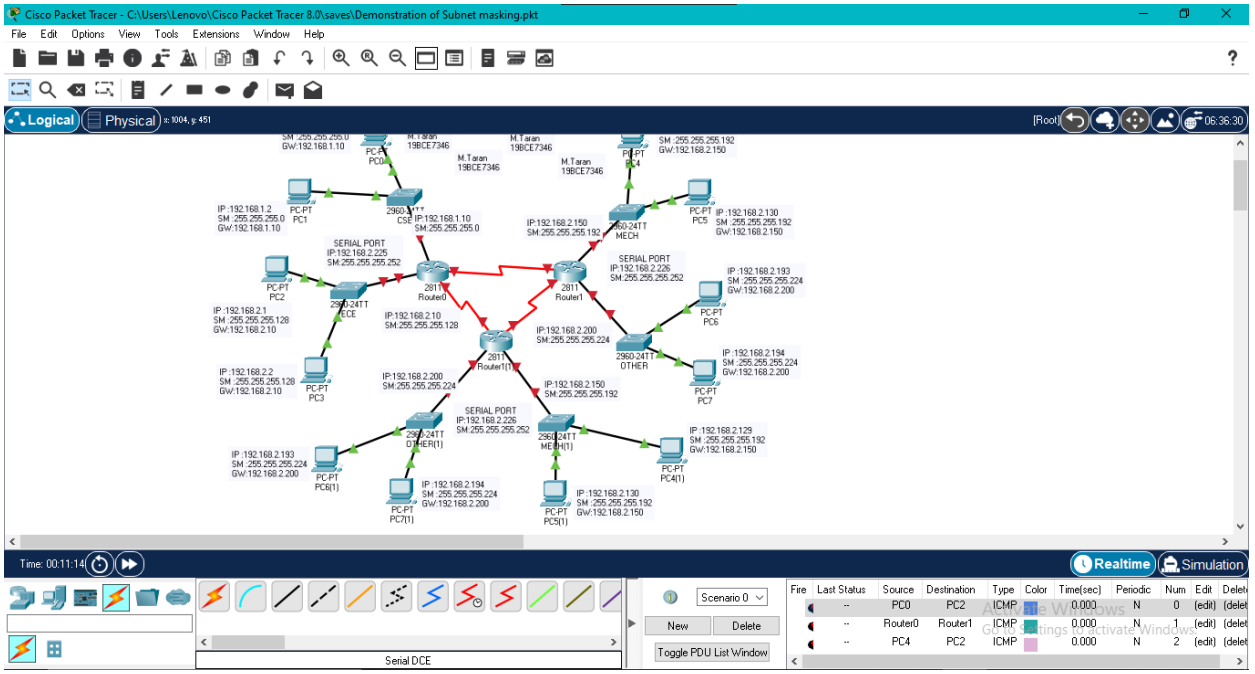


M.Taran
19BCE7346



Also taken with three Routers :


IP :192.168.1.1
SM :255.255.255.0
GW:192.168.1.10
PC-PT
PC0
M.Taran
19BCE7346
M.Taran
19BCE7346
M.Taran
19BCE7346
M.Taran
19BCE7346
PC-PT
PC4
IP :192.168.2.129
SM :255.255.255.192
GW:192.168.2.150
IP :192.168.1.2
SM :255.255.255.0
GW:192.168.1.10
PC-PT
PC1
2960-24TT
CSE
IP:192.168.1.10
SM:255.255.255.0
IP:192.168.2.150
SM:255.255.255.192
2960-24TT
MECH
PC-PT
PC5
IP :192.168.2.130
SM :255.255.255.192
GW:192.168.2.150
SERIAL PORT
IP:192.168.2.225
SM:255.255.255.252
SERIAL PORT
IP:192.168.2.226
SM:255.255.255.252
PC-PT
PC2
2960-24TT
ECE
2811
Router0
2811
Router1
IP :192.168.2.193
SM :255.255.255.224
GW:192.168.2.200
PC-PT
PC6
IP :192.168.2.1
SM :255.255.255.128
GW:192.168.2.10
IP:192.168.2.10
SM:255.255.255.128
IP:192.168.2.200
SM:255.255.255.224
2811
Router1(1)
2960-24TT
OTHER
IP :192.168.2.194
SM :255.255.255.224
GW:192.168.2.200
IP :192.168.2.2
SM :255.255.255.128
GW:192.168.2.10
PC-PT
PC3
IP:192.168.2.200
SM:255.255.255.224
IP:192.168.2.150
SM:255.255.255.192
PC-PT
PC7
SERIAL PORT
IP:192.168.2.226
SM:255.255.255.252
2960-24TT
OTHER(1)
2960-24TT
MECH(1)
IP :192.168.2.129
SM :255.255.255.192
GW:192.168.2.150
IP :192.168.2.193
SM :255.255.255.224
GW:192.168.2.200
PC-PT
PC6(1)
PC-PT
PC4(1)
IP :192.168.2.194
SM :255.255.255.224
GW:192.168.2.200
IP :192.168.2.130
SM :255.255.255.192
GW:192.168.2.150
PC-PT
PC7(1)
PC-PT
PC5(1)


Cisco Packet Tracer - C:\Users\Lenovo\Cisco Packet Tracer 8.0\saves\Demonstration of Subnet masking.pkt
File Edit Options View Tools Extensions Window Help
Logical
Physical
Time: 00:11:14
Realtime
Simulation
Scenario 0
New
Delete
Toggle PDU List Window
Serial DCE
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
PC0
PC2
ICMP
Router0
Router1
ICMP
PC4
PC2
ICMP

PDU list window of different transmission :

PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
	Successful	PC3	Router0	ICMP		0.000	N	1
	Successful	PC7	Router1	ICMP		0.000	N	2
	Successful	Router0	PC3	ICMP		0.000	N	3
	Successful	PC6	Router1	ICMP		0.000	N	4
	Successful	PC4	Router1	ICMP		0.000	N	5
	Successful	Router1	PC4	ICMP		0.000	N	6
	Successful	Router1	PC7	ICMP		0.000	N	7
	Successful	Router0	Router1	ICMP		0.000	N	8
	Successful	Router1	PC6	ICMP		0.000	N	9
	Successful	Router1	PC7	ICMP		0.000	N	10
	Successful	PC0	PC1	ICMP		0.000	N	11
	Successful	PC4	PC5	ICMP		0.000	N	12

With three routers in network

PDU List Window

Fire	Last Status	Source	Destination	Type	Color
	Successful	PC0	PC1	ICMP	
	Successful	PC2	PC3	ICMP	
	Successful	PC1	PC3	ICMP	
	Successful	Router1	Router2	ICMP	
	Successful	PC3	PC2	ICMP	
	Successful	Router3	Router2	ICMP	
	Successful	PC1	Router3	ICMP	
	Successful	PC3	Router0	ICMP	
	Successful	PC1	Router2	ICMP	
	Successful	PC0	Router3	ICMP	
	Successful	Router1	Router0	ICMP	