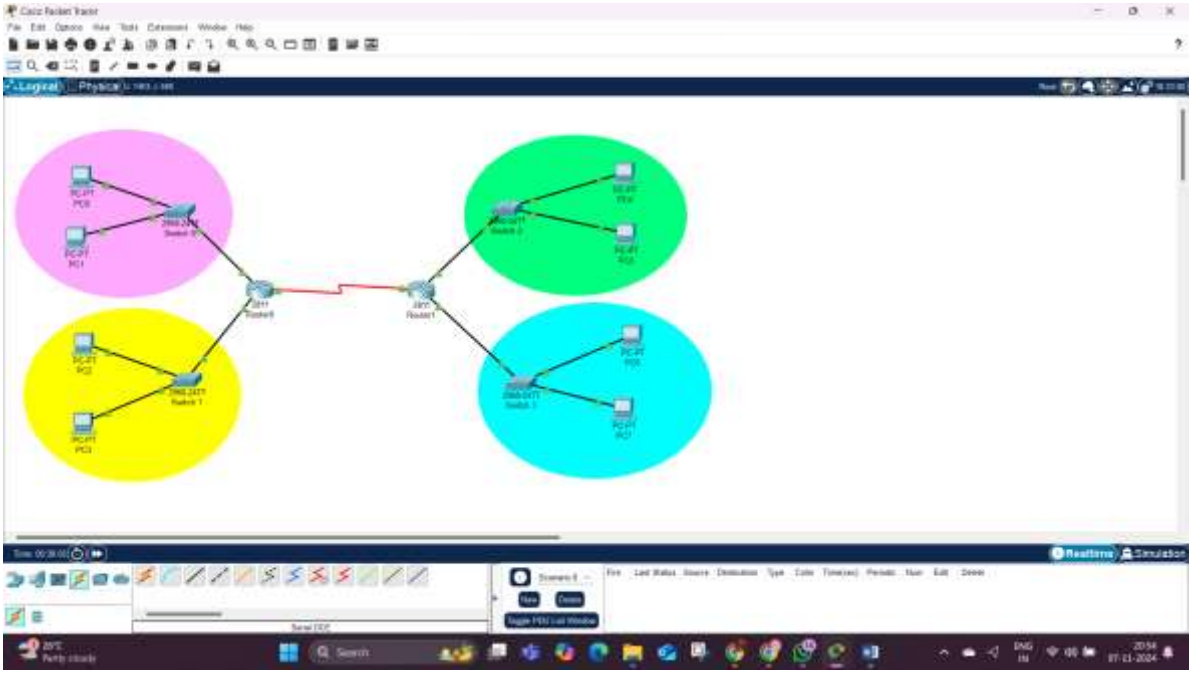
EXPERIMENT – 9

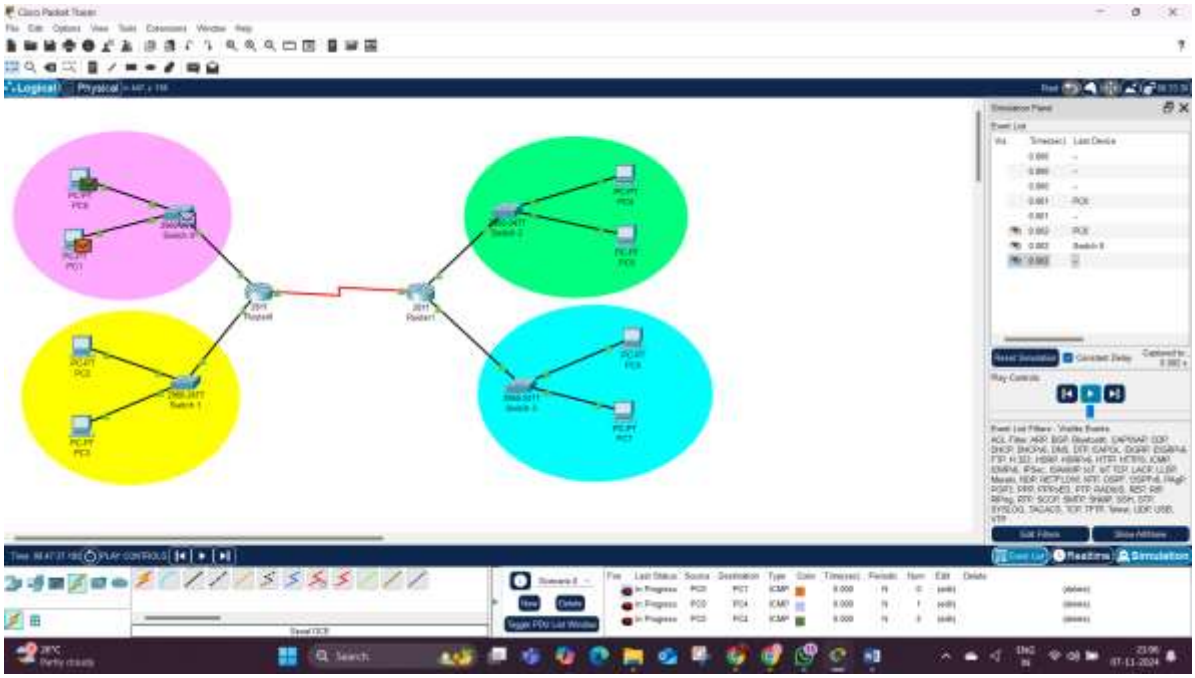
AIM: - Implementation of SUBNETTING in CISCO PACKET TRACER simulator.

What is subnetting?

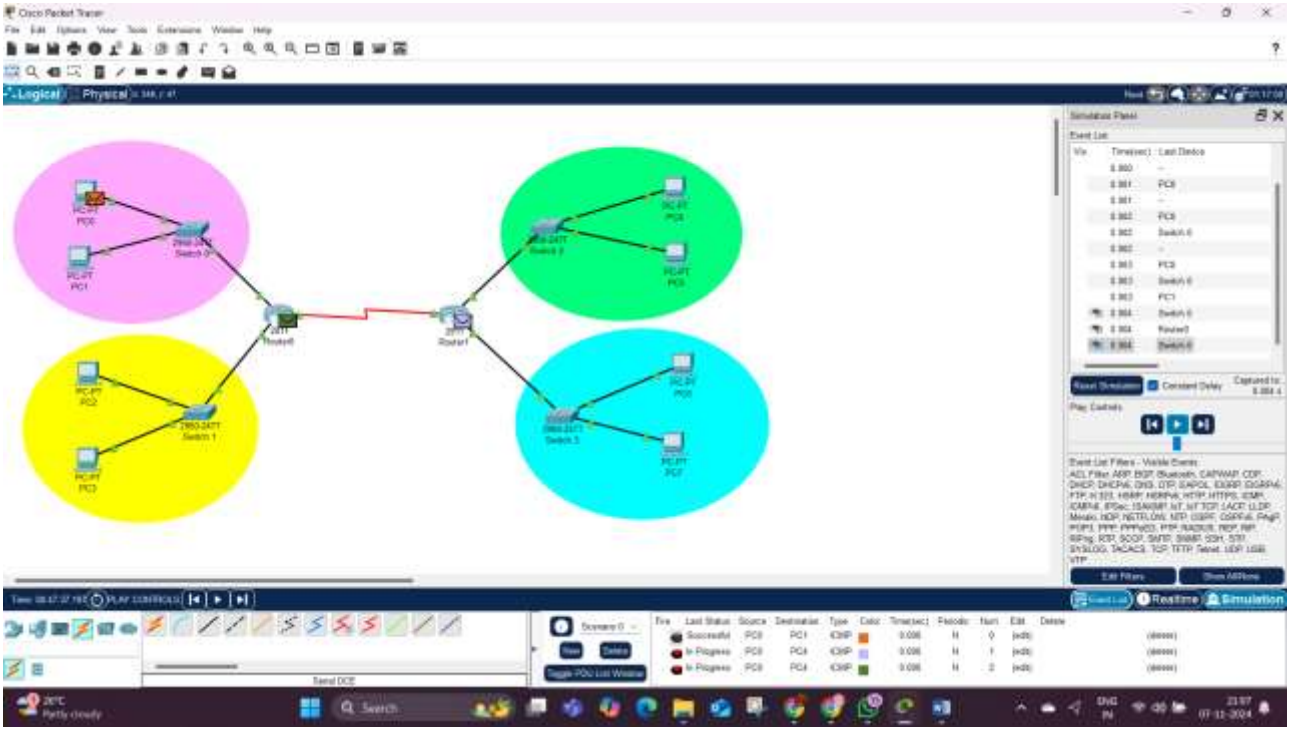
Classless IP subnetting is a technique that allows for more efficient use of IP addresses by allowing for subnet masks that are not just the default masks for each IP class. This means that we can divide our IP address space into smaller subnets, which can be useful when we have a limited number of IP addresses but need to create multiple networks.

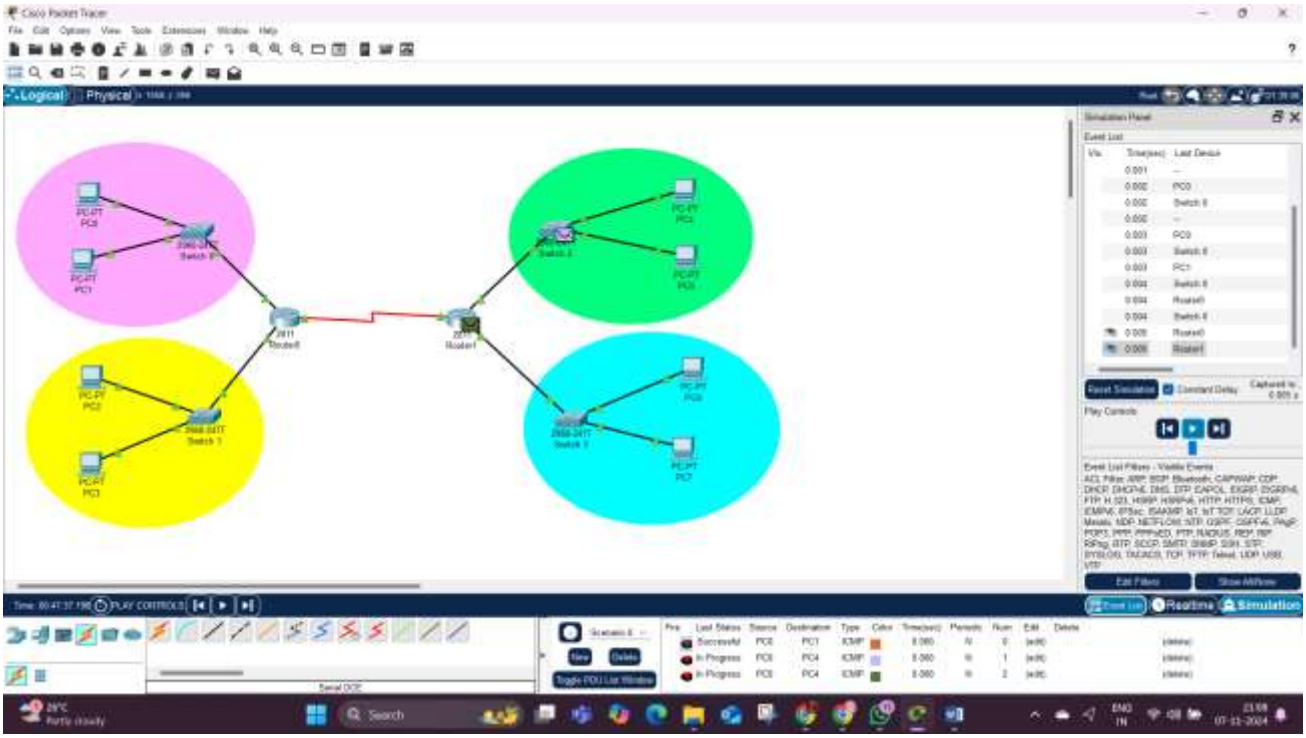
OUTPUT: -

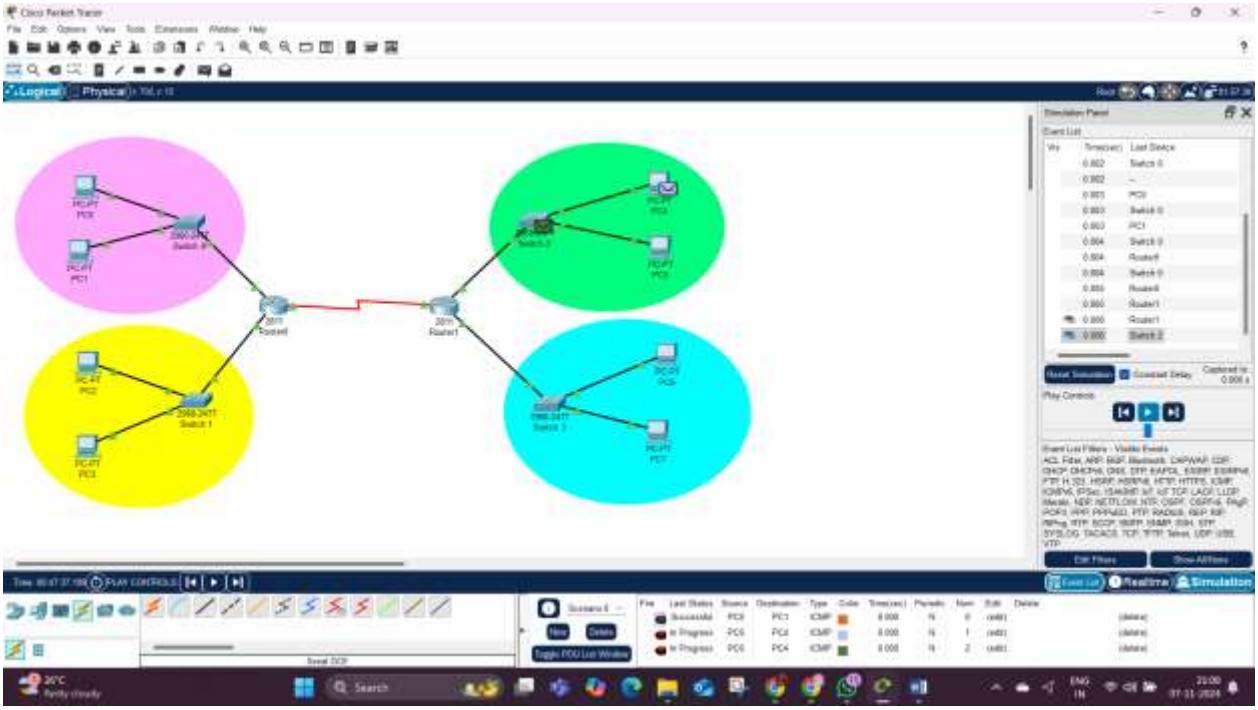




Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	PC1	ICMP		0.000	N	0	(edit)	(delete)
	Failed	PC0	PC4	ICMP		0.000	N	1	(edit)	(delete)
	Successful	PC0	PC4	ICMP		0.000	N	2	(edit)	(delete)







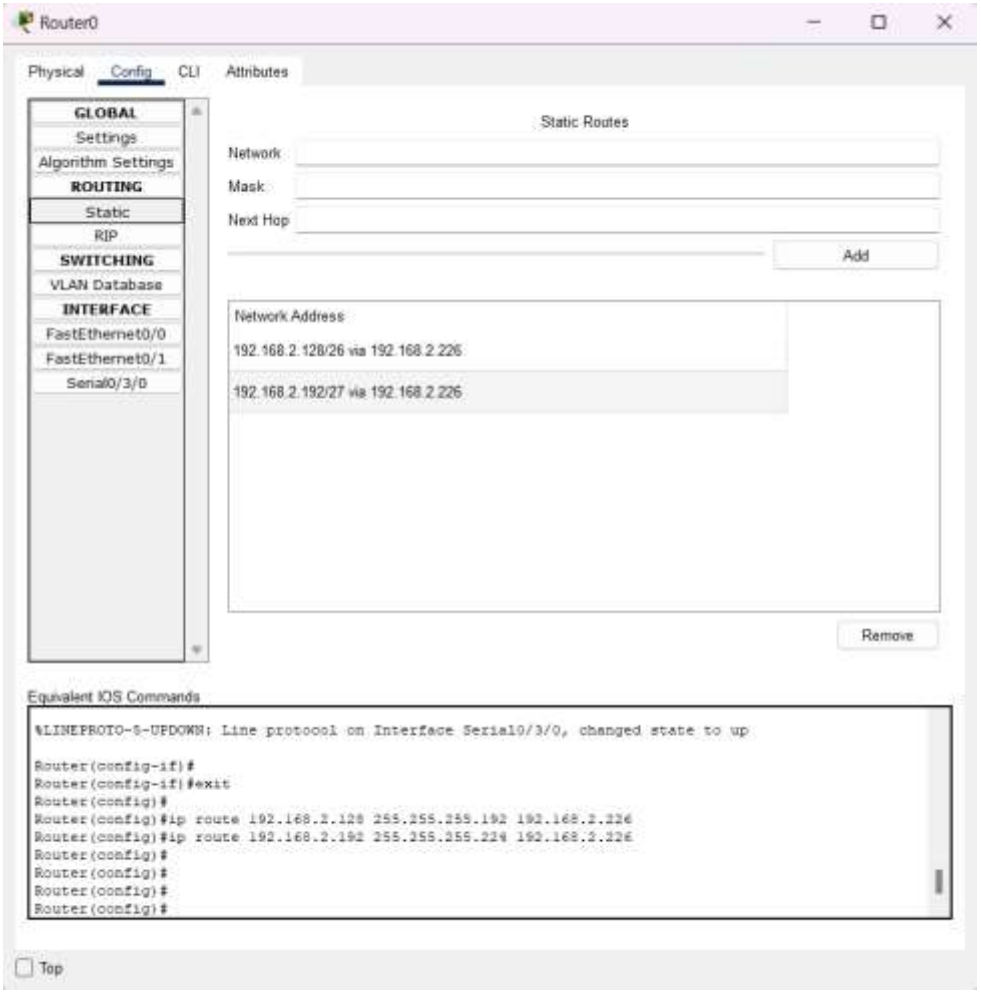
PC0

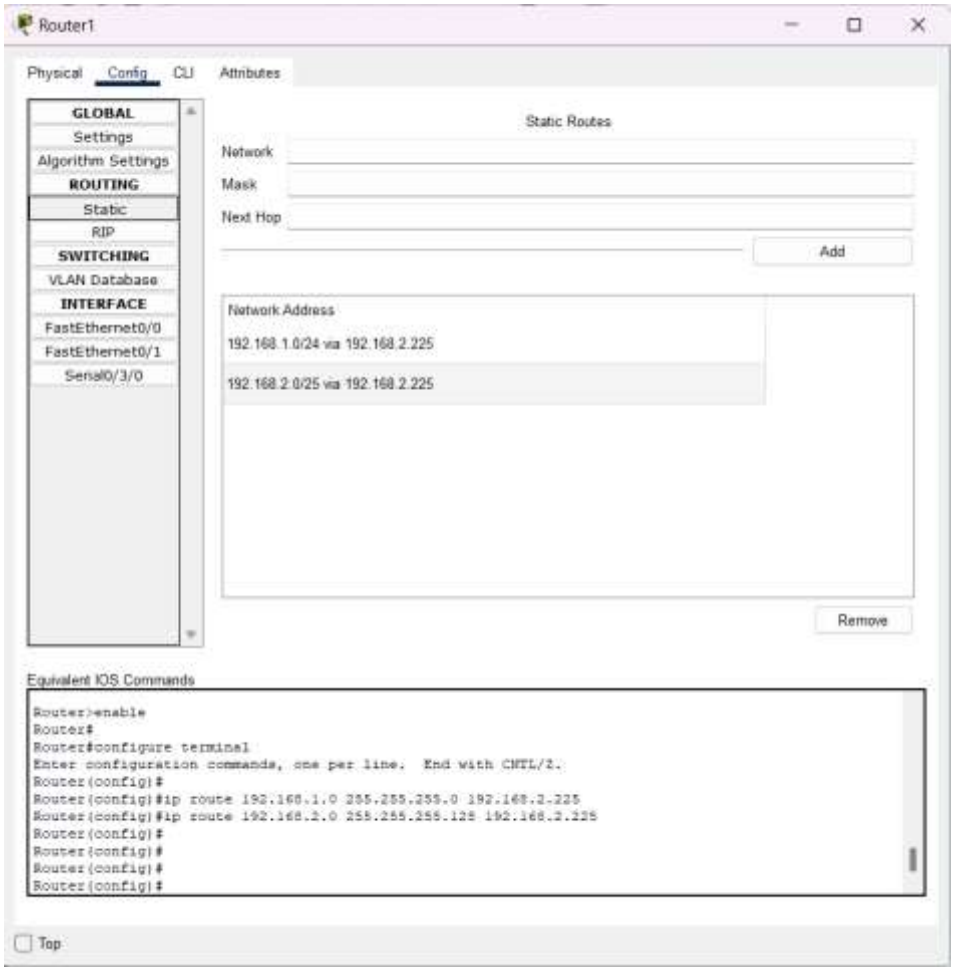
Physical Config Desktop Programming Attributes

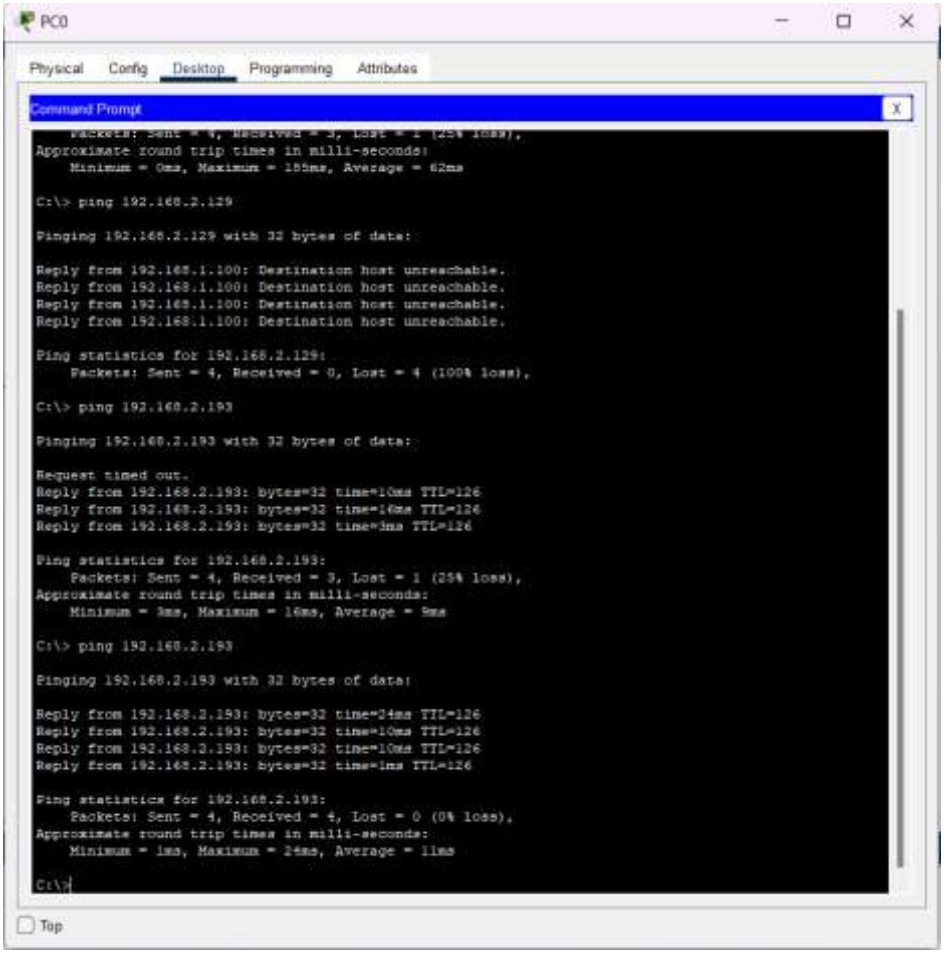
Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\> ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.2: bytes=32 time=185ms TTL=127
Reply from 192.168.2.2: bytes=32 time=1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 185ms, Average = 62ms

C:\>
```

Top


Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/3/0
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.2.128/26 via 192.168.2.226
192.168.2.192/27 via 192.168.2.226
Remove
Equivalent IOS Commands
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/0, changed state to up
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#ip route 192.168.2.128 255.255.255.192 192.168.2.226
Router(config)#ip route 192.168.2.192 255.255.255.224 192.168.2.226
Router(config)#
Router(config)#
Router(config)#
Router(config)#
Top


Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/3/0
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.1.0/24 via 192.168.2.225
192.168.2.0/25 via 192.168.2.225
Remove
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.2.225
Router(config)#ip route 192.168.2.0 255.255.255.128 192.168.2.225
Router(config)#
Router(config)#
Router(config)#
Router(config)#
Top



RESULT: -

Implementation of SUBNETTING in CISCO PACKET TRACER simulator have been done successfully.