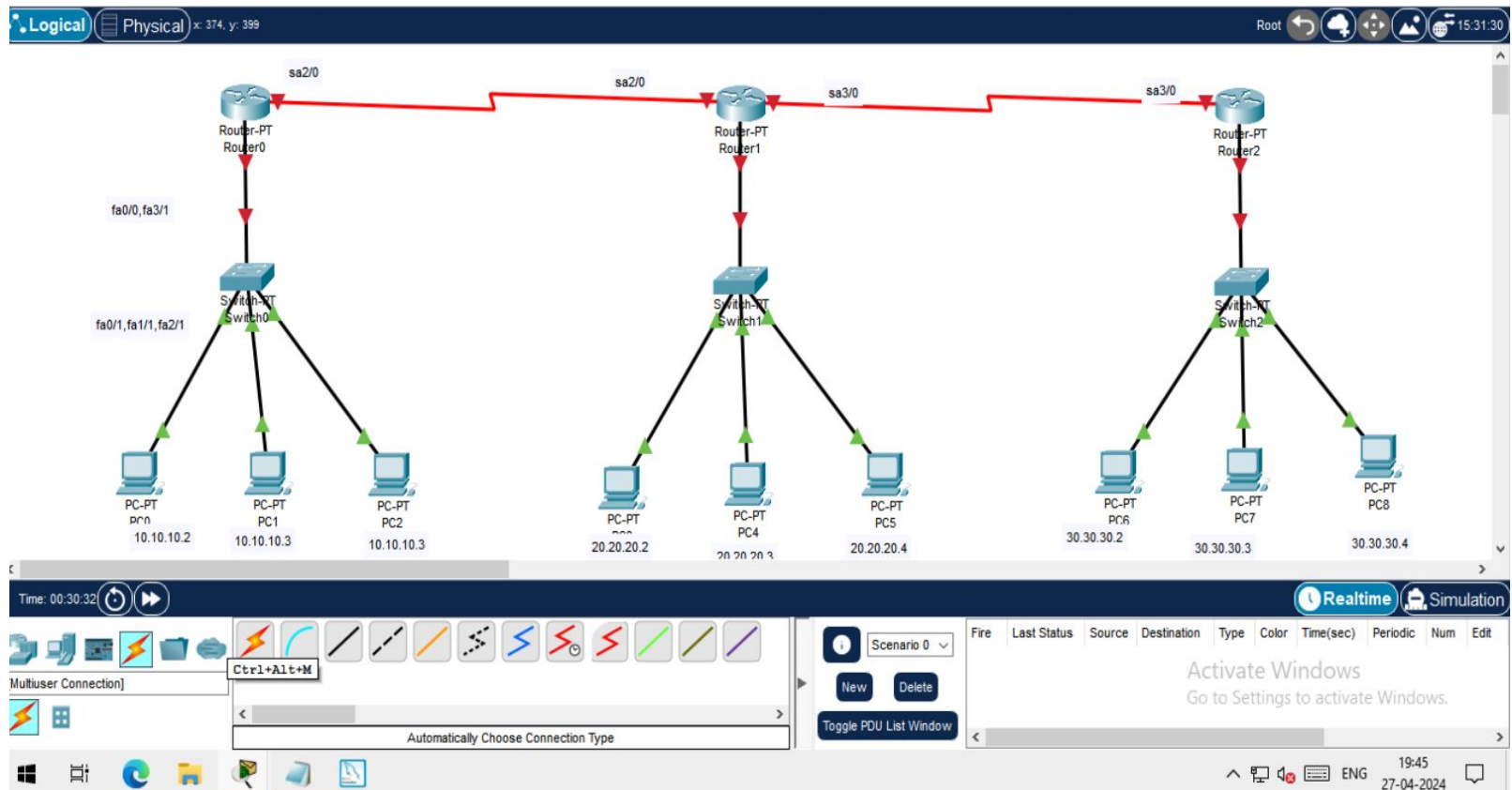# TASK: BGP USING 3 ROUTER
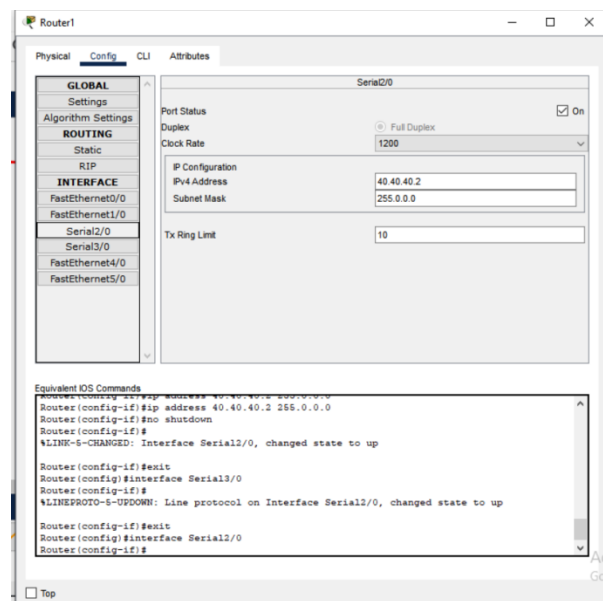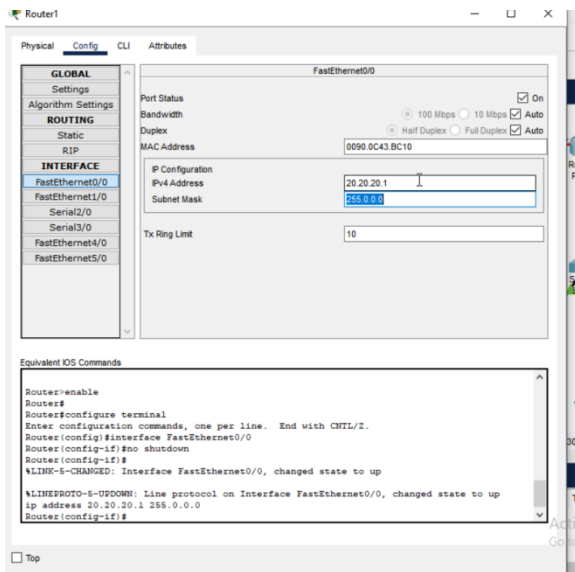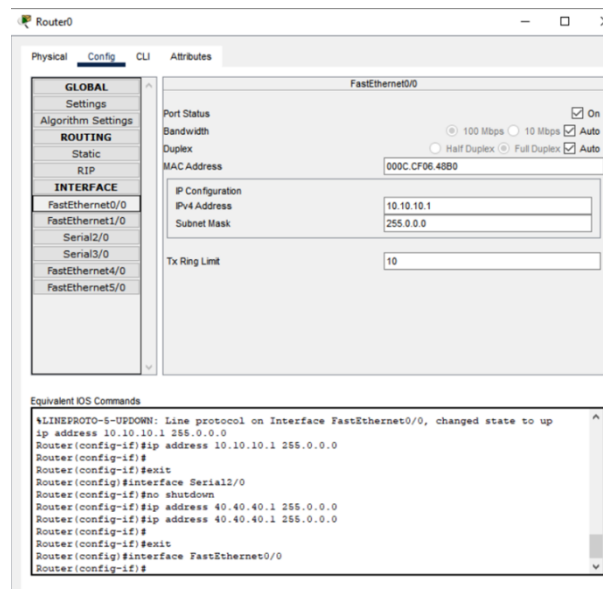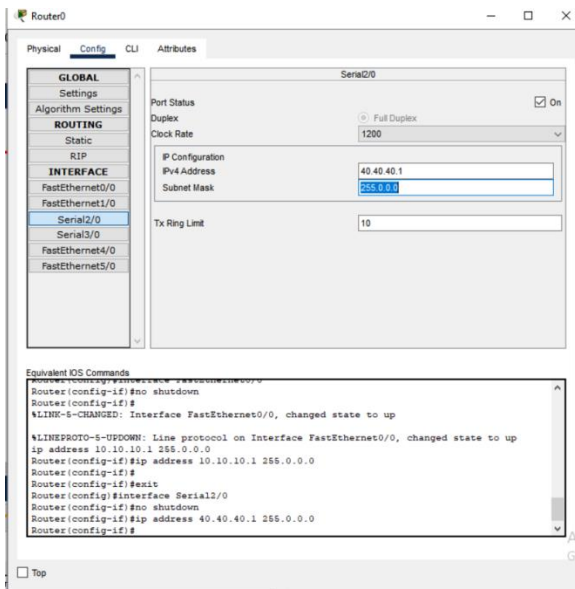
-Using packet tracker,create anetwork with 3 router with bgp and each router associated network will have minimum 3pc and 3switches show connectivity
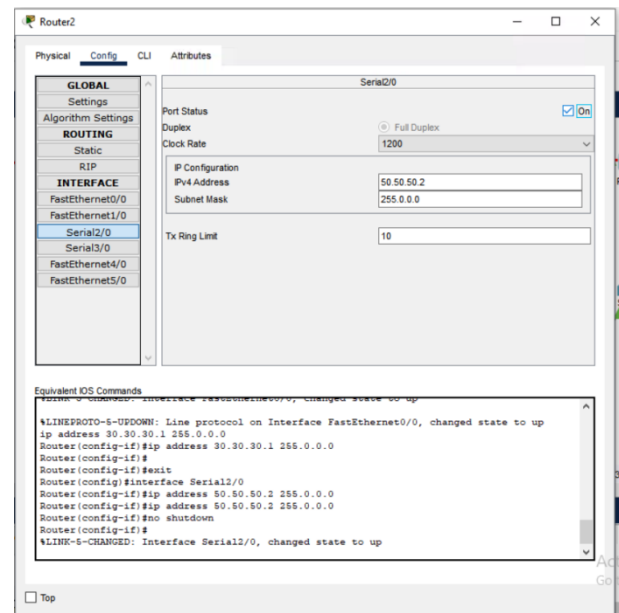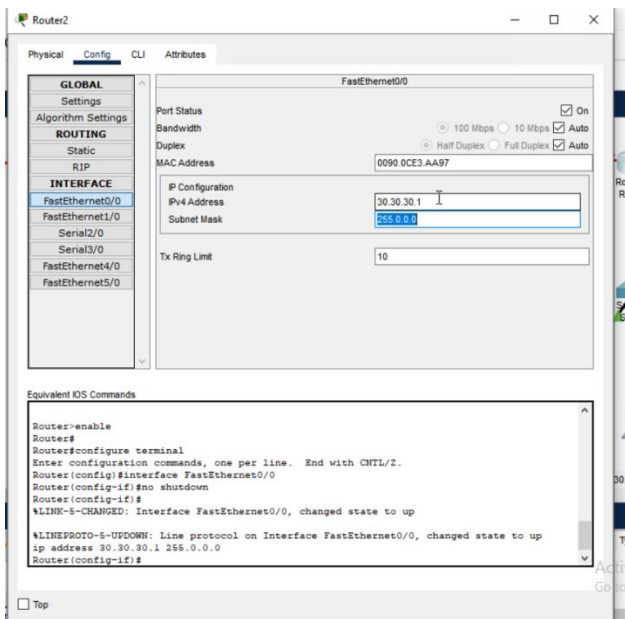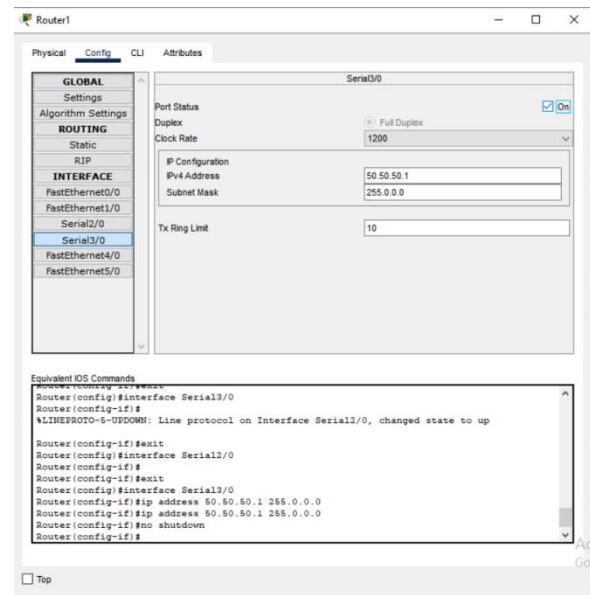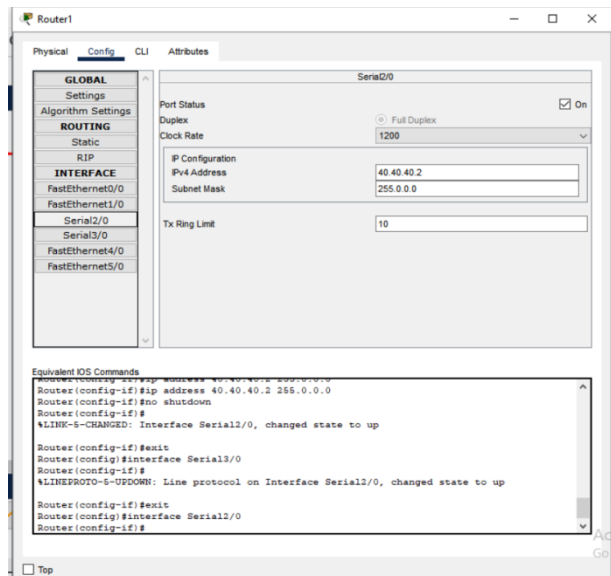
step-1- add 3 router, 9pc and 3 switches.

Step2- add wires with eachother.

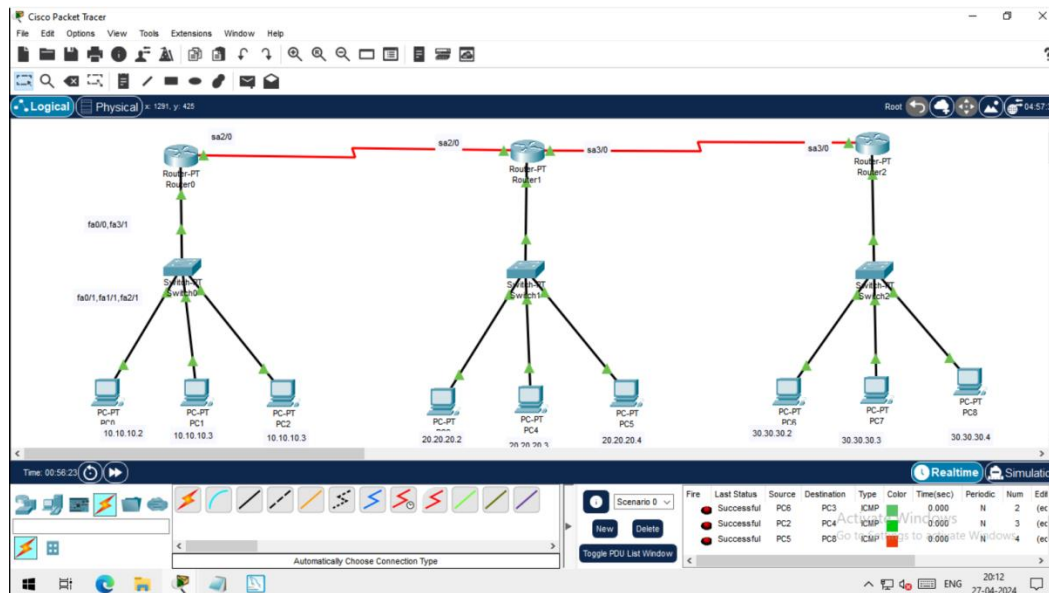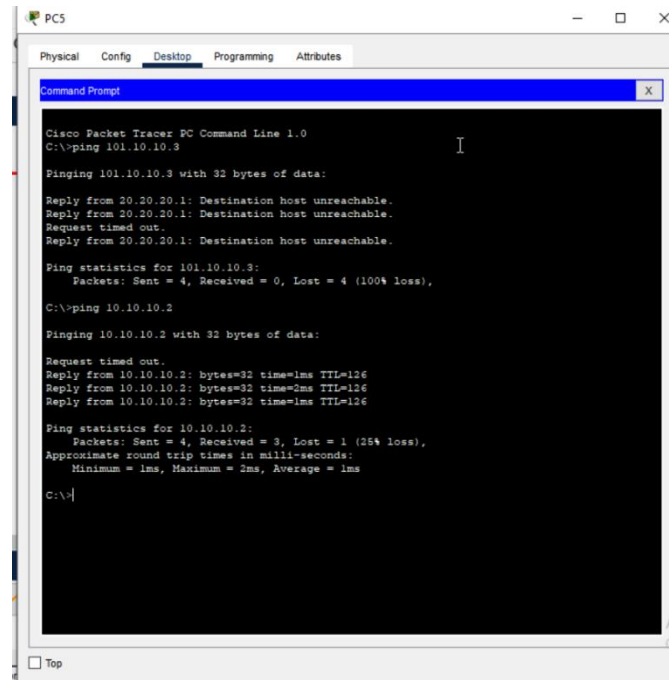Step3-add ip address to pc

Created By: Ashutosh Nayak

Router0 — Serial2/0 (Config)

Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

Serial2/0

Port Status: ☑ On
Duplex: ⦿ Full Duplex
Clock Rate: 1200

IP Configuration
IPv4 Address: 40.40.40.1
Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 10.10.10.1 255.0.0.0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#no shutdown
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#
```
☐ Top

Router0 — FastEthernet0/0 (Config)

Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

FastEthernet0/0

Port Status: ☑ On
Bandwidth: ⦿ 100 Mbps ○ 10 Mbps ☑ Auto
Duplex: ○ Half Duplex ⦿ Full Duplex ☑ Auto
MAC Address: 000C.CF06.48B0

IP Configuration
IPv4 Address: 10.10.10.1
Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 10.10.10.1 255.0.0.0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#no shutdown
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

Router1 — FastEthernet0/0 (Config)

Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

FastEthernet0/0

Port Status: ☑ On
Bandwidth: ⦿ 100 Mbps ○ 10 Mbps ☑ Auto
Duplex: ⦿ Half Duplex ○ Full Duplex ☑ Auto
MAC Address: 0090.0C43.BC10

IP Configuration
IPv4 Address: 20.20.20.1
Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 20.20.20.1 255.0.0.0
Router(config-if)#
```
☐ Top

Router1 — Serial2/0 (Config)

Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

Serial2/0

Port Status: ☑ On
Duplex: ⦿ Full Duplex
Clock Rate: 1200

IP Configuration
IPv4 Address: 40.40.40.2
Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
Router(config-if)#ip address 40.40.40.2 255.0.0.0
Router(config-if)#ip address 40.40.40.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
```
☐ Top

Created By: Ashutosh Nayak

Router1 — Config — Serial2/0

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

Port Status: ☑ On
Duplex: ● Full Duplex
Clock Rate: 1200

IP Configuration
- IPv4 Address: 40.40.40.2
- Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
Router(config-if)#ip address 40.40.40.2 255.0.0.0
Router(config-if)#ip address 40.40.40.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
```
☐ Top

Router1 — Config — Serial3/0

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

Port Status: ☑ On
Duplex: ● Full Duplex
Clock Rate: 1200

IP Configuration
- IPv4 Address: 50.50.50.1
- Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#ip address 50.50.50.1 255.0.0.0
Router(config-if)#ip address 50.50.50.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
```
☐ Top

Router2 — Config — FastEthernet0/0

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

Port Status: ☑ On
Bandwidth: ● 100 Mbps ○ 10 Mbps ☑ Auto
Duplex: ● Half Duplex ● Full Duplex ☑ Auto
MAC Address: 0090.0CE3.AA97

IP Configuration
- IPv4 Address: 30.30.30.1
- Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 30.30.30.1 255.0.0.0
Router(config-if)#
```
☐ Top

Router2 — Config — Serial2/0

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

INTERFACE
- FastEthernet0/0
- FastEthernet1/0
- Serial2/0
- Serial3/0
- FastEthernet4/0
- FastEthernet5/0

Port Status: ☑ On
Duplex: ● Full Duplex
Clock Rate: 1200

IP Configuration
- IPv4 Address: 50.50.50.2
- Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

Equivalent IOS Commands
```
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 30.30.30.1 255.0.0.0
Router(config-if)#ip address 30.30.30.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 50.50.50.2 255.0.0.0
Router(config-if)#ip address 50.50.50.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```
☐ Top

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Router0

IOS Command Line Interface

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 10.10.10.1 255.0.0.0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#no shutdown
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router bgp 1
Router(config-router)#network 10.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#neighbor 40.40.40.2 remote-as 2
Router(config-router)#exit
Router(config)#
```

Router1

IOS Command Line Interface

```
Router(config-if)#ip address 40.40.40.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config)#interface Serial3/0
Router(config-if)#ip address 50.50.50.1 255.0.0.0
Router(config-if)#ip address 50.50.50.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router(config-if)#exit
Router(config)#router bgp 2
Router(config-router)#network 20.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#
Router(config-router)#network 50.0.0.0
Router(config-router)#neighbor 40.40.40.1 remote-as 1
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 40.40.40.1 Up
neighbor 50.50.50.2 remote-as 3
Router(config-router)#exit
Router(config)#
```

Router2

IOS Command Line Interface

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 30.30.30.1 255.0.0.0
Router(config-if)#ip address 30.30.30.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 50.50.50.2 255.0.0.0
Router(config-if)#ip address 50.50.50.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#router bgp 3
Router(config-router)#network 30.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#neighbor 50.50.50.1 rempte-as 2
                                             ^
% Invalid input detected at '^' marker.

Router(config-router)#neighbor 50.50.50.1 remote-as 2
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 50.50.50.1 Up
exit
Router(config)#
```


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Task: RIP configuration in 3 Routers

 - Open ciscopacket tracker add 6 pc (Pc0,pPS1,pc2,pc3,pc4,pc5)and there ip address

-Add 3 switches and 3 router respectively .

-Connect pc to switches using automatic wire.

-Now add ip adress .

-Now router 2 can't connect with other router so go to router config and add ip adress and default adreaaand add extrenal ports.-npw routers are connected with each other

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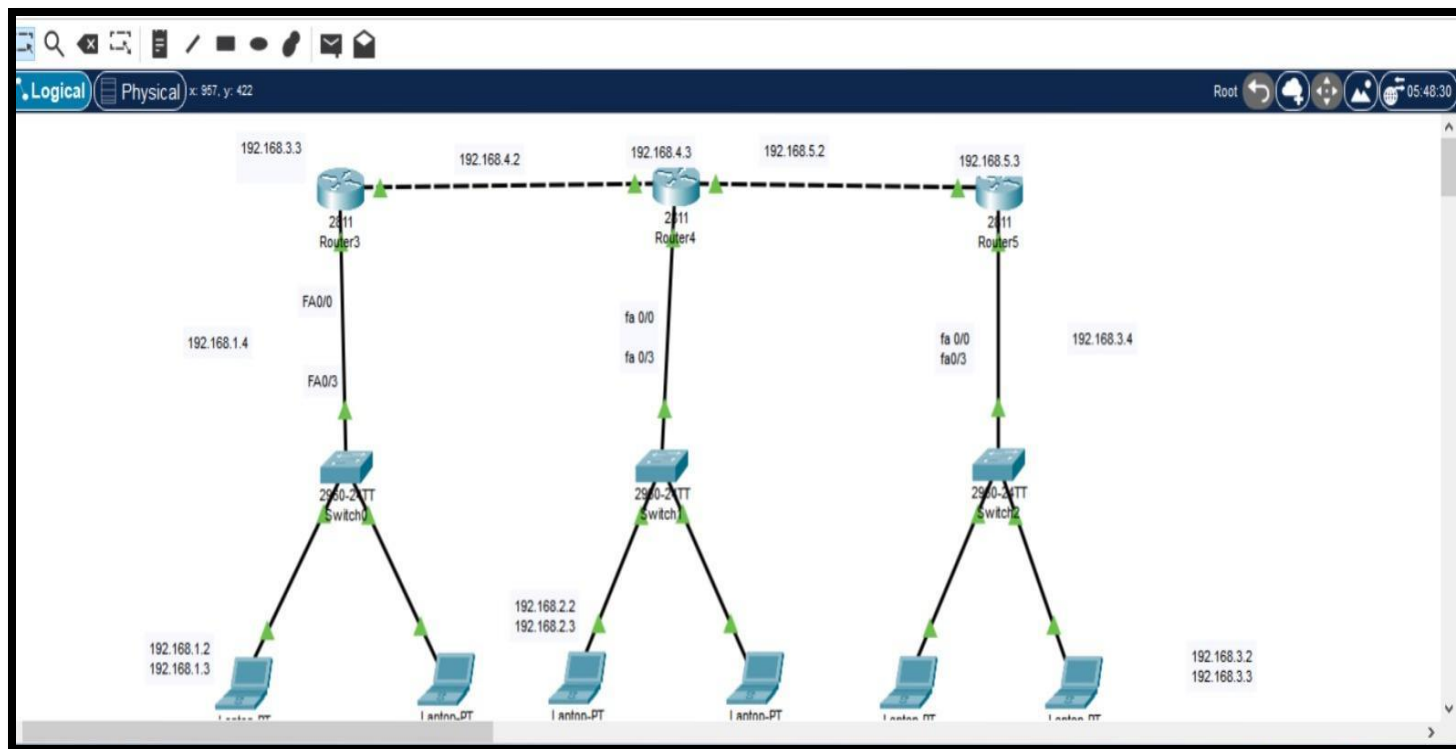
Laptop0

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

○ DHCP ● Static

IPv4 Address: 192.168.1.2
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.4
DNS Server: 0.0.0.0

IPv6 Configuration

○ Automatic ● Static

IPv6 Address: _____ / ____
Link Local Address: FE80::2E0:B0FF:FEAD:B2BE
Default Gateway: _____
DNS Server: _____

802.1X

☐ Use 802.1X Security

Authentication: MD5
Username: _____
Password: _____

☐ Top

Router3

Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

SWITCHING
- VLAN Database

INTERFACE
- FastEthernet0/0
- FastEthernet0/1
- FastEthernet1/0

FastEthernet0/0

Port Status ☑ On

Bandwidth: ◉ 100 Mbps ○ 10 Mbps ☑ Auto

Duplex: ○ Half Duplex ◉ Full Duplex ☑ Auto

MAC Address: 00D0.D34B.4701

IP Configuration

IPv4 Address: 192.168.1.4
Subnet Mask: 255.255.255.0

Tx Ring Limit: 10

Equivalent IOS Commands

```
Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
%SYS-5-CONFIG_I: Configured from console by console

?Bad filename
%Error parsing filename (Bad file number)
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

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Router3 — □ ✕

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
FastEthernet1/0

RIP Routing

Network: 192.168.4.0

Add

Network Address

Remove

Equivalent IOS Commands
```
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
?Bad filename
%Error parsing filename (Bad file number)
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
```

☐ Top

Router4 — □ ✕

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
FastEthernet1/0

RIP Routing

Network:

Add

Network Address
192.168.2.0
192.168.4.0
192.168.5.0

Remove

Equivalent IOS Commands
```
no network 192.168.5.0
Router(config-router)#no network 192.168.5.0
Router(config-router)#
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
%SYS-5-CONFIG_I: Configured from console by console
network 192.168.2.0
Router(config-router)#network 192.168.4.0
Router(config-router)#network 192.168.5.0
Router(config-router)#
```

☐ Top

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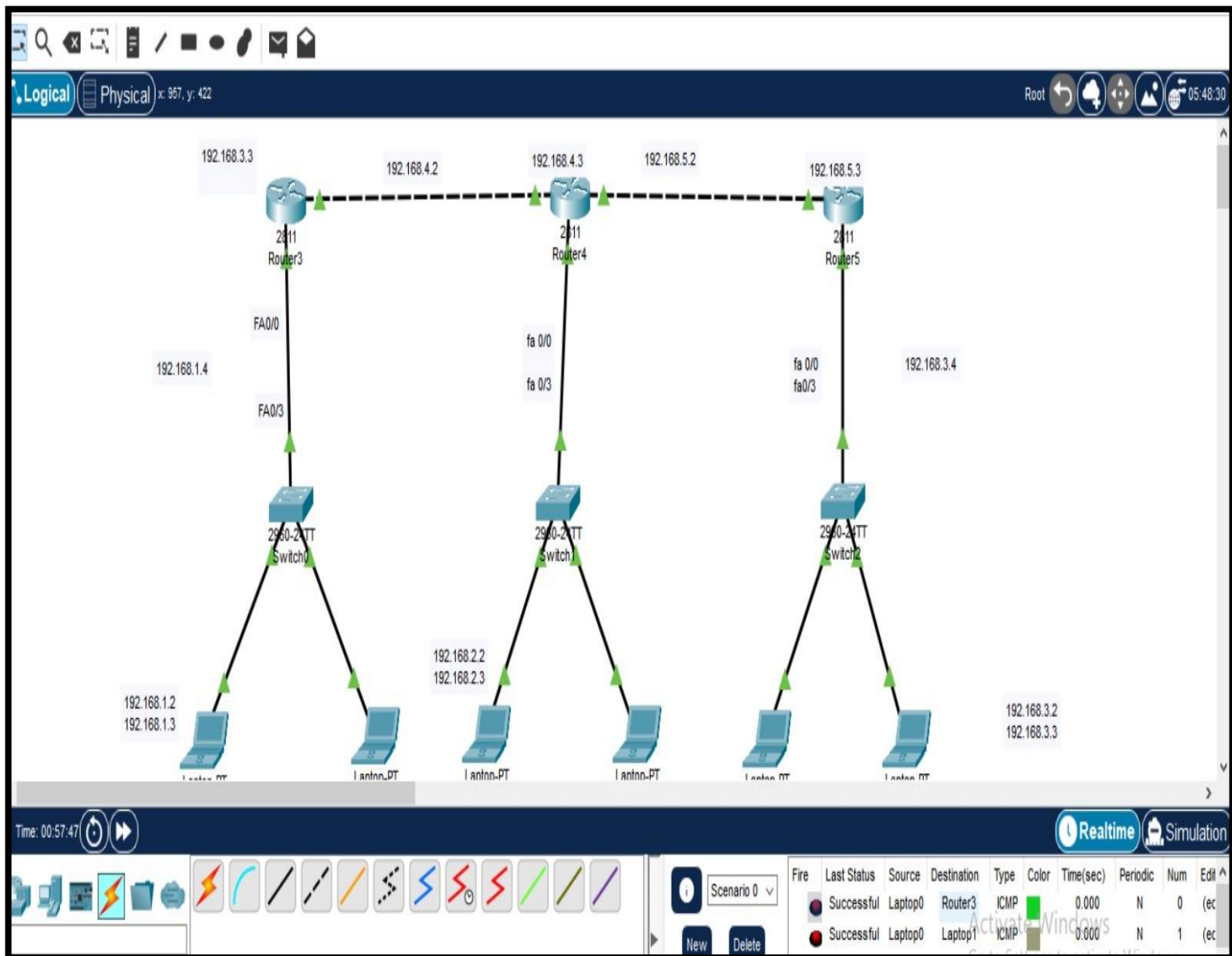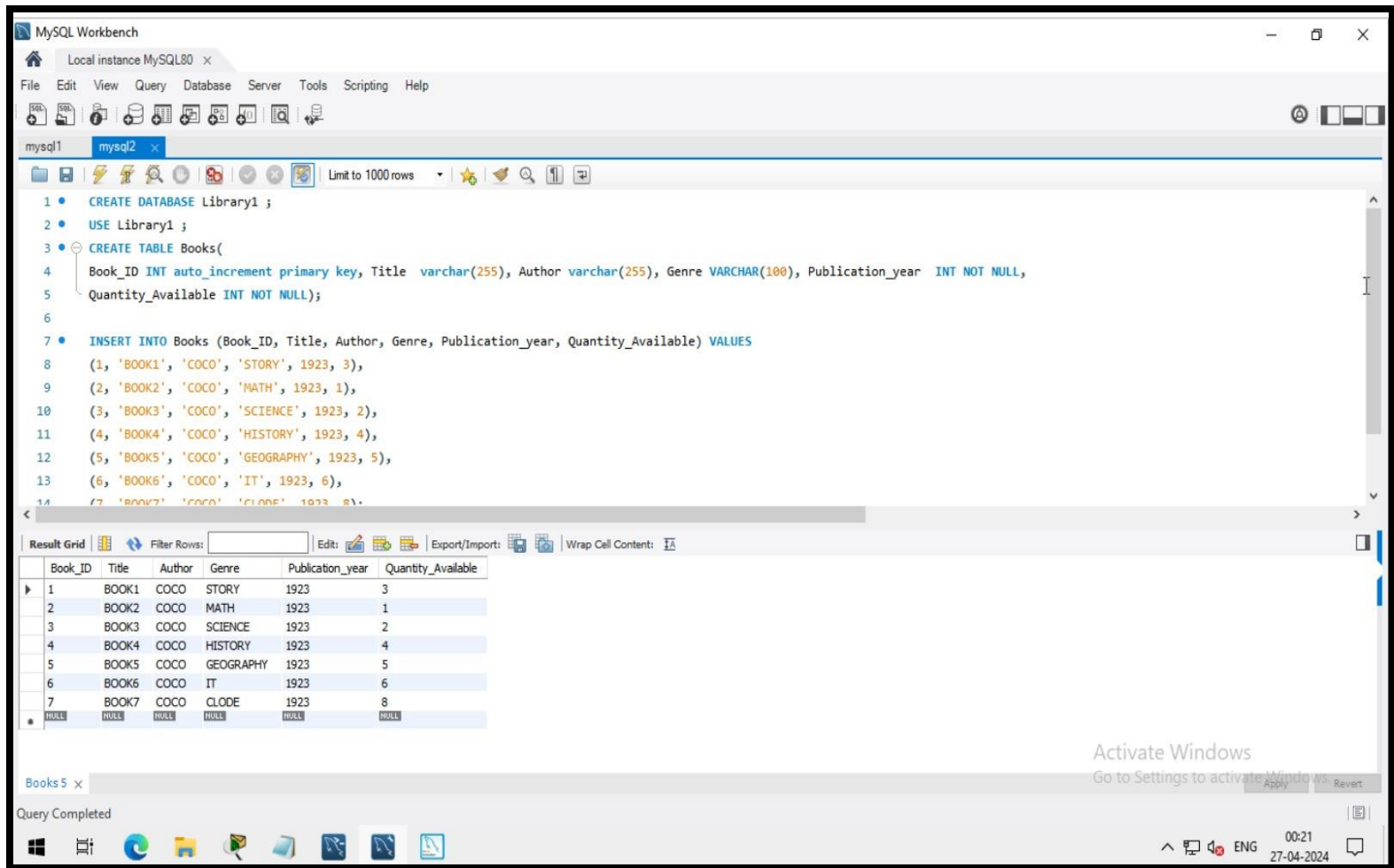
Task: To create database for local library

-Create database databasename, Use database, create table
tablename and columns, insert in to table .

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