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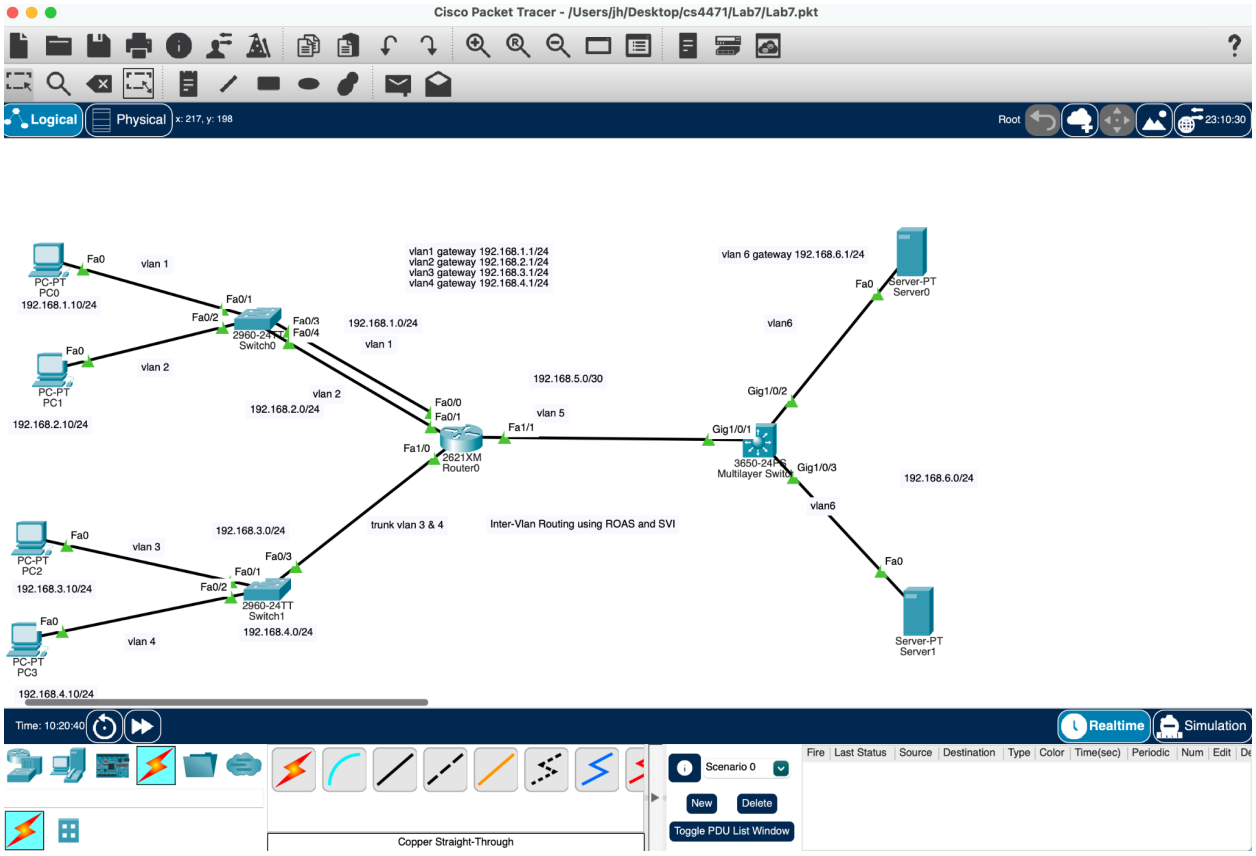
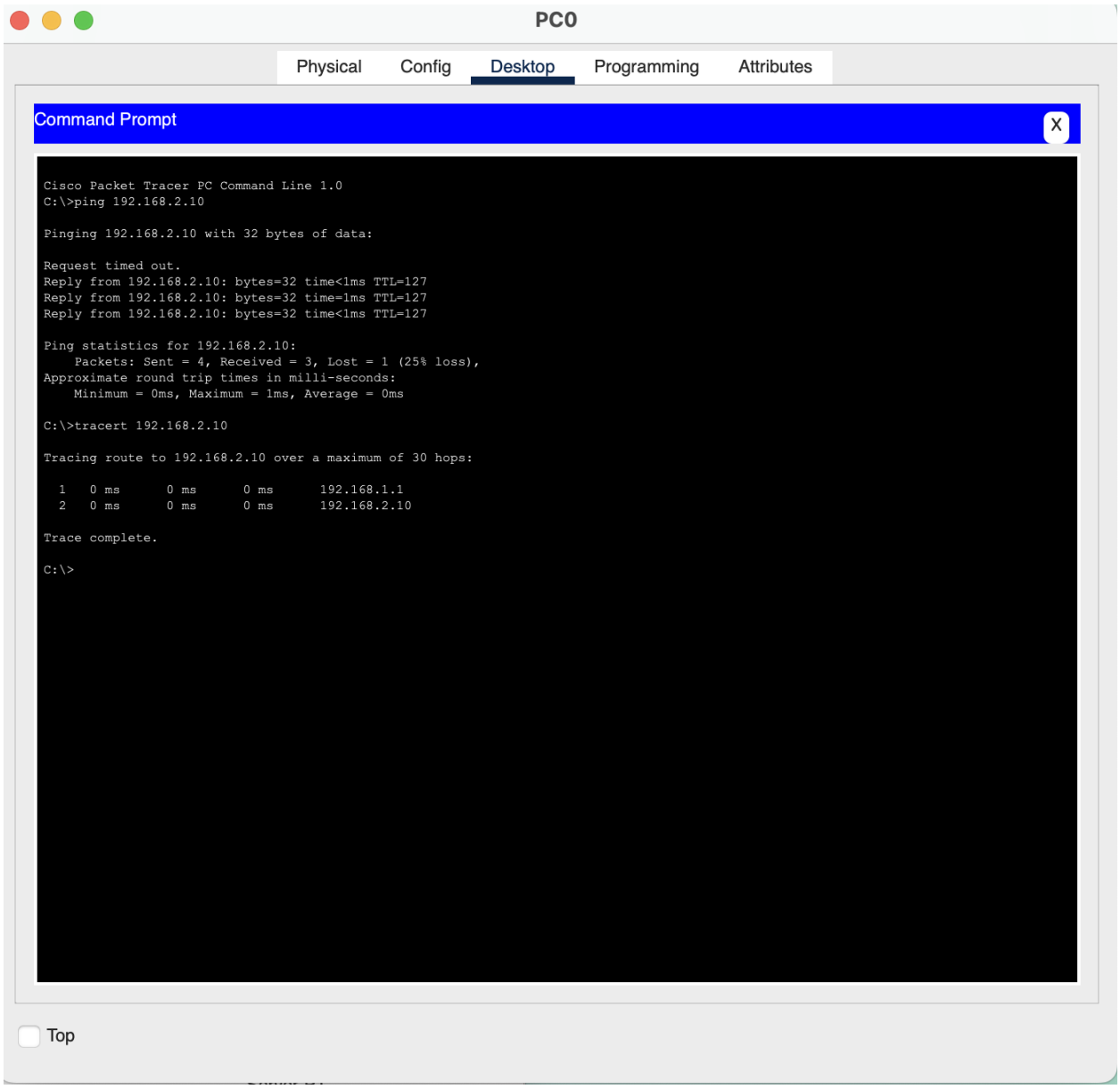
Lab 7

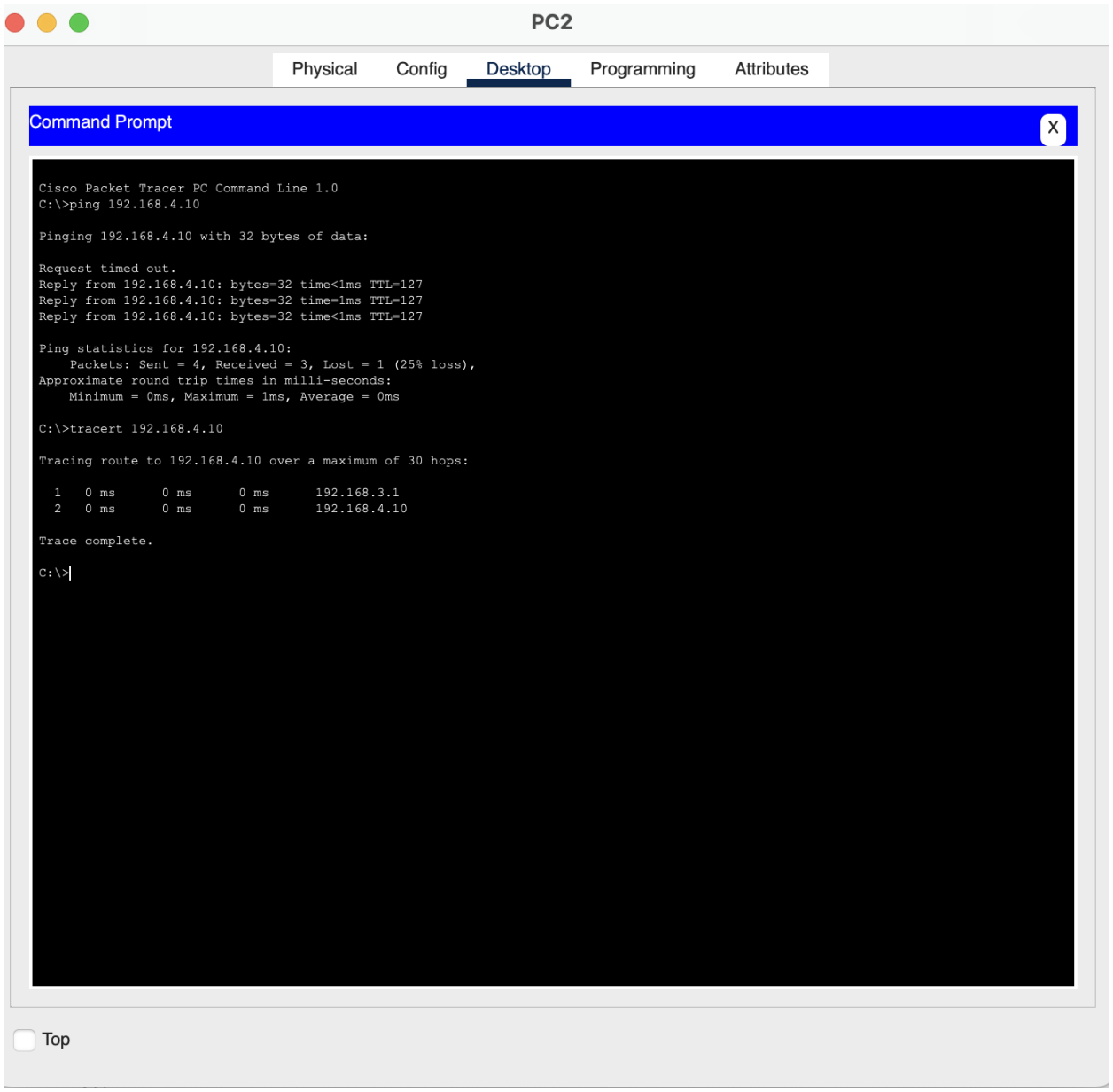
1. (1pt) Use Cisco Packet Tracer to create the network shown above. Submit a screenshot of the network your created.



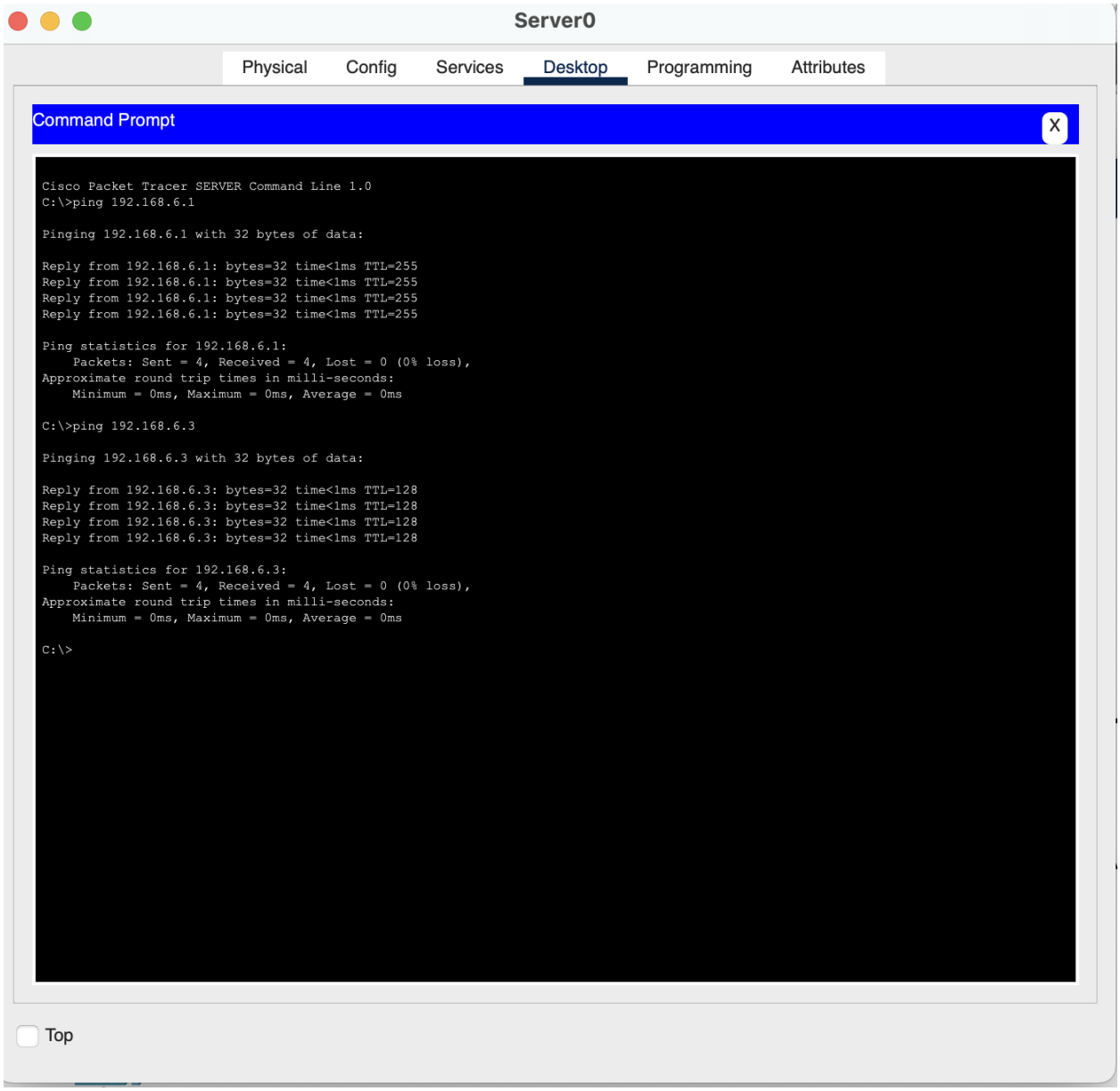
2. (1pt) Configure the hostnames, IP addresses, subnet masks, and default gateways on PC0 and PC1. On 2960 Switch0 configure switch ports Fa0/1 and Fa0/3 to be in vlan 1 while Fa0/2 and Fa0/4 should be in vlan 2. On Router0, configure IP address of interface Fa0/0 to be 192.168.1.1/24 while interface Fa0/1 should be configured with IP address 192.168.2.1/24. From command prompt window of PC0, ping the IP address of PC1. Submit a screenshot showing that PC0 can successfully ping and traceroute to the IP address of PC1.



3. (1pt) Configure the hostnames, IP addresses, subnet masks, and default gateways on PC2 and PC3. On 2960 Switch1 configure switch ports Fa0/1 to be in vlan 3 while Fa0/2 should be in vlan 4. Configure switch port Fa0/3 to trunk vlan 3 and vlan 4 traffic. On Router0, configure IP address 192.168.3.1/24 and enable 802.1q frame tagging of vlan 3 traffic on sub-interface Fa1/0.3. Configure IP address 192.168.4.1/24 and enable 802.1q frame tagging of vlan 4 traffic on sub-interface Fa1/0.4. From command prompt of PC2, ping the IP address of PC3. Submit a screenshot showing that PC2 can successfully ping and traceroute to IP address of PC3.

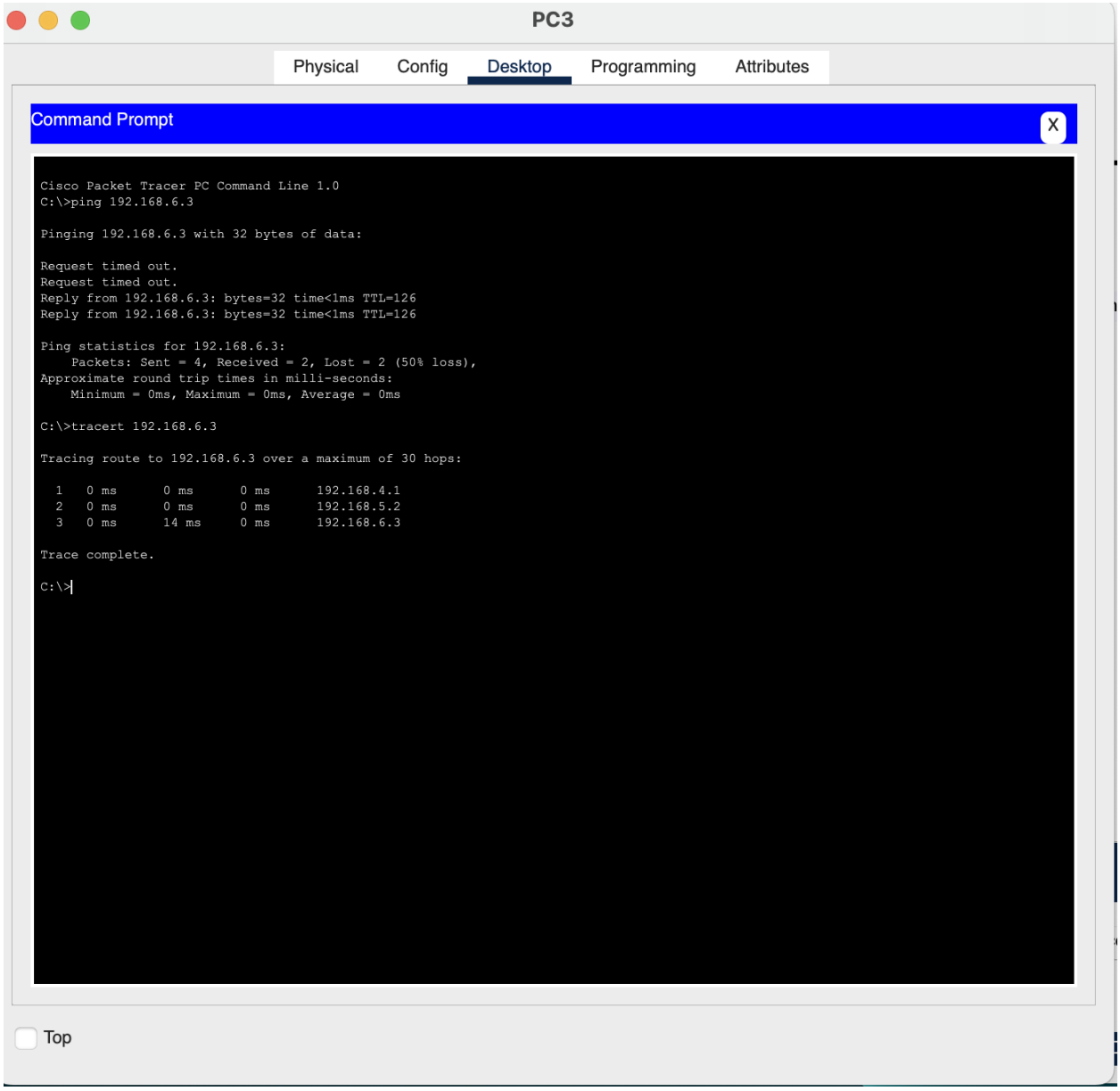


4. (1pt) Configure the hostnames, IP addresses, subnet masks, and default gateways on Server0 and Server1. On 3650 multi-layer Switch0, configure IP address 192.168.6.1/24 on svi interface vlan 6. From command prompt of Server0, ping the IP addresses 192.168.6.1 and 192.168.6.3. Submit a screenshot showing that Server0 can successfully ping these two IP addresses (multi-layer Switch0 and Server1).

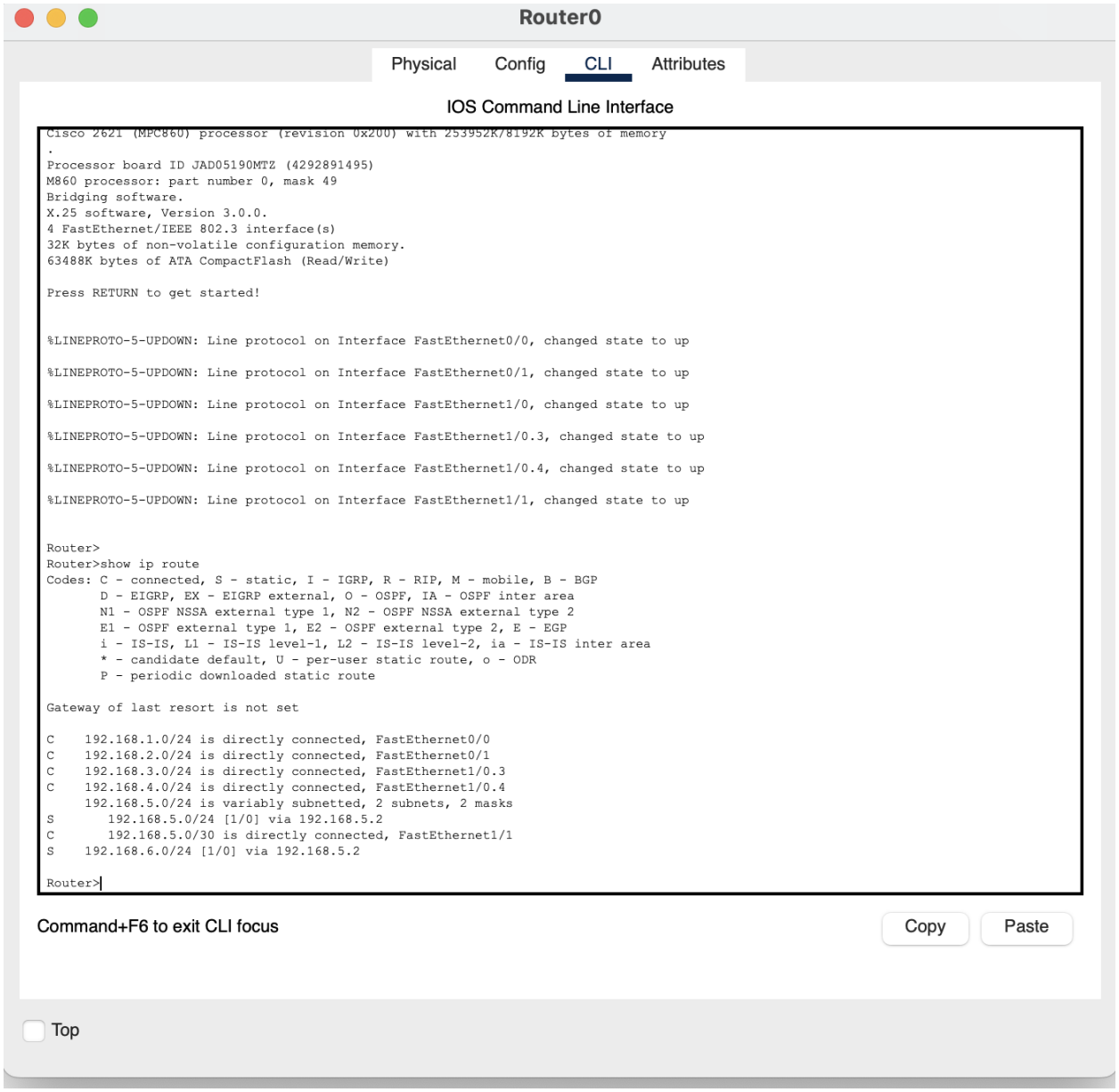


5. (3 pts) On Router0, configure IP address 192.168.5.1/30 on interface Fa1/1 and add a static route in order that Router0 knows how to forward IP packets destined for remote network 192.168.6.0/24. On 3650 multi-layer Switch0, configure IP address 192.168.5.2/30 on interface G1/0/1. Enable ip routing and add a static route(s) in order that the multi-layer Switch0 knows how to forward IP packets destined for remote networks 192.168.1.0/24, 192.168.2.0/24, 192.168.3.0/24, and 192.168.4.0/24. From the command prompt of PC3, ping the IP address of Server1.

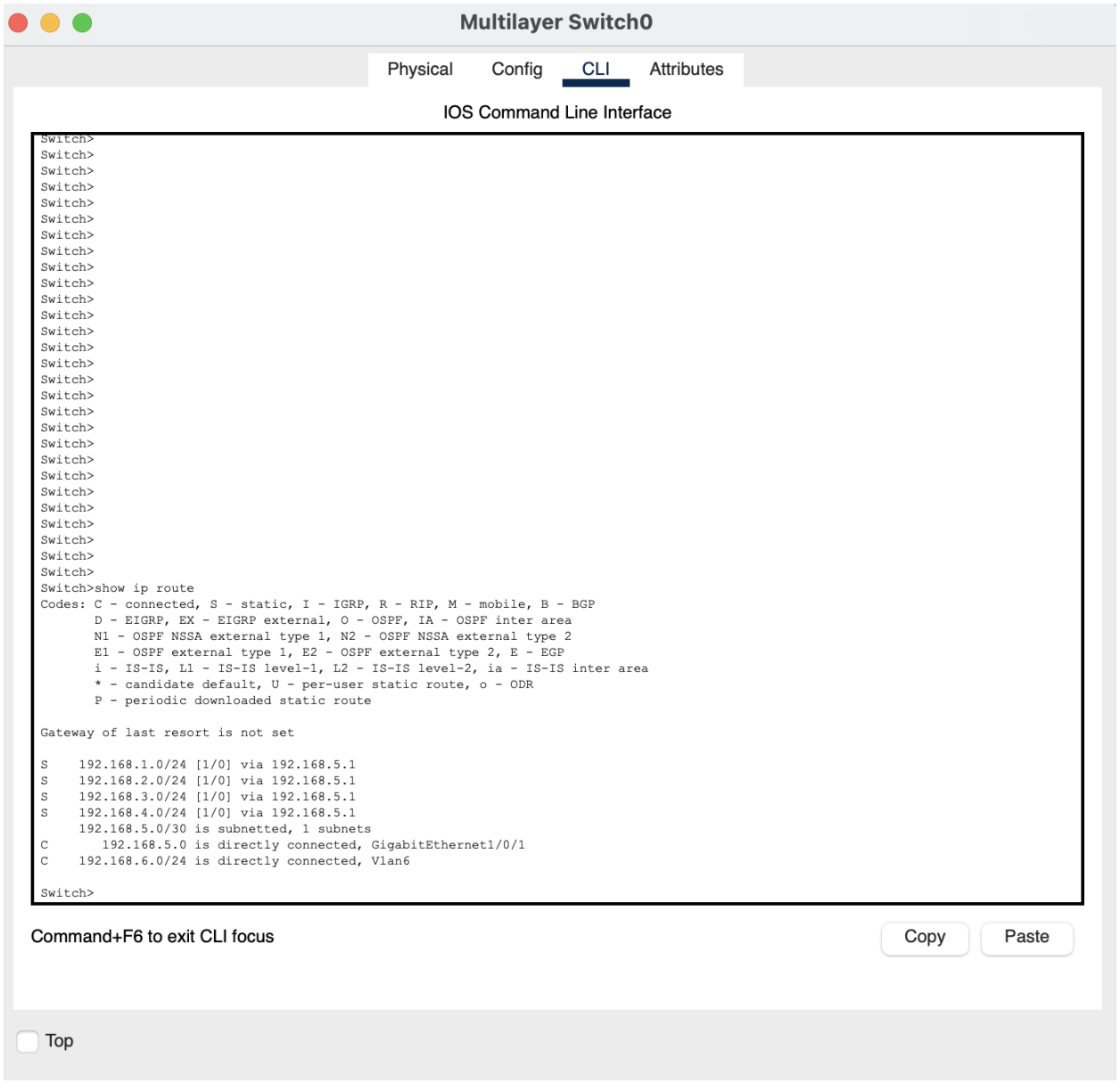
a. Submit a screenshot showing that PC3 can successfully ping and traceroute to Server1's IP address 192.168.6.3.



b. Submit a screenshot showing the routing table (show ip route) on Router0.



c. Submit a screenshot showing the routing table on multi-layer Switch0.



6. (1pt) Submit entire output of "show running-config" of 2960 Switch1.

2960 SWITCH1

Switch>en
Switch#show running-config
Building configuration...

Current configuration : 1281 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec

```
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport access vlan 3
switchport mode access
!
interface FastEthernet0/2
switchport access vlan 4
switchport trunk allowed vlan 2,5-1001
switchport mode access
!
interface FastEthernet0/3
switchport trunk allowed vlan 2-1001
switchport mode trunk
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
```

```
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
no ip address
shutdown
!
!
!
!
line con 0
!
```

```
line vty 0 4
login
line vty 5 15
login
!
!
!
!
end
```

7. (1pt) Submit entire output of “show running-config” of Router0.

Router0

```
Router>en
Router#show running-config
Building configuration...

Current configuration : 1015 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
no ip cef
no ipv6 cef
!
!
!
!
```

```
!
!
!
!
!
!
!
!
!
!
!
!
!
interface FastEthernet0/0
ip address 192.168.1.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 192.168.2.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
!
interface FastEthernet1/0.3
encapsulation dot1Q 3
ip address 192.168.3.1 255.255.255.0
!
interface FastEthernet1/0.4
encapsulation dot1Q 4
ip address 192.168.4.1 255.255.255.0
!
interface FastEthernet1/1
ip address 192.168.5.1 255.255.255.252
duplex auto
```

```
speed auto
!
router rip
!
ip classless
ip route 192.168.6.0 255.255.255.0 192.168.5.2
ip route 192.168.6.0 255.255.255.0 192.168.6.1
ip route 192.168.5.0 255.255.255.0 192.168.5.2
!
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
!
!
!
end
```

8. (1pt) Submit entire output of “show running-config” of multi-layer Switch0

MULTI-LAYER SWITCH0

```
Switch#show runnning-config
               ^
% Invalid input detected at '^' marker.

Switch#show running-config
Building configuration...
```

```
Current configuration : 1827 bytes
!
version 16.3.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
!
no ip cef
ip routing
!
no ipv6 cef
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
!
!
!
!
!
!
```

```
interface GigabitEthernet1/0/1
no switchport
ip address 192.168.5.2 255.255.255.252
duplex auto
speed auto
!
interface GigabitEthernet1/0/2
switchport access vlan 6
!
interface GigabitEthernet1/0/3
switchport access vlan 6
!
interface GigabitEthernet1/0/4
!
interface GigabitEthernet1/0/5
!
interface GigabitEthernet1/0/6
!
interface GigabitEthernet1/0/7
!
interface GigabitEthernet1/0/8
!
interface GigabitEthernet1/0/9
!
interface GigabitEthernet1/0/10
!
interface GigabitEthernet1/0/11
!
interface GigabitEthernet1/0/12
!
interface GigabitEthernet1/0/13
!
interface GigabitEthernet1/0/14
!
interface GigabitEthernet1/0/15
!
interface GigabitEthernet1/0/16
!
interface GigabitEthernet1/0/17
!
```

```
interface GigabitEthernet1/0/18
!
interface GigabitEthernet1/0/19
!
interface GigabitEthernet1/0/20
!
interface GigabitEthernet1/0/21
!
interface GigabitEthernet1/0/22
!
interface GigabitEthernet1/0/23
!
interface GigabitEthernet1/0/24
!
interface GigabitEthernet1/1/1
!
interface GigabitEthernet1/1/2
!
interface GigabitEthernet1/1/3
!
interface GigabitEthernet1/1/4
!
interface Vlan1
no ip address
shutdown
!
interface Vlan5
mac-address 00e0.a30c.7901
no ip address
!
interface Vlan6
mac-address 00e0.a30c.7902
ip address 192.168.6.1 255.255.255.0
!
ip classless
ip route 192.168.4.0 255.255.255.0 192.168.5.1
ip route 192.168.1.0 255.255.255.0 192.168.5.1
ip route 192.168.2.0 255.255.255.0 192.168.5.1
ip route 192.168.3.0 255.255.255.0 192.168.5.1
!
```

```
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
login
!
!
!
!
end
```