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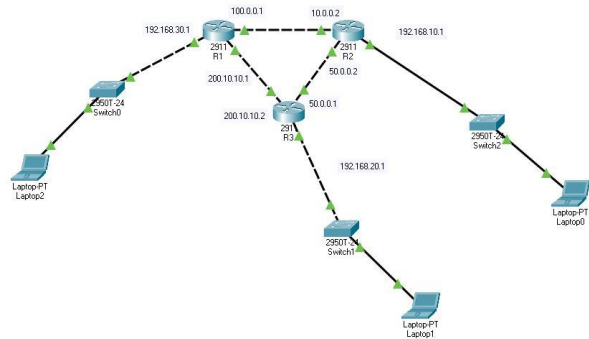
***Name: Muhammad Abeer***

***Roll no:19P-0061***

***Section: 5-B***


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R1 Routing	R2 Routing	R3 Routing
Network1	Network1	Network1
Network: 192.168.10.0 Subnet: 255.255.255.0 Next HOP: 10.0.0.2	Network: 192.168.30.0 Subnet: 255.255.255.0 Next HOP: 100.0.0.1	Network: 192.168.10.0 Subnet: 255.255.255.0 Next HOP: 10.0.0.2
Network2	Network2	Network2
Network: 50.0.0.0 Subnet: 255.0.0.0 Next HOP: 10.0.0.2	Network: 192.168.30.0 Subnet: 255.255.255.0 Next HOP: 200.10.10.1	Network: 10.0.0.0 Subnet: 255.0.0.0 Next HOP: 50.0.0.2
Network3	Network3	Network3
Network: 192.168.20.0 Subnet: 255.255.255.0 Next HOP: 200.10.10.2	Network: 192.168.20.0 Subnet: 255.255.255.0 Next HOP: 200.10.10.2	Network: 192.168.30.0 Subnet: 255.255.255.0 Next HOP: 200.10.10.1
Network4	Network4	Network4
Network: 192.168.20.0 Subnet: 255.255.255.0 Next HOP: 50.0.0.1	Network: 192.168.20.0 Subnet: 255.255.255.0 Next HOP: 50.0.0.1	Network: 192.168.30.0 Subnet: 255.255.255.0 Next HOP: 100.0.0.1
Network5	Network5	Network5
Network: 192.168.10.0 Subnet: 255.255.255.0 Next HOP: 50.0.0.2	Network: 200.10.10.0 Subnet: 255.255.255.0 Next HOP: 50.0.0.1	Network: 192.168.10.0 Subnet: 255.255.255.0 Next HOP: 50.0.0.2
Network6	Network6	Network6
Network: 50.0.0.0 Subnet: 255.0.0.0 Next HOP: 200.10.10.2	Network: 200.10.10.0 Subnet: 255.255.255.0 Next HOP: 100.0.0.1	Network: 100.0.0.0 Subnet: 255.0.0.0 Next HOP: 200.10.10.1



# Router Configurations

## R1

 R1

Physical

Config

**CLI**

Attributes

IOS Command Line Interface

```
Cisco CISC02911/R9 (revision 1.0) with 491520K/32768K bytes of memory.
Processor board ID FTX152400KS
5 Gigabit Ethernet interfaces
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 100.0.0.1 255.0.0.0
Router(config-if)#ip address 100.0.0.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#ip address 200.10.10.1 255.255.255.0
Router(config-if)#ip address 200.10.10.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/2
Router(config-if)#ip address 192.168.30.1 255.255.255.0
Router(config-if)#ip address 192.168.30.1 255.255.255.0
Router(config-if)#
```


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## R2

 R2

Physical

Config

CLI

Attributes

IOS Command Line Interface

```
Cisco CISC02911/R9 (revision 1.0) with 491520K/32768K bytes of memory.
Processor board ID FTX152400KS
3 Gigabit Ethernet interfaces
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#ip address 50.0.0.2 255.0.0.0
Router(config-if)#ip address 50.0.0.2 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/2
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#
```

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### R3

```
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 200.10.10.2 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#ip address 50.0.0.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/2
Router(config-if)#ip address 192.168.20.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
```

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### DHCP Config

#### R1

```
Router(config)#
Router(config)#ip route 192.168.10.0 255.255.255.0 50.0.0.2
Router(config)#ip route 50.0.0.0 255.0.0.0 200.10.10.2
Router(config)#IP DHCP POOL A
Router(dhcp-config)#default-network 192.168.30.0 255.255.255.0
^
% Invalid input detected at '^' marker.

Router(dhcp-config)#default network 192.168.30.0 255.255.255.0
^
% Invalid input detected at '^' marker.

Router(dhcp-config)#network 192.168.30.0 255.255.255.0
Router(dhcp-config)#default-route 192.168.30.1
Router(dhcp-config)#ex
Router(config)#ip dhcp excluded-address 192.168.30.1
Router(config)#
```

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## R2

```
Router(config)#  
Router(config)#ip dhcp pool b  
Router(dhcp-config)#network 192.168.20.0  
% Incomplete command.  
Router(dhcp-config)#network 192.168.20.0 255.255.255.0  
Router(dhcp-config)#default-route 192.168.20.1  
Router(dhcp-config)#ex  
Router(config)#ip dhcp excluded-address 192.168.20.1  
Router(config)#
```

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## R3

```
Router(config)#ip route 192.168.30.0 255.255.255.0 200.10.10.1  
Router(config)#ip dhcp pool c  
Router(dhcp-config)#network 192.168.10.0 255.255.255.0  
Router(dhcp-config)#default route 192.168.10.1  
^  
% Invalid input detected at '^' marker.  
  
Router(dhcp-config)#default-route 192.168.10.1  
Router(dhcp-config)#ex  
Router(config)#ip dhcp excluded-address 192.168.10.1  
Router(config)#
```

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## Static IP Config

## R1 Routing

### Network1

Network:192.168.10.0  
Subnet:255.255.255.0  
Next HOP:10.0.0.2

### Network2

Network:50.0.0.0  
subnet:255.0.0.0  
Next HOP:10.0.0.2

### Network 3

Network:192.168.20.0  
subnet:255.255.255.0  
Next HOP:200.10.10.2

### Network 4

Network:192.168.20.0  
subnet:255.255.255.0  
Next HOP:50.0.0.1

### Network 5

Network:192.168.10.0  
subnet:255.255.255.0  
Next HOP:50.0.0.2

### Network 6

network:50.0.0.0  
subnet:255.0.0.0  
Next HOP:200.10.10.2

## **R2 Routing**

### Network1

Network:192.168.30.0  
Subnet:255.255.255.0  
Next HOP:100.0.0.1

### Network2

Network:192.168.30.0  
subnet:255.255.255.0  
Next HOP:200.10.10.1

### Network 3

Network:192.168.20.0  
subnet:255.255.255.0  
Next HOP:200.10.10.2

### Network 4

Network:192.168.20.0  
subnet:255.255.255.0  
Next HOP:50.0.0.1

### Network 5

Network:200.10.10.0  
subnet:255.255.255.0  
Next HOP:50.0.0.1

### Network 6

network:200.10.10.0  
subnet:255.255.255.0  
Next HOP:100.0.0.1



## **R3 Routing**

### Network1

Network:192.168.10.0  
Subnet:255.255.255.0  
Next HOP:10.0.0.2

### Network2

Network:10.0.0.0  
subnet:255.0.0.0  
Next HOP:50.0.0.2

### Network 3

Network:192.168.30.0  
subnet:255.255.255.0  
Next HOP:200.10.10.1

### Network 4

Network:192.168.30.0  
subnet:255.255.255.0  
Next HOP:100.0.0.1

### Network 5

Network:192.168.10.0  
subnet:255.255.255.0  
Next HOP:50.0.0.2

### Network 6

network:100.0.0.0  
subnet:255.0.0.0  
Next HOP:200.10.10.1

**\* There are 6 total networks in the given mapping of Network. \***

