



CSE421 FINAL PROJECT

GROUP: 710

TOPIC: 07

Group Members:

- Mobashra Abeer(19201092)
- Tirthendu Prosad Chakravorty(19201036)
- Shaiane Prema Baroi(21101098)
- Khan Abrar Shams(19201052)

Configuration Commands

ATHENS

```
Router>en
Router#erase startup-config
Router#reload
```

```
Router#conf t
Router(config)#hostname Athens
Athens(config)#int f0/0
Athens(config-if)#ip address 192.168.8.1 255.255.252.0
Athens(config-if)#no shut
```

```
Athens(config)#int s6/0
Athens(config-if)#ip address 192.168.17.129 255.255.255.252
Athens(config-if)#no shut
```

```
Athens(config)#int se3/0
Athens(config-if)#ip address 192.168.17.141 255.255.255.252
Athens(config-if)#no shut
```

```
Athens(config-if)#int se6/0
Athens(config-if)#ip address 192.168.17.145 255.255.255.252
Athens(config-if)#no shut
```

```
Athens>en
Athens#conf t
Athens# ip route 192.168.16.0 255.255.255.0 s6/0
Athens#exit
```

```
Athens>en
Athens#conf t
Athens# ip route 192.168.17.0 255.255.255.128 s2/0
Athens#exit
```

```
Athens>en
Athens#conf t
Athens# ip route 192.168.17.132 255.255.255.252 s2/0
Athens#exit
```

```
Athens>en
Athens#conf t
Athens(config)#ip route 192.168.0.0 255.255.248.0 s2/0 125

Athens>en
Athens#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Athens(config)#router rip
Athens(config-router)#version 2
Athens(config-router)#no auto-summary
Athens(config-router)#network 192.168.17.128
Athens(config-router)#network 192.168.17.144
Athens(config-router)#network 192.168.17.140
Athens(config-router)#network 192.168.8.0
Athens(config-router)#passive-interface f0/0
Athens(config-router)#exit
Athens(config)#exit
Athens#
Athens#copy run start
```

PUNJAB

```
Router>en
Router#erase startup-config
Router#reload
Router#conf t

Router(config)#hostname Punjab
Punjab(config)#int s6/0
Punjab(config-if)#ip address 192.168.17.130 255.255.255.252
Punjab(config-if)#no shut

Punjab(config-if)#int se2/0
Punjab(config-if)#ip address 192.168.17.134 255.255.255.252
Punjab(config-if)#no shut

Punjab(config-if)#int se3/0
Punjab(config-if)#ip address 192.168.17.137 255.255.255.252
Punjab(config-if)#no shut

Punjab(config)#int f0/0
```

```
Punjab(config-if)#ip address 192.168.0.1 255.255.248.0
Punjab(config-if)#no shut
```

```
Punjab>en
Punjab#conf t
Punjab# ip route 192.168.17.0 255.255.255.128 s2/0
Punjab#exit
```

```
Punjab>en
Punjab#conf t
Punjab(config)#ip route 192.168.8.0 255.255.252.0 s6/0 150
```

copy run start

```
Punjab>en
Punjab#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Punjab(config)#router rip
Punjab(config-router)#version 2
Punjab(config-router)#no auto-summary
Punjab(config-router)#network 192.168.17.128
Punjab(config-router)#network 192.168.17.132
Punjab(config-router)#network 192.168.17.136
Punjab(config-router)#network 192.168.0.0
Punjab(config-router)#passive-interface f0/0
Punjab(config-router)#exit
Punjab(config)#exit
Punjab#
Punjab#copy run start
```

ALEXANDRIA

```
Router>en
Router#erase startup-config
Router#reload
Router#conf t
```

```
Router(config)#hostname Alexandria
```

```
Alexandria(config)#int f0/0
Alexandria(config-if)#ip address 192.168.12.1 255.255.252.0
Alexandria(config-if)#no shut
```

```
Alexandria(config)#int s3/0
Alexandria(config-if)#ip address 192.168.17.142 255.255.255.252
Alexandria(config-if)#no shut
```

```
Alexandria(config)#int s2/0
Alexandria(config-if)#ip address 192.168.17.138 255.255.252.0
Alexandria(config-if)#no shut
Alexandria>en
Alexandria#conf t
```

```
Alexandria(config)#ip dhcp excluded-address 192.168.12.1 192.168.12.3
Alexandria(config)#ip dhcp pool DHCP1
Alexandria(dhcp-config)# network 192.168.12.0 255.255.252.0
Alexandria(dhcp-config)#default-router 192.168.12.1
Alexandria(dhcp-config)# dns-server 192.168.16.6
Alexandria(dhcp-config)#end
```

```
Alexandria>en
Alexandria#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Alexandria(config)#router rip
Alexandria(config-router)#version 2
Alexandria(config-router)#no auto-summary
Alexandria(config-router)#network 192.168.17.136
Alexandria(config-router)#network 192.168.17.140
Alexandria(config-router)#network 192.168.12.0
Alexandria(config-router)#passive-interface f0/0
Alexandria(config-router)#exit
Alexandria(config)#exit
Alexandria#
```

```
Alexandria#copy run start
```

```
Alexandria>en
Alexandria#conf t
Alexandria(config)#ip dhcp excluded-address 192.168.12.1 192.168.12.3
Alexandria(config)#ip dhcp pool DHCP1
Alexandria(dhcp-config)# network 192.168.12.0 255.255.252.0
Alexandria(dhcp-config)#default-router 192.168.12.1
Alexandria(dhcp-config)# dns-server 192.168.16.6
Alexandria(dhcp-config)#end
```

MACEDONIA

```
Router>en
Router#erase startup-config
Router#reload
Router#conf t
```

```
Router(config)#hostname Macedonia
```

```
Macedonia(config)#int s2/0
Macedonia(config-if)#ip address 192.168.17.146 255.255.252.0
Macedonia(config-if)#no shut
```

```
Macedonia(config)#int f0/0
Macedonia(config-if)#ip address 192.168.16.138 255.255.255.0
Macedonia(config-if)#no shut
```

```
Macedonia>en
Macedonia#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Macedonia(config)#ip dhcp excluded-address 192.168.16.1 192.168.16.10
Macedonia(config)#ip dhcp pool DHCP2
Macedonia(dhcp-config)#network 192.168.16.0 255.255.255.0
Macedonia(dhcp-config)#default-router 192.168.16.1
Macedonia(dhcp-config)#dns-server 192.168.16.6
Macedonia(dhcp-config)#end
Macedonia#
```

```
Macedonia>en
Macedonia#conf t
Macedonia# ip route 192.168.8.0 255.255.255.252 s2/0
Macedonia#exit
```

```
Macedonia>en
Macedonia#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Macedonia(config)#router rip
Macedonia(config-router)#version 2
Macedonia(config-router)#no auto-summary
Macedonia(config-router)#network 192.168.17.144
Macedonia(config-router)#network 192.168.16.0
Macedonia(config-router)#passive-interface f0/0
Macedonia(config-router)#exit
Macedonia(config)#exit
Macedonia#
```

Macedonia#copy run start

SAMARKAND

Router>en

Router#erase startup-config

Router#reload

Router#conf t

Router(config)#hostname Samarkand

Samarkand(config)#int f0/0

Samarkand(config-if)#ip address 192.168.17.1 255.255.255.128

Samarkand(config-if)#no shut

Samarkand(config)#int s2/0

Samarkand(config-if)#ip address 192.168.17.133 255.255.255.252

Samarkand(config-if)#no shut

Samarkand#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Samarkand(config)#ip dhcp excluded-address 192.168.17.1 192.168.17.3

Samarkand(config)#ip dhcp pool DHCP3

Samarkand(dhcp-config)#network 192.168.17.0 255.255.255.128

Samarkand(dhcp-config)#default-router 192.168.17.1

Samarkand(dhcp-config)#dns-server 192.168.16.6

Samarkand(dhcp-config)#end

Samarkand#

Samarkand>en

Samarkand#conf t

Samarkand# ip route 192.168.0.0 255.255.248.0 s2/0

Samarkand#exit

Samarkand>en

Samarkand#conf t

Samarkand# ip route 192.168.8.0 255.255.252.0 s2/0

Samarkand#exit

Samarkand>en

Samarkand#conf t

Samarkand# ip route 192.168.17.128 255.255.255.252 s2/0

Samarkand#exit

copy run start

Samarkand>en

Samarkand#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Samarkand(config)#router rip

Samarkand(config-router)#version 2

Samarkand(config-router)#no auto-summary

Samarkand(config-router)#network 192.168.17.0

Samarkand(config-router)#passive-interface f0/0

Samarkand(config-router)#exit

Samarkand(config)#exit

Samarkand#

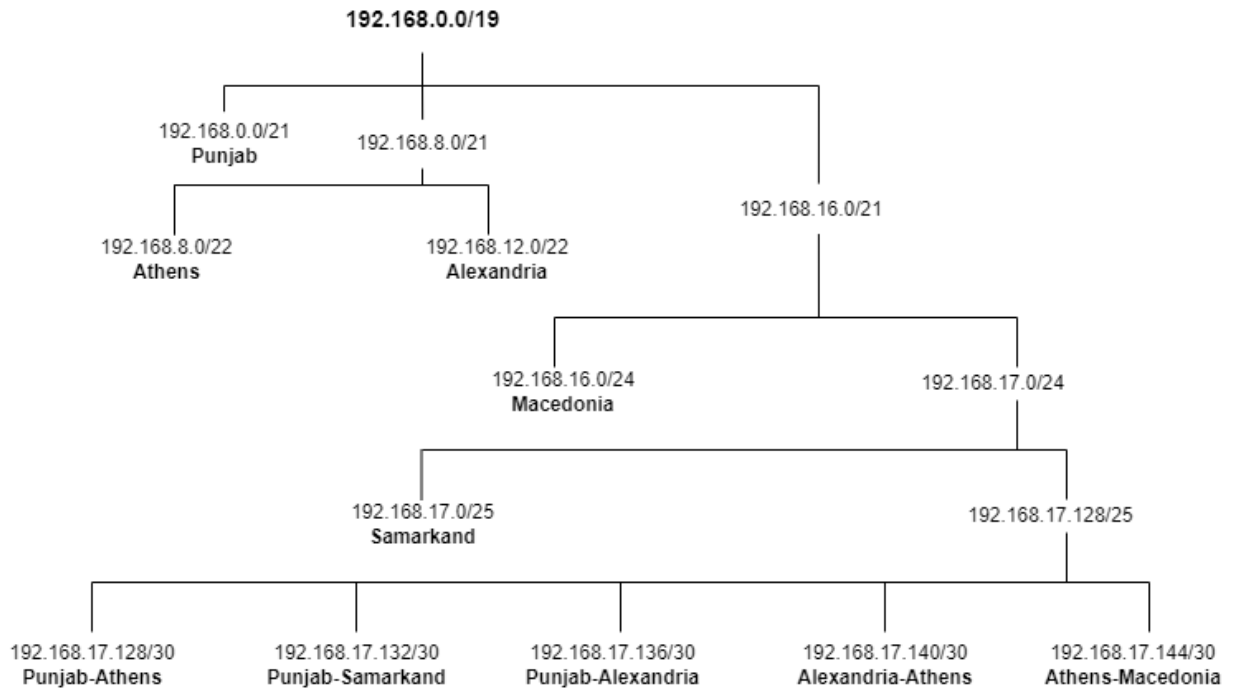
Samarkand#copy run start

VLSM/Network address table

Host Name	Host Requirement	+2	IP block size	Host bit required	Network bit required
Punjab	1789	1791	2048	11	21
Alexandria	900	902	1024	10	22
Athens	512	514	1024	10	22
Macedonia	234	236	256	8	24
Samarkand	72	74	128	7	25
WAN1(P-A)	2	4	4	2	30
WAN2(P-S)	2	4	4	2	30
WAN3(P-AL)	2	4	4	2	30
WAN4(AL-A)	2	4	4	2	30
WAN5(A-M)	2	4	4	2	30

Network Address: 192.168.0.0/19 (least wastage of network)

VLSM TREE



Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
Punjab	Fa0/0	192.168.0.1/21	255.255.248.0	N/A
	Se2/0	192.168.17.134/30	255.255.255.252	N/A
	Se3/0	192.168.17.137/30	255.255.255.252	N/A
	Se6/0	192.168.17.130/30	255.255.255.252	N/A
Samarkand	Fa0/0	192.168.17.1/25	255.255.255.128	N/A
	Se2/0	192.168.17.133/30	255.255.255.252	N/A
Alexandria	Fa0/0	192.168.12.1/22	255.255.252.0	N/A
	Se2/0	192.168.17.138/30	255.255.255.252	N/A
	Se3/0	192.168.17.142/30	255.255.255.252	N/A
Athens	Fa0/0	192.168.8.1/22	255.255.252.0	N/A
	Se2/0	192.168.17.129/30	255.255.255.252	N/A
	Se3/0	192.168.17.141/30	255.255.255.252	N/A
	Se6/0	192.168.17.145/30	255.255.255.252	N/A
Macedonia	Fa0/0	192.168.16.1/24	255.255.255.0	N/A
	Se2/0	192.168.17.146/30	255.255.255.252	N/A
PC0	NIC	192.168.0.2/21	255.255.248.0	192.168.0.1
PC2	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC3	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC4	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC5	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC6	NIC	192.168.8.2/22	255.255.252.0	192.168.8.1
DNS Server	NIC	192.168.16.6/24	255.255.255.0	192.168.16.1

Web Server Samarkand	NIC	192.168.17.3/25	255.255.255.128	192.168.16.6
Web Server Macedonia	NIC	192.168.16.5/24	255.255.255.0	192.168.16.1
Email Server Athens	NIC	192.168.8.4/22	255.255.252.0	192.168.8.1
DHCP1	NIC	192.168.12.2/22	255.255.252.0	192.168.12.1
DHCP2	NIC	192.168.16.2/24	255.255.255.0	192.168.16.1
DHCP3	-	-	-	-