

CSE421 PROJECT GROUP: 704

Members:

Fahmid Bin Kibria (ID: 19201063)

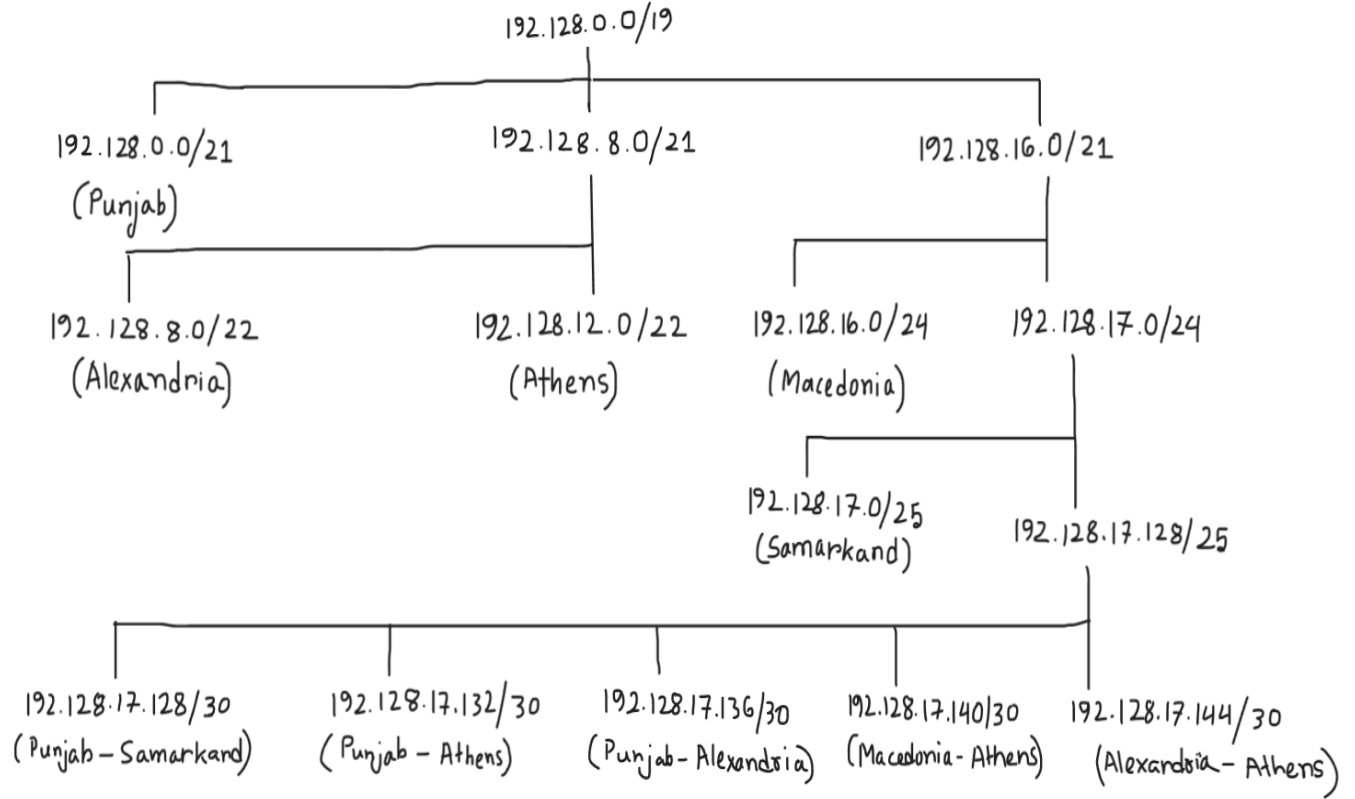
Esaba Ahnaf Ibrahim (ID: 20301422)

Asif Hossain (ID: 22241039)

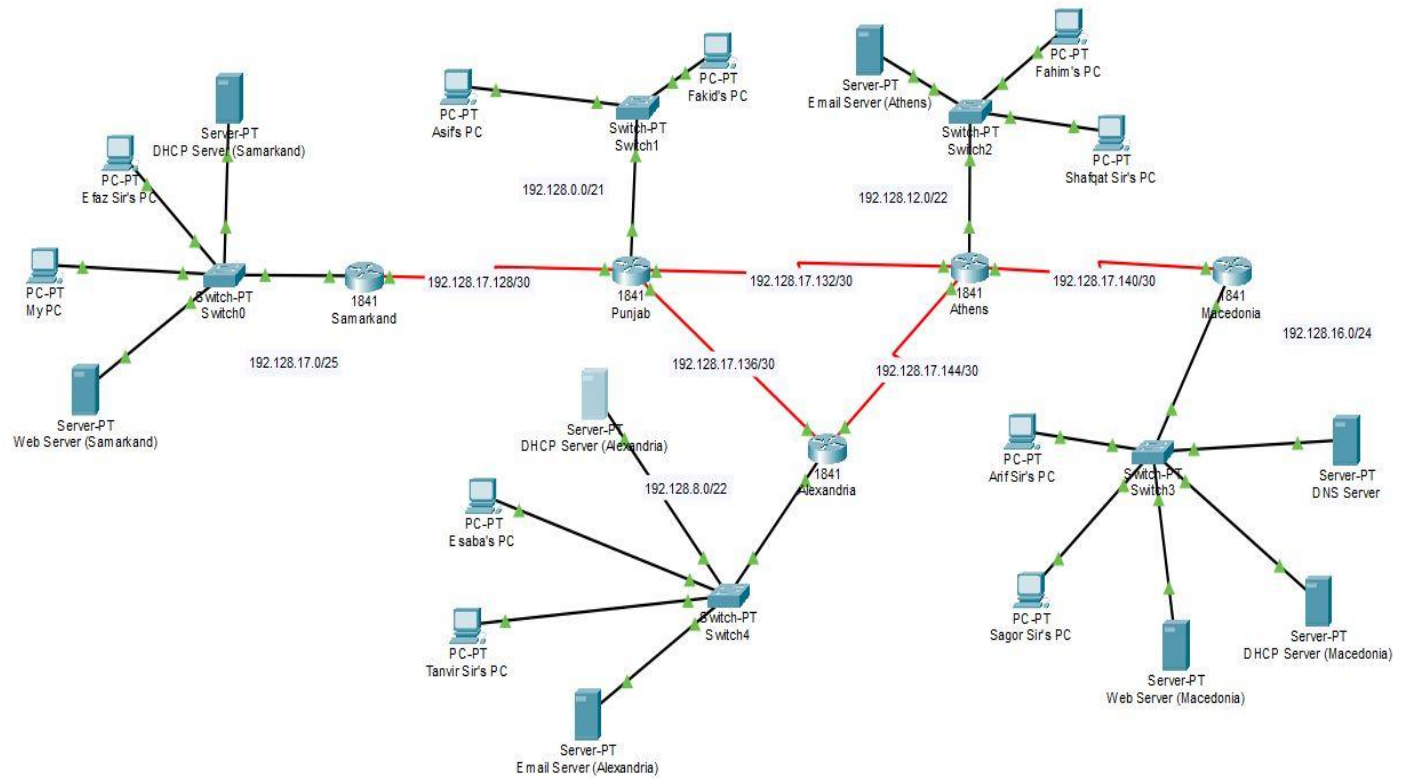
Fakid Arman (ID: 23141035)

VLSM Tree

Network Address ----> 192.128.0.0/19



Network Topology



IP Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
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Punjab (192.128.0.0/21)	se0/0/0	192.128.17.133	255.255.255.252	N/A
	se0/0/1	192.128.17.137	255.255.255.252	N/A
	se0/1/0	192.128.17.129	255.255.255.252	N/A
	fa0/0	192.128.0.1	255.255.248.0	N/A
Alexandria (192.128.8.0/22)	se0/0/0	192.128.17.138	255.255.255.252	N/A
	se0/0/1	192.128.17.145	255.255.255.252	N/A
	fa0/0	192.128.8.1	255.255.252.0	N/A
Athens (192.128.12.0/22)	se0/0/0	192.128.17.134	255.255.255.252	N/A
	se0/0/1	192.128.17.146	255.255.255.252	N/A
	se0/1/0	192.128.17.141	255.255.255.252	N/A
	fa0/0	192.128.12.1	255.255.252.0	N/A
Macedonia (192.128.16.0/24)	se0/0/0	192.128.17.142	255.255.255.252	N/A
	fa0/0	192.128.16.1	255.255.255.0	N/A
Samarkand (192.128.17.0/25)	se0/0/0	192.128.17.130	255.255.255.252	N/A
	fa0/0	192.128.17.1	255.255.255.128	N/A
Asif's PC (Punjab)	NIC	192.128.0.2	255.255.248.0	192.128.0.1
Fakid's PC (Punjab)	NIC	192.128.0.3	255.255.248.0	192.128.0.1
Esaba's PC (Alexandria)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
Tanvir Sir's PC (Alexandria)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
Email Server (Alexandria)	NIC	192.128.8.3	255.255.252.0	192.128.8.1
DHCP Server (Alexandria)	NIC	192.128.8.2	255.255.252.0	192.128.8.1
Fahim's PC (Athens)	NIC	192.128.12.3	255.255.252.0	192.128.12.1
Shafqat Sir's PC (Athens)	NIC	192.128.12.4	255.255.252.0	192.128.12.1
Email Server (Athens)	NIC	192.128.12.5	255.255.252.0	192.128.12.1
Arif Sir's PC (Macedonia)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
Sagor Sir's PC (Macedonia)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
DNS Server (Macedonia)	NIC	192.128.16.2	255.255.255.0	192.128.16.1
Web Server (Macedonia)	NIC	192.128.16.4	255.255.255.0	192.128.16.1
DHCP Server (Macedonia)	NIC	192.128.16.3	255.255.255.0	192.128.16.1
Efaz Sir's PC (Samarkand)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
My PC (Samarkand)	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
Web Server (Samarkand)	NIC	192.128.17.2	255.255.255.128	192.128.17.1
DHCP Server (Samarkand)	NIC	192.128.17.3	255.255.255.128	192.128.17.1

Commands

Router Configuration

Samarkand:

Router>en

Router#conf t

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

Router(config)#hostname Samarkand

Samarkand(config)#int fa0/0

Samarkand(config-if)#ip address 192.128.17.1 255.255.255.128

Samarkand(config-if)#no shut

Samarkand(config-if)#exit

Samarkand(config)#int fa0/0

Samarkand(config-if)#ip address 192.128.17.1 255.255.255.128

Samarkand(config-if)#no shut

Samarkand(config-if)#exit

Samarkand(config)#int se0/0/0

Samarkand(config-if)#ip address 192.128.17.130 255.255.255.252

Samarkand(config-if)#clock rate 64000

Samarkand(config-if)#no shut

Punjab:

Router>en

Router#conf t

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

Router(config)#hostname Punjab

Punjab(config)#int se0/1/0

Punjab(config-if)#ip address 192.128.17.129 255.255.255.252

Punjab(config-if)#clock rate 64000

Punjab(config-if)#no shut

Punjab(config-if)#exit

Punjab(config)#int se0/0/0

Punjab(config-if)#ip address 192.128.17.133 255.255.255.252

Punjab(config-if)#clock rate 64000

Punjab(config-if)#no shut

Punjab(config-if)#exit

Punjab(config)#int se0/0/1

Punjab(config-if)#ip address 192.128.17.137 255.255.255.252

Punjab(config-if)#clock rate 64000

Punjab(config-if)#no shut

Punjab(config-if)#exit

Punjab(config)#int fa0/0

Punjab(config-if)#ip address 192.128.0.1 255.255.248.0

Punjab(config-if)#no shut

Athens:

Router>en

Router#conf t

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

Router(config)#hostname Athens

Athens(config)#int fa0/0

Athens(config-if)#ip address 192.128.12.1 255.255.252.0

Athens(config-if)#no shut

Athens(config-if)#exit

Athens(config)#int se0/0/0

Athens(config-if)#ip address 192.128.17.134 255.255.255.252

Athens(config-if)#clock rate 64000

This command applies only to DCE interfaces

Athens(config-if)#no shut

Athens(config-if)#exit

Athens(config)#int se0/0/1

Athens(config-if)#ip address 192.128.17.146 255.255.255.252

Athens(config-if)#clock rate 64000

This command applies only to DCE interfaces

Athens(config-if)#no shut

Athens(config-if)#exit

Athens(config)#int se0/1/0

Athens(config-if)#ip address 192.128.17.141 255.255.255.252

Athens(config-if)#clock rate 64000

Athens(config-if)#no shut

Alexandria:

Router#conf t

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

Router(config)#hostname Alexandria

Alexandria(config)#int se0/0/0

Alexandria(config-if)#ip address 192.128.17.138 255.255.255.252

Alexandria(config-if)#no shut

Alexandria(config-if)#exit

Alexandria(config)#int se0/0/1

Alexandria(config-if)#ip address 192.128.17.145 255.255.255.252

Athens(config-if)#clock rate 64000

Alexandria(config-if)#no shut

Alexandria(config-if)#exit

Alexandria(config)#int fa0/0

Alexandria(config-if)#ip address 192.128.8.1 255.255.252.0

Alexandria(config-if)#no shut

Macedonia:

Router#conf t

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

Router(config)#hostname Macedonia

Macedonia(config)#int se0/0/0

Macedonia(config-if)#ip address 192.128.17.142 255.255.255.252

Macedonia(config-if)#clock rate 64000

Macedonia(config-if)#no shut

Macedonia(config-if)#exit

Macedonia(config)#int fa0/0

Macedonia(config-if)#ip address 192.128.16.1 255.255.255.0

Macedonia(config-if)#no shut

All servers were configured manually

Routing

macedonia router

Macedonia(config)#ip route 192.128.12.0 255.255.252.0 s0/0/0

Macedonia(config)#ip route 192.128.0.0 255.255.248.0 s0/0/0

Macedonia(config)#ip route 192.128.8.0 255.255.252.0 s0/0/0

Macedonia(config)#ip route 192.128.17.0 255.255.255.128 s0/0/0

athens router

Athens(config)#ip route 192.128.0.0 255.255.248.0 s0/0/0

Athens(config)#ip route 192.128.8.0 255.255.252.0 s0/0/1

Athens(config)#ip route 192.128.16.0 255.255.255.0 s0/1/0

Athens(config)#ip route 192.128.17.0 255.255.255.128 s0/0/0

punjab router

Punjab(config)#ip route 192.128.12.0 255.255.252.0 s0/0/0

Punjab(config)#ip route 192.128.8.0 255.255.252.0 s0/0/1

Punjab(config)#ip route 192.128.17.0 255.255.255.128 s0/1/0

Punjab(config)#ip route 192.128.16.0 255.255.255.0 s0/0/0

alexandria router

Alexandria(config)#ip route 192.128.0.0 255.255.248.0 s0/0/0

Alexandria(config)#ip route 192.128.12.0 255.255.252.0 s0/0/1

Alexandria(config)#ip route 192.128.16.0 255.255.255.0 s0/0/1

Alexandria(config)#ip route 192.128.17.0 255.255.255.128 s0/0/1

samarkand router

Samarkand(config)#ip route 192.128.0.0 255.255.248.0 s0/0/0

Samarkand(config)#ip route 192.128.16.0 255.255.255.0 s0/0/0

Samarkand(config)#ip route 192.128.8.0 255.255.252.0 s0/0/0

Samarkand(config)#ip route 192.128.12.0 255.255.252.0 s0/0/0

Primary : Punjab -> Alexandria : ip route 192.128.8.0 255.255.252.0 s0/0/1

Backup : Punjab → Athens -> Alexandria : ip route 192.128.8.0 255.255.252.0 s0/0/0 5