UTM

UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF ENGINEERING SCHOOL OF COMPUTING

SEMESTER 2 SESSION 2021/2022

SECR2242 – COMPUTER NETWORK

SECTION 01

GROUP PROJECT
TASK 5: IMPLEMENTING VLANs

LECTURER: Ts. MS HAZINAH BINTI KUTTY MAMMI

GROUP NAME: HELLO WORLD

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SUBMISSION DATE: 2nd June 2022

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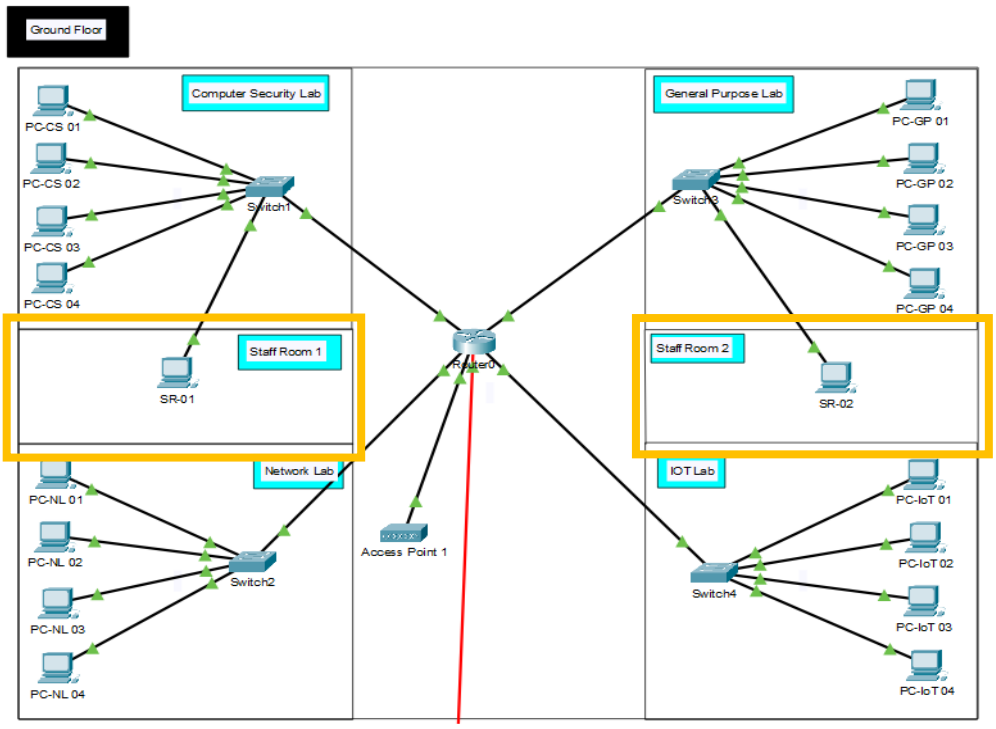
1.1 Staff Rooms Added

Ground Floor

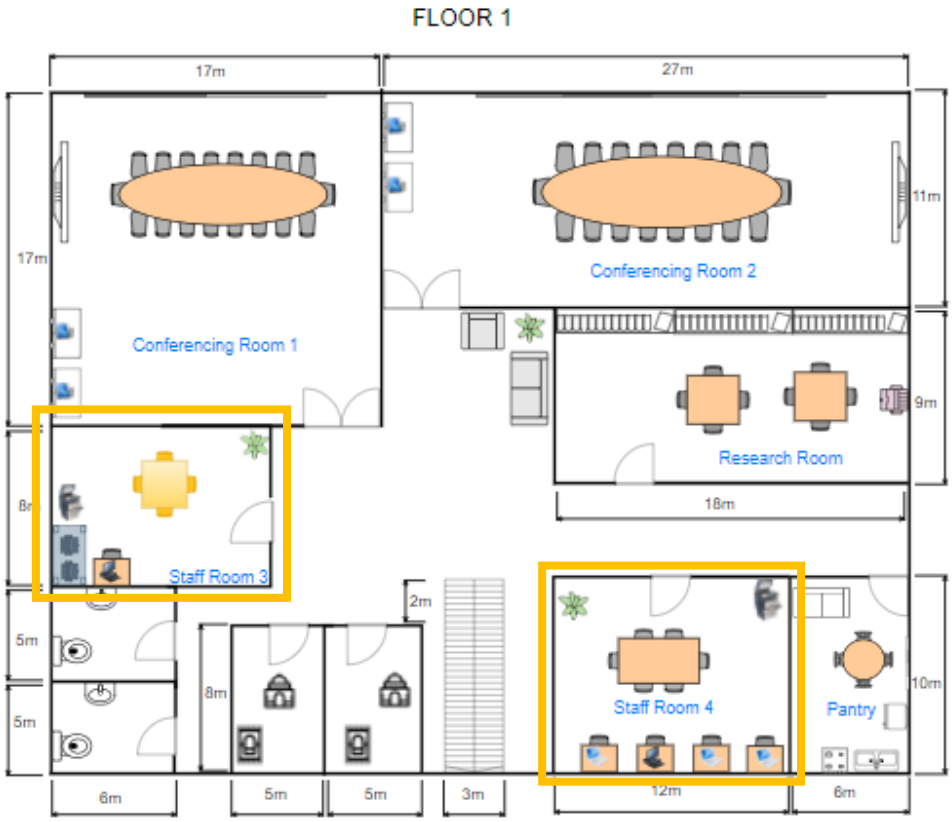
Floorplan:

Topology:

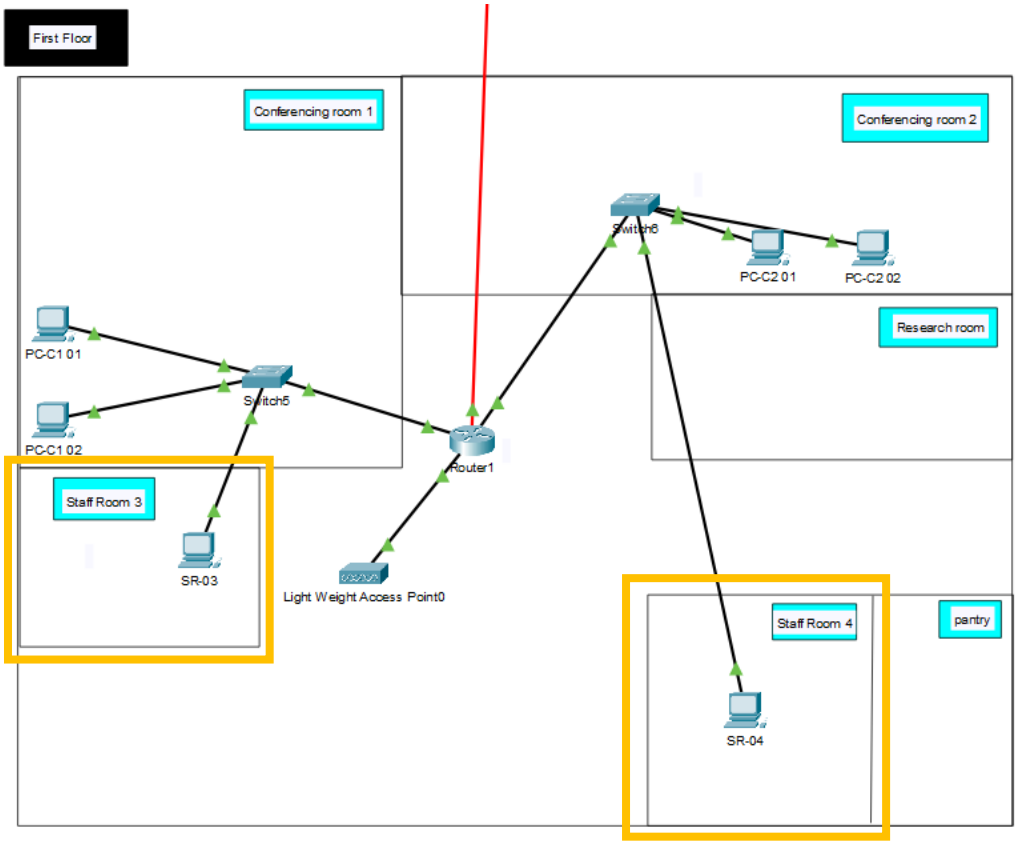


First Floor

Floorplan:



Topology:



1.2 IP Assignments to Staff Rooms

Subnetting for Staff Rooms

172 . 16 . 25 . xx		
10101100.00010000.00011001.00100000 00011001.00100111	S9-SR1	/29
10101100.00010000.00011001.00101000 00011001. 00101111	S10-SR2	/29
10101100.00010000.00011001.00110000 00011001. 00110111	S11-SR3	/29
10101100.00010000.00011001.00111000 00011001.00111111	S12-SR4	/29

IP Subnetting Table

Subnet	Room	Network address	Broadcast address	Usable address range	Subnet mask
0	Computer Security Lab	172.16.24.0	172.16.24.63	172.16.24.1– 172.16.24.62	/26 or 255.255.255.192
1	Network Lab	172.16.24.64	172.16.24.127	172.16.24.65 – 172.16.24.126	/26 or 255.255.255.192
2	General Purpose Lab	172.16.24.128	172.16.24.191	172.16.24.129- 172.16.24.190	/26 or 255.255.255.192
3	IoT Lab	172.16.24.192	172.16.24.255	172.16.24.193 - 172.16.24.254	/26 or 255.255.255.192
4	Conferencing Room 1	172.16.25.0	172.16.25.7	172.16.25.1 - 172.16.256	/29 or 255.255.255.248
5	Conferencing Room 2	172.16.25.8	172.16.25.15	172.16.25.9- 172.16.25.14	/29 or 255.255.255.248
6	Access Point 1	172.16.25.16	172.16.25.19	172.16.25.17- 172.16.25.18	/30 or 255.255.255.252
7	Access Point 2	172.16.25.20	172.16.25.23	172.16.25.21- 172.16.25.22	/30 or 255.255.255.252
8	Router0 to Router1	172.16.25.24	172.16.25.27	172.16.25.25- 172.16.25.26	/30 or 255.255.255.252
9	Staff Room 1	172.16.25.32	172.16.25.39	172.16.25.33 – 172.16.25.38	/29 or 255.255.255.248
10	Staff Room 2	172.16.25.40	172.16.25.47	172.16.25.41 - 172.16.25.46	/29 or 255.255.255.248
11	Staff Room 3	172.16.25.48	172.16.25.55	172.16.25.49 - 172.16.25.54	/29 or 255.255.255.248
12	Staff Room 4	172.16.25.56	172.16.25.63	172.16.25.57 - 172.16.25.62	/29 or 255.255.255.248

Addressing table

There are 4 VLANs that has been configured in this task. Vlan 10 is assigned to Computer Security Lab, vlan 20 is assigned to General Purpose lab, vlan 30 is assigned to Conference Room 1 and 2 and lastly, vlan 40 is assigned to Staff Room 1,2,3 and 4. Besides, Router0 and Router1 have 4 interfaces.

#	Device	Interface	IP Address	Subnet Mask	Default Gateway	VLAN
1.	Router0	Gig6/0.10	172.16.24.1	255.255.255.192	N/A	VLAN 10
		Gig6/0.40	172.16.25.33	255.255.255.248	N/A	VLAN 40
		Gig8/0.20	172.16.24.129	255.255.255.192	N/A	VLAN 20
		Gig8/0.40	172.16.25.41	255.255.255.248	N/A	VLAN 40
2.	Switch1	Vlan 10	N/A	N/A	N/A	VLAN 10
		Vlan 40	N/A	N/A	N/A	VLAN 40
3.	SR-01	Fa0	172.16.25.38	255.255.255.248	172.16.25.33	VLAN 40
4.	Switch3	Vlan 20	N/A	N/A	N/A	VLAN 20
		Vlan 40	N/A	N/A	N/A	VLAN 40
5.	SR-02	Fa0	172.16.25.46	255.255.255.248	172.16.25.41	VLAN 40
6.	Router1	Gig7/0.30	172.16.25.1	255.255.255.248	N/A	VLAN 30
		Gig7/0. 40	172.16.25.49	255.255.255.248	N/A	VLAN 40
		Gig8/0.30	172.16.25.9	255.255.255.248	N/A	VLAN 30
		Gig8/0.40	172.16.25.57	255.255.255.248	N/A	VLAN 40
7.	Switch5	Vlan 30	N/A	N/A	N/A	VLAN 30
		Vlan 40	N/A	N/A	N/A	VLAN 40
8.	SR-03	Fa0	172.16.25.54	255.255.255.248	172.16.25.49	VLAN 40
9.	Switch6	Vlan 30	N/A	N/A	N/A	VLAN 30
		Vlan 40	N/A	N/A	N/A	VLAN 40
10.	SR-04	Fa0	172.16.25.62	255.255.255.248	172.16.25.57	VLAN 40

1.3 VLAN Configurations

VLAN Configuration in each switch

Switch	Command
Switch 1	Switch1(config)#vlan 10 Switch1(config-vlan)#name CompSec Switch1(config-vlan)#end Switch1(config)#int range f0/1-f0/4 Switch1(config-if-range)#switchport mode access Switch1(config-if-range)#switchport access vlan 10 Switch1(config)#vlan 40 Switch1(config-vlan)#name Staff Switch1(config-vlan)#exit Switch1(config)#int f0/5 Switch1(config-if)#switchport mode access Switch1(config-if)#switchport access vlan 40
Switch 3	Switch3(config)#vlan 20 Switch3(config-vlan)#name GenPurpose Switch3(config-vlan)#end Switch3(config)#int range f0/1-f0/4 Switch3(config-if-range)#switchport mode access Switch3(config-if-range)#switchport access vlan 20 Switch3(config)#vlan 40 Switch3(config-vlan)#name Staff Switch3(config-vlan)#exit Switch3(config)#int f0/5 Switch3(config-if)#switchport mode access Switch3(config-if)#switchport access vlan 40

Switch 5	Switch5(config)#vlan 30 Switch5(config-vlan)#name Conf Switch5(config-vlan)#end Switch5(config)#int range f0/1-f0/2 Switch5(config-if-range)#switchport mode access Switch5(config-if-range)#switchport access vlan 30 Switch5(config-if-range)#exit Switch5(config)#vlan 40 Switch5(config-vlan)#name Staff Switch5(config-vlan)#end S witch5(config)#int f0/3 Switch5(config-if)#switchport mode access Switch5(config-if)#switchport access vlan 40
Switch 6	Switch6(config)#vlan 30 Switch6(config-vlan)#name Conf Switch6(config-vlan)#exit Switch6(config)#int range f0/1-f0/2 Switch6(config-if-range)#switchport mode access Switch6(config-if-range)#switchport access vlan 30 Switch6(config)#vlan 40 Switch6(config-vlan)#name Staff Switch6(config-vlan)#exit Switch6(config)#int f0/3 Switch6(config-if)#switchport mode access Switch6(config-if)#switchport access vlan 40

Trunking and Inter-VLAN Configuration

In this task, we decided to choose **Router-on-a-Stick** for the inter-VLAN routing:

Switch	Command
Switch 1 and Router 0	Switch1(config)#int g0/1 Switch1(config-if)#switchport mode trunk Switch1(config-if)#no shut Switch1(config-if)#exit Router0(config-if)#int g6/0.10 Router0(config-subif)#encapsulation dot1Q 10 Router0(config-subif)#ip add 172.16.24.1 255.255.255.192 Router0(config-subif)#exit Router0(config)#int g6/0.40 Router0(config-subif)#encapsulation dot1Q 40 Router0(config-subif)#ip address 172.16.25.33 255.255.255.248 Router0(config-subif)#exit
Switch 3 and Router 0	Switch3(config)#int g0/1 Switch3(config-if)#switchport mode trunk Switch3(config-if)#no shut Switch3(config-if)#exit Router0(config-if)#int g8/0.20 Router0(config-subif)#encapsulation dot1Q 20 Router0(config-subif)#ip add 172.16.24.129 255.255.255.192 Router0(config-subif)#exit Router0(config)#int g8/0.40 Router0(config-subif)#encapsulation dot1Q 40 Router0(config-subif)#ip add 172.16.25.41 255.255.255.248 Router0(config-subif)#exit

Switch 5 and Router 1	Switch5(config)#int g0/1 Switch5(config-if)#switchport mode trunk Switch5(config-if)#no shut Switch5(config-if)#exit Router1(config)#int g7/0.30 Router1(config-subif)#encapsulation dot1Q 30 Router1(config-subif)#ip address 172.16.25.1 255.255.255.248 Router1(config-subif)#exit Router1(config)#int g7/0.40 Router1(config-subif)#encapsulation dot1Q 40 Router1(config-subif)#ip add 172.16.25.49 255.255.255.248 Router1(config-subif)#exit
Switch 6 and Router 1	Switch6(config)#int g0/1 Switch6(config-if)#switchport mode trunk Switch6(config-if)#no shut Switch6(config-if)#exit Router1(config)#int g8/0.30 Router1(config-subif)#encapsulation dot1Q 30 Router1(config-subif)#ip add 172.16.25.9 255.255.255.248 Router1(config-subif)#exit Router1(config)#int g8/0.40 Router1(config-subif)#encapsulation dot1Q 40 Router1(config-subif)#ip add 172.16.25.57 255.255.255.248 Router1(config-subif)#exit

1.4 Content of VLAN Table

VLAN	Name	Interface Assigned
10	CompSec	Switch1: Fa0/1 – Fa0/4
20	GenPurpose	Switch3: Fa0/1 – Fa0/4
30	Conf	Switch5: Fa0/1 – Fa0/2 Switch6: Fa0/1 – Fa0/2
40	Staff	Switch1: Fa0/5 Switch3: Fa0/5 Switch5: Fa0/3 Switch6: Fa0/3

Switch 1

```
Switch1#show vlan b

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/6, Fa0/7, Fa0/8, Fa0/9
                                                Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                Fa0/14, Fa0/15, Fa0/16, Fa0/17
                                                Fa0/18, Fa0/19, Fa0/20, Fa0/21
                                                Fa0/22, Fa0/23, Fa0/24, Gig0/2
10   CompSec                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
40   Staff                            active    Fa0/5
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

Switch 3

```
Switch3#show vlan b

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/6, Fa0/7, Fa0/8, Fa0/9
                                                Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                Fa0/14, Fa0/15, Fa0/16, Fa0/17
                                                Fa0/18, Fa0/19, Fa0/20, Fa0/21
                                                Fa0/22, Fa0/23, Fa0/24, Gig0/2
20   GenPurpose                       active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
40   Staff                            active    Fa0/5
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

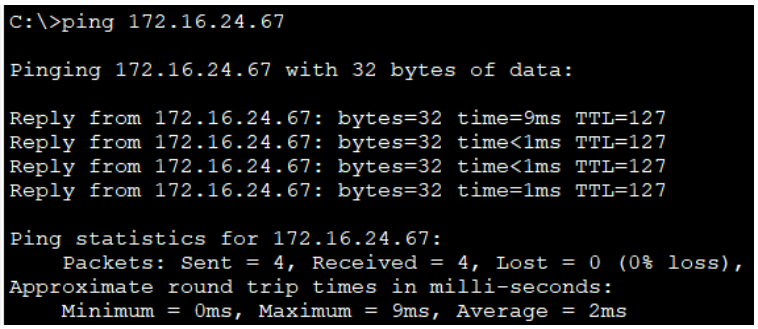
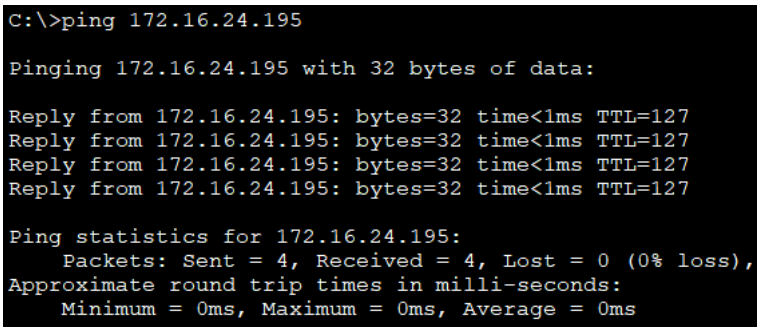
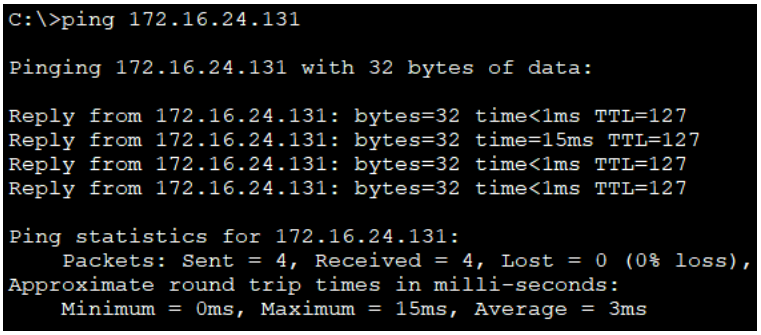
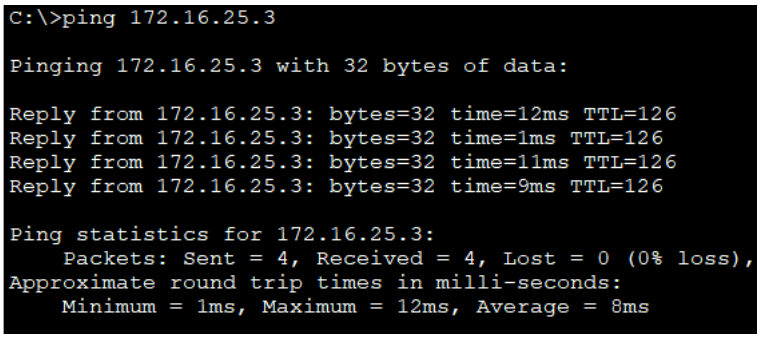
Switch 5

```
Switch5#show vlan b

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/4, Fa0/5, Fa0/6, Fa0/7
                                                Fa0/8, Fa0/9, Fa0/10, Fa0/11
                                                Fa0/12, Fa0/13, Fa0/14, Fa0/15
                                                Fa0/16, Fa0/17, Fa0/18, Fa0/19
                                                Fa0/20, Fa0/21, Fa0/22, Fa0/23
                                                Fa0/24, Gig0/2
30   Conf                             active    Fa0/1, Fa0/2
40   Staff                            active    Fa0/3
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

Switch 6

```
Switch6#show vlan b

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/4, Fa0/5, Fa0/6, Fa0/7
                                                Fa0/8, Fa0/9, Fa0/10, Fa0/11
                                                Fa0/12, Fa0/13, Fa0/14, Fa0/15
                                                Fa0/16, Fa0/17, Fa0/18, Fa0/19
                                                Fa0/20, Fa0/21, Fa0/22, Fa0/23
                                                Fa0/24, Gig0/2
30   Conf                             active    Fa0/1, Fa0/2
40   Staff                            active    Fa0/3
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

1.5 End-to-end Connection

<table>
<tr><th rowspan="2">VLAN</th><th colspan="2">PC</th><th rowspan="2">Result</th></tr>
<tr><th>From</th><th>To</th></tr>
<tr><td rowspan="4">VLAN 10 - Computer Security Lab</td><td rowspan="4">PC-CS 01</td><td>PC-NL 01 (VLAN 1)</td><td> 
</td></tr>
<tr><td>PC-IoT 01 (VLAN 1)</td><td> 
</td></tr>
<tr><td>PC-GP 01 (VLAN 20)</td><td> 
</td></tr>
<tr><td>PC-C1 01 (VLAN 30)</td><td> 
</td></tr>
</table>

		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11 Pinging 172.16.25.11 with 32 bytes of data: Reply from 172.16.25.11: bytes=32 time=10ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Reply from 172.16.25.11: bytes=32 time=11ms TTL=126 Ping statistics for 172.16.25.11: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 11ms, Average = 5ms
		SR-01 (VLAN 40)	C:\>ping 172.16.25.38 Pinging 172.16.25.38 with 32 bytes of data: Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.38: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
		SR-02 (VLAN 40)	C:\>ping 172.16.25.46 Pinging 172.16.25.46 with 32 bytes of data: Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.46: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
		SR-03 (VLAN 40)	C:\>ping 172.16.25.54 Pinging 172.16.25.54 with 32 bytes of data: Reply from 172.16.25.54: bytes=32 time=11ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.54: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 11ms, Average = 3ms

		SR-04 (VLAN 40)	C:\>ping 172.16.25.62 Pinging 172.16.25.62 with 32 bytes of data: Reply from 172.16.25.62: bytes=32 time=10ms TTL=126 Reply from 172.16.25.62: bytes=32 time=2ms TTL=126 Reply from 172.16.25.62: bytes=32 time=10ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.62: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 10ms, Average = 5ms
VLAN 40 – Staff Room 1	SR-01	PC-CS 01	C:\>ping 172.16.24.3 Pinging 172.16.24.3 with 32 bytes of data: Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time=14ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 14ms, Average = 3ms
		PC-NL 01 (VLAN 1)	C:\>ping 172.16.24.67 Pinging 172.16.24.67 with 32 bytes of data: Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.67: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
		PC-IoT 01 (VLAN 1)	C:\>ping 172.16.24.195 Pinging 172.16.24.195 with 32 bytes of data: Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.195: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms

		PC-GP 01 (VLAN 20)	C:\>ping 172.16.24.131 Pinging 172.16.24.131 with 32 bytes of data: Reply from 172.16.24.131: bytes=32 time=1ms TTL=127 Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.131: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms
		PC-C1 01 (VLAN 30)	C:\>ping 172.16.25.3 Pinging 172.16.25.3 with 32 bytes of data: Reply from 172.16.25.3: bytes=32 time=10ms TTL=126 Reply from 172.16.25.3: bytes=32 time=1ms TTL=126 Reply from 172.16.25.3: bytes=32 time=2ms TTL=126 Reply from 172.16.25.3: bytes=32 time=2ms TTL=126 Ping statistics for 172.16.25.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 10ms, Average = 3ms
		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11 Pinging 172.16.25.11 with 32 bytes of data: Reply from 172.16.25.11: bytes=32 time=10ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Reply from 172.16.25.11: bytes=32 time=5ms TTL=126 Ping statistics for 172.16.25.11: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 10ms, Average = 4ms
		SR-02 (VLAN 40)	C:\>ping 172.16.25.46 Pinging 172.16.25.46 with 32 bytes of data: Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time=12ms TTL=127 Ping statistics for 172.16.25.46: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 12ms, Average = 3ms

		SR-03 (VLAN 40)	C:\>ping 172.16.25.54 Pinging 172.16.25.54 with 32 bytes of data: Reply from 172.16.25.54: bytes=32 time=10ms TTL=126 Reply from 172.16.25.54: bytes=32 time=2ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.54: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 10ms, Average = 3ms
		SR-04 (VLAN 40)	C:\>ping 172.16.25.62 Pinging 172.16.25.62 with 32 bytes of data: Reply from 172.16.25.62: bytes=32 time=9ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Reply from 172.16.25.62: bytes=32 time=12ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.62: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 12ms, Average = 5ms
VLAN 20 – General Purpose Lab	PC-GP 01	PC-NL 01 (VLAN 1)	C:\>ping 172.16.24.67 Pinging 172.16.24.67 with 32 bytes of data: Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time=14ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.67: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 14ms, Average = 3ms
		PC-IoT 01 (VLAN 1)	C:\>ping 172.16.24.195 Pinging 172.16.24.195 with 32 bytes of data: Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.195: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms

		PC-CS 01 (VLAN 10)	C:\>ping 172.16.24.3 Pinging 172.16.24.3 with 32 bytes of data: Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time=7ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 7ms, Average = 1ms
		PC-C1 01 (VLAN 30)	C:\>ping 172.16.25.3 Pinging 172.16.25.3 with 32 bytes of data: Reply from 172.16.25.3: bytes=32 time=13ms TTL=126 Reply from 172.16.25.3: bytes=32 time=2ms TTL=126 Reply from 172.16.25.3: bytes=32 time=11ms TTL=126 Reply from 172.16.25.3: bytes=32 time=9ms TTL=126 Ping statistics for 172.16.25.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 2ms, Maximum = 13ms, Average = 8ms
		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11 Pinging 172.16.25.11 with 32 bytes of data: Reply from 172.16.25.11: bytes=32 time=10ms TTL=126 Reply from 172.16.25.11: bytes=32 time=16ms TTL=126 Reply from 172.16.25.11: bytes=32 time=8ms TTL=126 Reply from 172.16.25.11: bytes=32 time=5ms TTL=126 Ping statistics for 172.16.25.11: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 5ms, Maximum = 16ms, Average = 9ms
		SR-01 (VLAN 40)	C:\>ping 172.16.25.38 Pinging 172.16.25.38 with 32 bytes of data: Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.38: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms

		SR-02 (VLAN 40)	C:\>ping 172.16.25.46 Pinging 172.16.25.46 with 32 bytes of data: Reply from 172.16.25.46: bytes=32 time<1ms TTL=127 Reply from 172.16.25.46: bytes=32 time=1ms TTL=127 Reply from 172.16.25.46: bytes=32 time=16ms TTL=127 Reply from 172.16.25.46: bytes=32 time=1ms TTL=127 Ping statistics for 172.16.25.46: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 16ms, Average = 4ms
		SR-03 (VLAN 40)	C:\>ping 172.16.25.54 Pinging 172.16.25.54 with 32 bytes of data: Reply from 172.16.25.54: bytes=32 time=7ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.54: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 7ms, Average = 2ms
		SR-04 (VLAN 40)	C:\>ping 172.16.25.62 Pinging 172.16.25.62 with 32 bytes of data: Reply from 172.16.25.62: bytes=32 time=13ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Reply from 172.16.25.62: bytes=32 time=10ms TTL=126 Ping statistics for 172.16.25.62: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 13ms, Average = 6ms
VLAN 40 – Staff Room 2	SR-02	PC-CS 01 (VLAN 10)	C:\>ping 172.16.24.3 Pinging 172.16.24.3 with 32 bytes of data: Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Reply from 172.16.24.3: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms

		PC-NL 01 (VLAN 1)	C:\>ping 172.16.24.67 Pinging 172.16.24.67 with 32 bytes of data: Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time<1ms TTL=127 Reply from 172.16.24.67: bytes=32 time=1ms TTL=127 Ping statistics for 172.16.24.67: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms
		PC-IoT 01 (VLAN 1)	C:\>ping 172.16.24.195 Pinging 172.16.24.195 with 32 bytes of data: Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time=1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Reply from 172.16.24.195: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.195: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms
		PC-GP 01 (VLAN 20)	C:\>ping 172.16.24.131 Pinging 172.16.24.131 with 32 bytes of data: Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Reply from 172.16.24.131: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.24.131: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
		PC-C1 01 (VLAN 30)	C:\>ping 172.16.25.3 Pinging 172.16.25.3 with 32 bytes of data: Reply from 172.16.25.3: bytes=32 time=11ms TTL=126 Reply from 172.16.25.3: bytes=32 time=1ms TTL=126 Reply from 172.16.25.3: bytes=32 time=1ms TTL=126 Reply from 172.16.25.3: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 11ms, Average = 3ms

		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11 Pinging 172.16.25.11 with 32 bytes of data: Reply from 172.16.25.11: bytes=32 time=6ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Reply from 172.16.25.11: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.11: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 6ms, Average = 2ms
		SR-01 (VLAN 40)	C:\>ping 172.16.25.38 Pinging 172.16.25.38 with 32 bytes of data: Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Reply from 172.16.25.38: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.38: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
		SR-03 (VLAN 40)	C:\>ping 172.16.25.54 Pinging 172.16.25.54 with 32 bytes of data: Reply from 172.16.25.54: bytes=32 time=8ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Reply from 172.16.25.54: bytes=32 time=7ms TTL=126 Reply from 172.16.25.54: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.54: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 8ms, Average = 4ms
		SR-04 (VLAN 40)	C:\>ping 172.16.25.62 Pinging 172.16.25.62 with 32 bytes of data: Reply from 172.16.25.62: bytes=32 time=7ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Reply from 172.16.25.62: bytes=32 time=10ms TTL=126 Reply from 172.16.25.62: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.62: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 10ms, Average = 4ms

<table>
<tr>
<td rowspan="4">VLAN 30 – Conferencing room 1</td>
<td rowspan="4">PC-C1 01</td>
<td>PC-CS 01</td>
<td>

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.24.3

Pinging 172.16.24.3 with 32 bytes of data:

Reply from 172.16.24.3: bytes=32 time=1ms TTL=126
Reply from 172.16.24.3: bytes=32 time=6ms TTL=126
Reply from 172.16.24.3: bytes=32 time=1ms TTL=126
Reply from 172.16.24.3: bytes=32 time=8ms TTL=126

Ping statistics for 172.16.24.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 8ms, Average = 4ms
```

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<tr>
<td>PC-NL 01 (VLAN 1)</td>
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```
C:\>ping 172.16.24.67

Pinging 172.16.24.67 with 32 bytes of data:

Request timed out.
Reply from 172.16.24.67: bytes=32 time=8ms TTL=126
Reply from 172.16.24.67: bytes=32 time=8ms TTL=126
Reply from 172.16.24.67: bytes=32 time=12ms TTL=126

Ping statistics for 172.16.24.67:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 8ms, Maximum = 12ms, Average = 9ms
```

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<tr>
<td>PC-IoT 01 (VLAN 1)</td>
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```
C:\>ping 172.16.24.195

Pinging 172.16.24.195 with 32 bytes of data:

Reply from 172.16.24.195: bytes=32 time=9ms TTL=126
Reply from 172.16.24.195: bytes=32 time=6ms TTL=126
Reply from 172.16.24.195: bytes=32 time=7ms TTL=126
Reply from 172.16.24.195: bytes=32 time=4ms TTL=126

Ping statistics for 172.16.24.195:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 9ms, Average = 6ms
```

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<tr>
<td>PC-GP 01 (VLAN 20)</td>
<td>

```
C:\>ping 172.16.24.131

Pinging 172.16.24.131 with 32 bytes of data:

Reply from 172.16.24.131: bytes=32 time=10ms TTL=126
Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
Reply from 172.16.24.131: bytes=32 time=6ms TTL=126
Reply from 172.16.24.131: bytes=32 time=13ms TTL=126

Ping statistics for 172.16.24.131:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 13ms, Average = 7ms
```

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</table>

		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11
			
			Pinging 172.16.25.11 with 32 bytes of data:
			
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			
			Ping statistics for 172.16.25.11:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 0ms, Average = 0ms

		SR-01 (VLAN 40)	C:\>ping 172.16.25.38
			
			Pinging 172.16.25.38 with 32 bytes of data:
			
			Reply from 172.16.25.38: bytes=32 time=13ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=8ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=5ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=20ms TTL=126
			
			Ping statistics for 172.16.25.38:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 5ms, Maximum = 20ms, Average = 11ms

		SR-02 (VLAN 40)	C:\>ping 172.16.25.46
			
			Pinging 172.16.25.46 with 32 bytes of data:
			
			Reply from 172.16.25.46: bytes=32 time=2ms TTL=126
			Reply from 172.16.25.46: bytes=32 time=2ms TTL=126
			Reply from 172.16.25.46: bytes=32 time=2ms TTL=126
			Reply from 172.16.25.46: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.25.46:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 2ms, Average = 1ms

		SR-03 (VLAN 40)	C:\>ping 172.16.25.54
			
			Pinging 172.16.25.54 with 32 bytes of data:
			
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			
			Ping statistics for 172.16.25.54:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 0ms, Average = 0ms

		SR-04 (VLAN 40)	C:\>ping 172.16.25.62 Pinging 172.16.25.62 with 32 bytes of data: Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.62: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
VLAN 40 – Staff Room 3	SR-03	PC-CS 01	C:\>ping 172.16.24.3 Pinging 172.16.24.3 with 32 bytes of data: Reply from 172.16.24.3: bytes=32 time=11ms TTL=126 Reply from 172.16.24.3: bytes=32 time=8ms TTL=126 Reply from 172.16.24.3: bytes=32 time=8ms TTL=126 Reply from 172.16.24.3: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.24.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 11ms, Average = 7ms
		PC-NL 01 (VLAN 1)	C:\>ping 172.16.24.67 Pinging 172.16.24.67 with 32 bytes of data: Reply from 172.16.24.67: bytes=32 time=12ms TTL=126 Reply from 172.16.24.67: bytes=32 time=1ms TTL=126 Reply from 172.16.24.67: bytes=32 time=8ms TTL=126 Reply from 172.16.24.67: bytes=32 time=8ms TTL=126 Ping statistics for 172.16.24.67: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 12ms, Average = 7ms
		PC-IoT 01 (VLAN 1)	C:\>ping 172.16.24.195 Pinging 172.16.24.195 with 32 bytes of data: Reply from 172.16.24.195: bytes=32 time=10ms TTL=126 Reply from 172.16.24.195: bytes=32 time=5ms TTL=126 Reply from 172.16.24.195: bytes=32 time=7ms TTL=126 Reply from 172.16.24.195: bytes=32 time=6ms TTL=126 Ping statistics for 172.16.24.195: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 5ms, Maximum = 10ms, Average = 7ms

		PC-GP 01 (VLAN 20)	C:\>ping 172.16.24.131
			
			Pinging 172.16.24.131 with 32 bytes of data:
			
			Reply from 172.16.24.131: bytes=32 time=9ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=14ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.24.131:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 14ms, Average = 6ms

		PC-C1 01 (VLAN 30)	C:\>ping 172.16.25.3
			
			Pinging 172.16.25.3 with 32 bytes of data:
			
			Reply from 172.16.25.3: bytes=32 time=1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time=4ms TTL=127
			
			Ping statistics for 172.16.25.3:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 4ms, Average = 1ms

		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11
			
			Pinging 172.16.25.11 with 32 bytes of data:
			
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.11: bytes=32 time<1ms TTL=127
			
			Ping statistics for 172.16.25.11:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 0ms, Average = 0ms

		SR-01 (VLAN 40)	C:\>ping 172.16.25.38
			
			Pinging 172.16.25.38 with 32 bytes of data:
			
			Reply from 172.16.25.38: bytes=32 time=12ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=10ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=8ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=8ms TTL=126
			
			Ping statistics for 172.16.25.38:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 8ms, Maximum = 12ms, Average = 9ms

		SR-02 (VLAN 40)	C:\>ping 172.16.25.46 Pinging 172.16.25.46 with 32 bytes of data: Reply from 172.16.25.46: bytes=32 time=11ms TTL=126 Reply from 172.16.25.46: bytes=32 time=9ms TTL=126 Reply from 172.16.25.46: bytes=32 time=2ms TTL=126 Reply from 172.16.25.46: bytes=32 time=7ms TTL=126 Ping statistics for 172.16.25.46: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 2ms, Maximum = 11ms, Average = 7ms
		SR-04 (VLAN 40)	C:\>ping 172.16.25.62 Pinging 172.16.25.62 with 32 bytes of data: Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Reply from 172.16.25.62: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.62: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
VLAN 30 – Conferencing room 2	PC-C2 01	PC-CS 01	C:\>ping 172.16.24.3 Pinging 172.16.24.3 with 32 bytes of data: Reply from 172.16.24.3: bytes=32 time=1ms TTL=126 Reply from 172.16.24.3: bytes=32 time=1ms TTL=126 Reply from 172.16.24.3: bytes=32 time=1ms TTL=126 Reply from 172.16.24.3: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.24.3: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 1ms, Average = 1ms
		PC-NL 01 (VLAN 1)	C:\>ping 172.16.24.67 Pinging 172.16.24.67 with 32 bytes of data: Reply from 172.16.24.67: bytes=32 time=1ms TTL=126 Reply from 172.16.24.67: bytes=32 time=1ms TTL=126 Reply from 172.16.24.67: bytes=32 time=1ms TTL=126 Reply from 172.16.24.67: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.24.67: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 1ms, Average = 1ms

		PC-IoT 01 (VLAN 1)	C:\>ping 172.16.24.195
			
			Pinging 172.16.24.195 with 32 bytes of data:
			
			Reply from 172.16.24.195: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.195: bytes=32 time=28ms TTL=126
			Reply from 172.16.24.195: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.195: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.24.195:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 28ms, Average = 7ms

		PC-GP 01 (VLAN 20)	C:\>ping 172.16.24.131
			
			Pinging 172.16.24.131 with 32 bytes of data:
			
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.24.131:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 1ms, Average = 1ms

		PC-C1 01 (VLAN 30)	C:\>ping 172.16.25.3
			
			Pinging 172.16.25.3 with 32 bytes of data:
			
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			
			Ping statistics for 172.16.25.3:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 0ms, Average = 0ms

		SR-01 (VLAN 40)	C:\>ping 172.16.25.38
			
			Pinging 172.16.25.38 with 32 bytes of data:
			
			Reply from 172.16.25.38: bytes=32 time=1ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=1ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=1ms TTL=126
			Reply from 172.16.25.38: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.25.38:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 1ms, Average = 1ms

		SR-02 (VLAN 40)	C:\>ping 172.16.25.46
			
			Pinging 172.16.25.46 with 32 bytes of data:
			
			Reply from 172.16.25.46: bytes=32 time=2ms TTL=126
			Reply from 172.16.25.46: bytes=32 time=4ms TTL=126
			Reply from 172.16.25.46: bytes=32 time=1ms TTL=126
			Reply from 172.16.25.46: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.25.46:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 4ms, Average = 2ms

		SR-03 (VLAN 40)	C:\>ping 172.16.25.54
			
			Pinging 172.16.25.54 with 32 bytes of data:
			
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.54: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.54: bytes=32 time=1ms TTL=127
			
			Ping statistics for 172.16.25.54:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 1ms, Average = 0ms

		SR-04 (VLAN 40)	C:\>ping 172.16.25.62
			
			Pinging 172.16.25.62 with 32 bytes of data:
			
			Reply from 172.16.25.62: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.62: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.62: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.62: bytes=32 time<1ms TTL=127
			
			Ping statistics for 172.16.25.62:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 0ms, Average = 0ms

VLAN 40 – Staff Room 4	SR-04	PC-CS 01	C:\>ping 172.16.24.3
			
			Pinging 172.16.24.3 with 32 bytes of data:
			
			Reply from 172.16.24.3: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.3: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.3: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.3: bytes=32 time=10ms TTL=126
			
			Ping statistics for 172.16.24.3:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 10ms, Average = 3ms

		PC-NL 01 (VLAN 1)	C:\>ping 172.16.24.67
			
			Pinging 172.16.24.67 with 32 bytes of data:
			
			Reply from 172.16.24.67: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.67: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.67: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.67: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.24.67:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 1ms, Average = 1ms

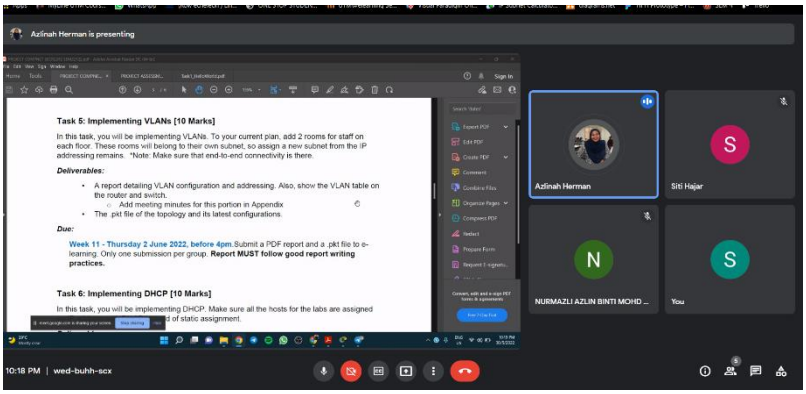
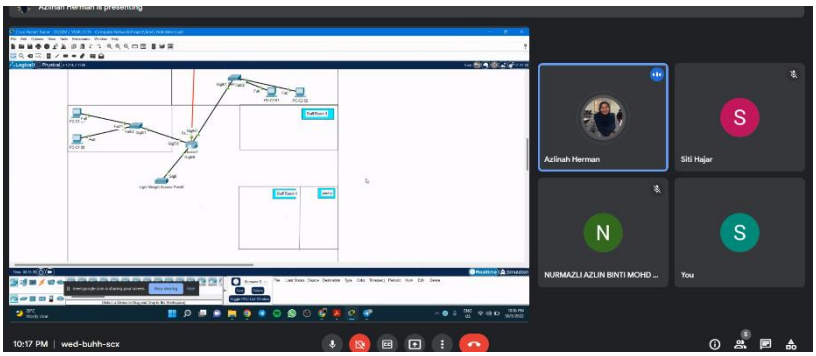
		PC-IoT 01 (VLAN 1)	C:\>ping 172.16.24.195
			
			Pinging 172.16.24.195 with 32 bytes of data:
			
			Reply from 172.16.24.195: bytes=32 time=13ms TTL=126
			Reply from 172.16.24.195: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.195: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.195: bytes=32 time=1ms TTL=126
			
			Ping statistics for 172.16.24.195:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 13ms, Average = 4ms

		PC-GP 01 (VLAN 20)	C:\>ping 172.16.24.131
			
			Pinging 172.16.24.131 with 32 bytes of data:
			
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=1ms TTL=126
			Reply from 172.16.24.131: bytes=32 time=20ms TTL=126
			
			Ping statistics for 172.16.24.131:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 1ms, Maximum = 20ms, Average = 5ms

		PC-C1 01 (VLAN 30)	C:\>ping 172.16.25.3
			
			Pinging 172.16.25.3 with 32 bytes of data:
			
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time=1ms TTL=127
			Reply from 172.16.25.3: bytes=32 time<1ms TTL=127
			
			Ping statistics for 172.16.25.3:
			    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
			Approximate round trip times in milli-seconds:
			    Minimum = 0ms, Maximum = 1ms, Average = 0ms

		PC-C2 01 (VLAN 30)	C:\>ping 172.16.25.11 Pinging 172.16.25.11 with 32 bytes of data: Reply from 172.16.25.11: bytes=32 time=1ms TTL=127 Reply from 172.16.25.11: bytes=32 time<1ms TTL=127 Reply from 172.16.25.11: bytes=32 time<1ms TTL=127 Reply from 172.16.25.11: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.11: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms
		SR-01 (VLAN 40)	C:\>ping 172.16.25.38 Pinging 172.16.25.38 with 32 bytes of data: Reply from 172.16.25.38: bytes=32 time=2ms TTL=126 Reply from 172.16.25.38: bytes=32 time=1ms TTL=126 Reply from 172.16.25.38: bytes=32 time=1ms TTL=126 Reply from 172.16.25.38: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.38: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 2ms, Average = 1ms
		SR-02 (VLAN 40)	C:\>ping 172.16.25.46 Pinging 172.16.25.46 with 32 bytes of data: Reply from 172.16.25.46: bytes=32 time=1ms TTL=126 Reply from 172.16.25.46: bytes=32 time=1ms TTL=126 Reply from 172.16.25.46: bytes=32 time=1ms TTL=126 Reply from 172.16.25.46: bytes=32 time=1ms TTL=126 Ping statistics for 172.16.25.46: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 1ms, Average = 1ms
		SR-03 (VLAN 40)	C:\>ping 172.16.25.54 Pinging 172.16.25.54 with 32 bytes of data: Reply from 172.16.25.54: bytes=32 time<1ms TTL=127 Reply from 172.16.25.54: bytes=32 time<1ms TTL=127 Reply from 172.16.25.54: bytes=32 time<1ms TTL=127 Reply from 172.16.25.54: bytes=32 time<1ms TTL=127 Ping statistics for 172.16.25.54: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms

1.6 Meeting Minutes

Date	Activity	Proof
31/06/2022	• We reviewed the instruction and assessment rubric for Task 5. • **Azlinah** displayed the topology in packet tracer and the pdf document as **Azlin**, **Hajar** and **Sharteswary** discussed on implementing the VLANs to our topology. • **We** encountered some difficulties with inter VLAN connectivity and had some doubts. So, **we** decided to ask our lecturer during the lecture tomorrow. • **We** calculated the subnets needed for the staff rooms. • **We** held a discussion where we discussed and came out with potential commands we could use when updating the packet tracer. • We divided the tasks as follows: **Azlinah**: ✓ Inter-VLAN Configuration LAN Configuration ✓ End to end connectivity testing form General Purpose lab to other	 

	subnets/VLANs and Staff Room 2 to other subnets/VLANs **Azlin**: ✓ Content of VLAN Table ✓ Creating VLANs and assigning ports to specific VLANs. ✓ End to end connectivity testing form Computer security lab to other subnets/VLANs and Staff Room 1 to other subnets/VLANs **Hajar:** ✓ IP Assignments to Staff Rooms ✓ End to end connectivity testing form Conferencing Room 2 to other subnets/VLANs and Staff Room 4 to other subnets/VLANs **Sharteswary:** ✓ Update floorplan & topology to fulfill task 5 ‘s requirements ✓ End to end connectivity testing form Conferencing Room 1 to other subnets/VLANs and Staff Room 3 to other subnets/VLANs	

02/06/2022	• **We** made final adjustments to the report. • **Azlin** created cover page and numbering. • **Sharteswary** wrote minute meetings. • Before submitting, **everyone** double checked the topology and report. Once satisfied with our work, **Azlin** submitted our work of task 5.