FACULTY OF COMPUTING

SECR1213 - NETWORK COMMUNICATIONS

TASK 5: IP ADDRESSING SCHEME

LECTURER:

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GROUP 3: THE PHOENIX

GROUP MEMBER:

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Introduction

IP addressing is important in ensuring that each host can connect to the network without address conflict. In this assignment, we need to explore the best way to subdivide the subnets from the network address assigned to our group. Below are the available networks listed according to the group and the network address assigned to our group is 192.18.0.0/8.

| Group/Section	Network Address
1	192.16.0.0/8
2	192.17.0.0/8
3	192.18.0.0/8
4	192.19.0.0/8
5	192.20.0.0/8
6	192.21.0.0/8
7	192.22.0.0/8
8	192.23.0.0/8
9	192.24.0.0/8
10	192.25.0.0/8

Since the notation is /8, the subnet mask is 255.0.0.0. By doing the AND operation, on the IP address and the subnet mask, we get the network address of 192.0.0.0 and the broadcast address of 192.255.255.255. Therefore, the usable IP address that we can use to assign to the end hosts ranges from 192.0.0.1 to 192.255.255.254.

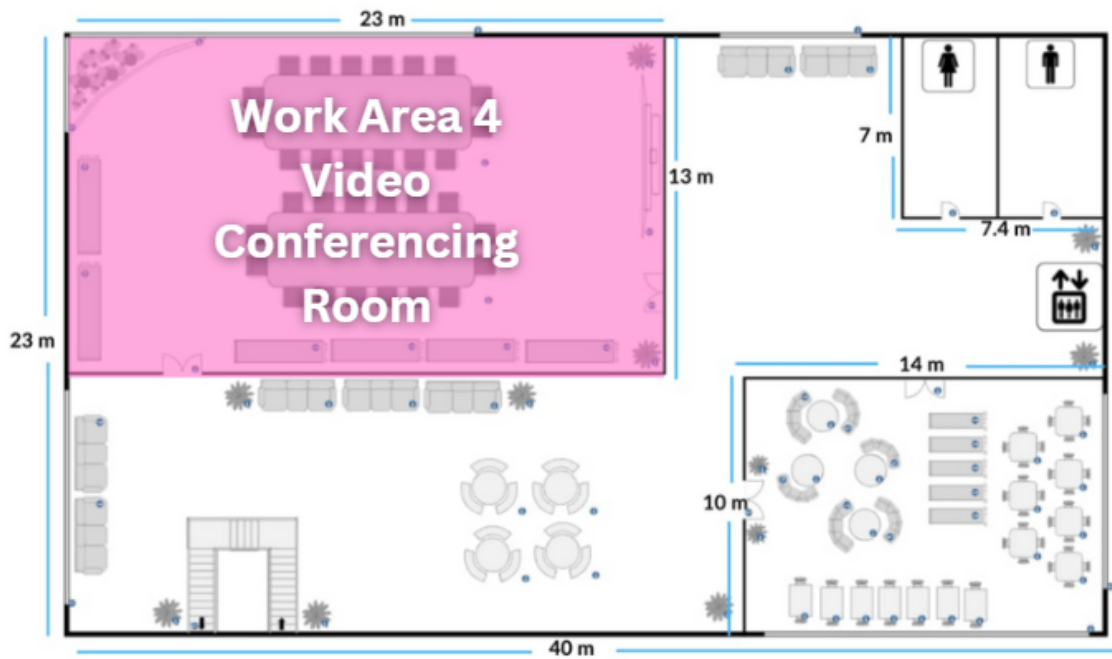| Subnet Mask	Network Address	Broadcast Address	Usable Host IP Address
255.0.0.0	192.0.0.0	192.255.255.255	192.0.0.1 - 192.255.255.254

We have 4 labs in total which includes 2 General Purpose Lab, 1 IoT Lab and 1 Network Lab, and a Video Conferencing Room. Therefore, task 5 requires us to divide the IP addresses according to the number of end users for each room.

Work Area

Ground Floor
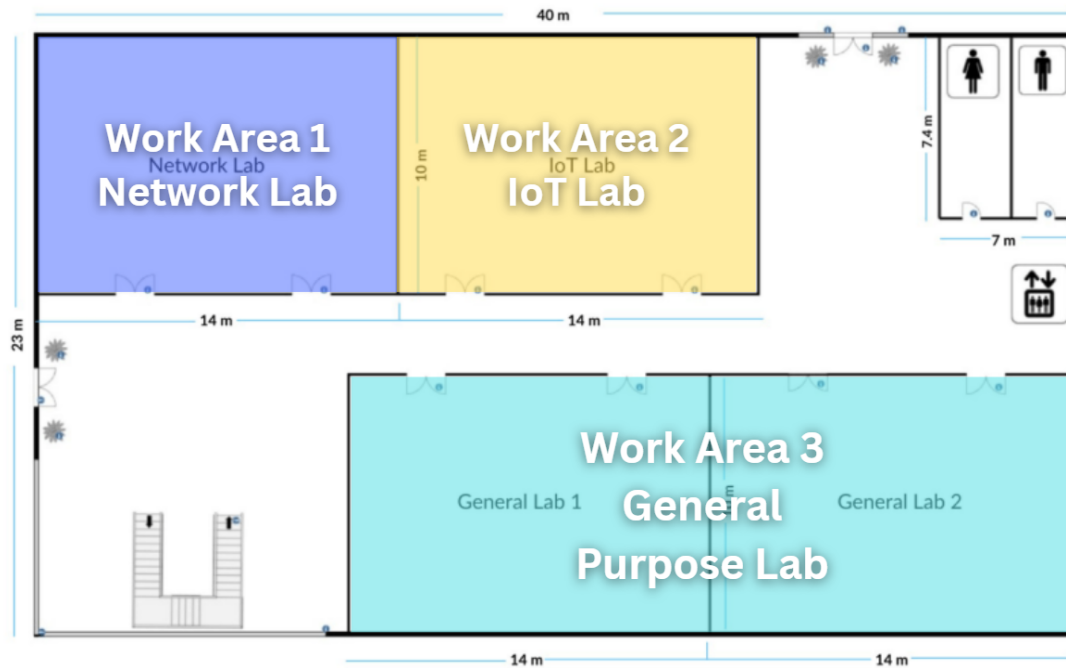
Level 1

A. Subnet mask.

Subnet	Area	Subnet Mask (Binary)	Subnet Mask (Decimal)
1	Network Lab	11111111.00000000.00000000.00000000	255.0.0.0
2	IoT Lab		
3	General Purpose Lab		
4	Video Conferencing Room		

B. Range of IP address, network and broadcast address for subnet.

Subnet	Area	Range of IP Address	Network Address	Broadcast Address
1	Network Lab	192.18.1.1 - 192.18.1.33	192.18.1.0	192.18.1.34
2	IoT Lab	192.18.2.1 - 192.18.2.33	192.18.2.0	192.18.2.34
3	General Purpose Lab	192.18.3.1- 192.18.3.63	192.18.3.0	192.18.3.64
4	Video Conferencing Room	192.18.4.1 - 192.184.2	192.18.4.0	192.18.4.3

C. Range of IP addresses allocated for user types based on the area.

i. Work Area 1: Network Lab

User	IP Range
Switch	192.18.1.1
Server	192.18.1.2
Access Point	192.18.1.3
Student PC (30 PCs)	192.18.1.4 - 192.18.1.33

ii. Work Area 2: IoT Lab

User	IP Range
Switch	192.18.2.1
Server	192.18.2.2
Access Point	192.18.2.3
Student PC (30 PCs)	192.18.2.4 - 192.18.2.33

iii. Work Area 3: General Purpose Lab

User	IP Range
Switch	192.18.3.1
Server	192.18.3.2
Access Point	192.18.3.3
Student PC (60 PCs)	192.18.3.4 - 192.18.3.63

iv. Work Area 4: Video Conferencing Room

User	IP Range
Switch	192.18.4.1
PC (1 PC)	192.18.4.2

Group 3, The Phoenix

MEETING MINUTES FOR TASK 5

28 December 2022 (Wednesday)

ATTENDEES

Harchana, Lee Rong Xian, Lu Qi Yan, Yusra Nadatul Alyeea

AGENDA

    a) **Get the Network Address from your lecturer (the project representative).**

    b) **Divide it in the best possible way for your network - all the different labs and rooms.**

1. Lee Rong Xian does a briefing on task 5 to make sure all of the team members understand the task.
2. All of the group members decide who will get the network IP address from the lecturer.
3. All of us do some research about how to divide and calculate the IP address for each room.

Divide the task

1. Yusra divided the task into 4 parts.
2. 1 person will do the meeting minutes and the IP address for the video conferencing room.
3. 1 person will do the IP address for the IOT Lab.
4. 1 person will do the IP address for the Network Lab.
5. 1 person will do the IP address for the General Purpose Lab.

Finish the task

No.	Items	Members
1.	Do the meeting minutes and the IP address for the video conferencing room.	Yusra Nadatul Alyeea
2.	Do the addresses for the IOT Lab.	Lu Qi Yan
3.	Do the addresses for the Network Lab.	Lee Rong Xian
4.	Do the addresses for the General Purpose Lab.	Harchana

ACTION ITEMS

No.	Items	Status
1.	Get the network address from the lecturer.	Done
2.	Divide it in the best possible way for your network - all the different labs and rooms.	Done
3.	Divide the task.	Done
4.	Finish the task.	Done