UTM

UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING

SEMESTER 1 2024/2025

SECR 1213 NETWORK COMMUNICATIONS

SECTION 02

PROJECT TASK 4

LECTURER: ASSOC. PROF. TS. DR. ISMAIL FAUZI BIN ISNIN

GROUP FOUREVER

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LAM YOKE YU	A23CS0233
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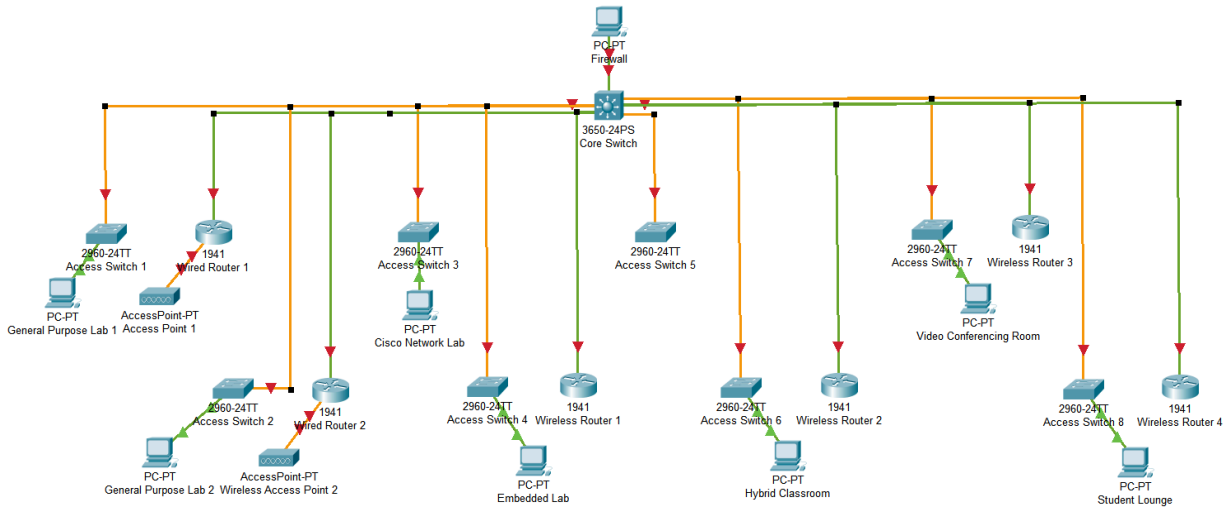
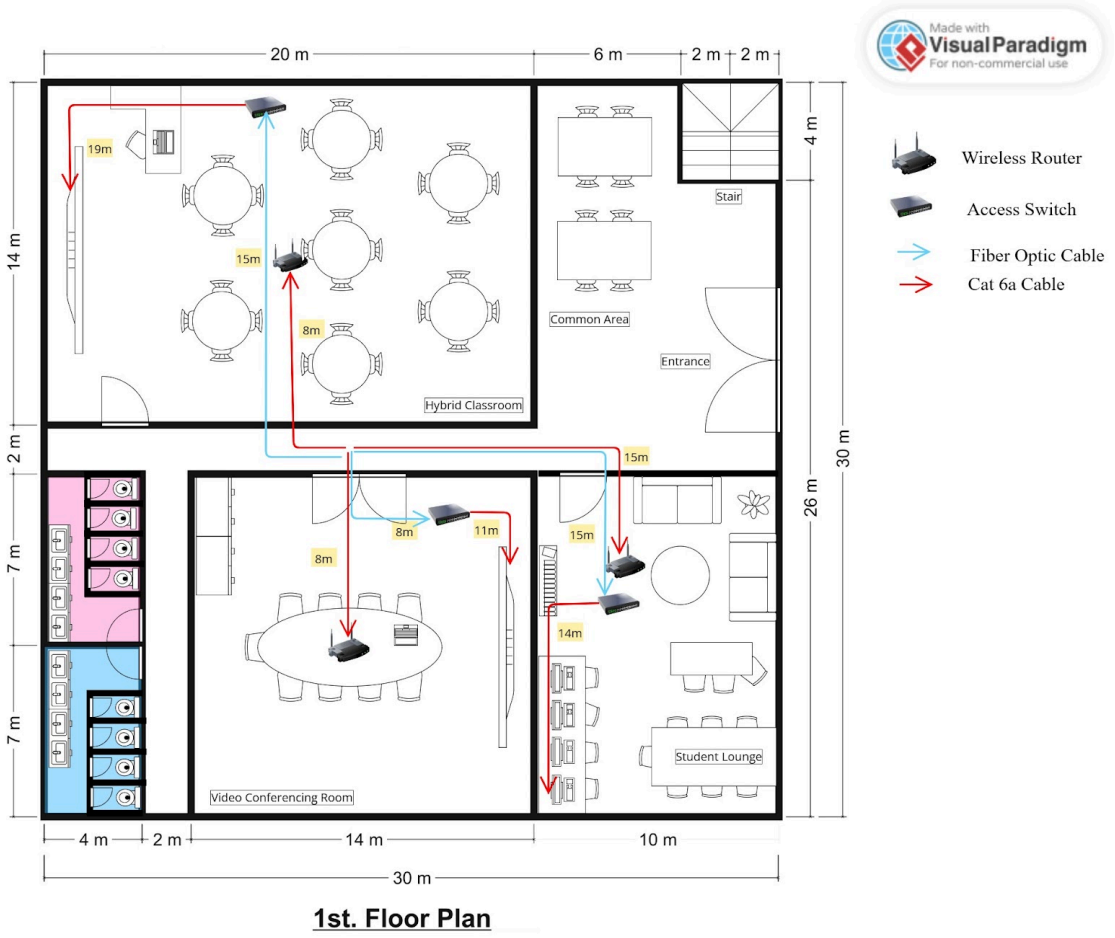
Network Devices Arrangement



Ground Floor Plan



1st. Floor Plan

First Floor Plan

There are nine connections. One general connection connecting to the Internet service provider, firewall and the core switch. There is then one connection for each room, with 3 connections on the ground floor and 5 connections on the first floor.

CAT6 cables and RS PRO 12-way TB Fibre Optic Cable are used as patch cords. There is an estimated amount of 106 patch cords.
For switches, Cisco C9200-48T-A Catalyst 9200 would be used. It has 48 ports of data. There are a total of 8 switches.

The estimated length of cable needed is 1007m by considering the height of a floor is 4m.

The calculations are shown in the table below.

Description	Patch Cords	Length (m)
General Connection		
- Firewall to core switch (Fiber Optic Cable)	1	30
Hybrid Classroom		
- Core switch to wireless router (CAT6)	1	8
- Core switch to access switch (Fiber Optic Cable)	1	15
- Access switch to smart TV (CAT6)	1	19
Video Conferencing Room		
- Core switch to wireless router (CAT6)	1	8
- Core switch to access switch (Fiber Optic Cable)	1	8
- Access switch to smart TV (CAT6)	1	11
Student Lounge		
- Core switch to wireless router (CAT6)	1	15
- Core switch to access switch (Fiber Optic Cable)	1	15
- Access switch to PC (CAT6)	4	14
General Purpose lab 1		
- Core switch to router (Fiber Optic Cable)	1	32
- Router to access point (CAT6)	1	2
- Core switch to access switch (Fiber Optic Cable)	1	32
- Access switch to PCs (CAT6)	31	216
General Purpose lab 2		
- Core switch to router (Fiber Optic Cable)	1	32
- Router to access point (CAT6)	1	2
- Core switch to access switch (Fiber Optic Cable)	1	32
- Access switch to PCs (CAT6)	31	216
Cisco Network Lab		
- Core switch to access switch (Fiber Optic Cable)	1	10
- Access switch to PCs (CAT6)	17	228
Embedded Lab		
- Core switch to wireless router (CAT6)	1	15
- Core switch to access switch (Fiber Optic Cable)	1	10
Technical Office		
- Core switch to access switch (Fiber Optic Cable)	1	22
- Core switch to PCs (CAT6)	4	12
Total	106	1004
Fiber Optics	11	238
CAT6	95	766

Meeting Minutes

DATE/TIME		10/12/2024	
LOCATION		Student Lounge, N28	
AGENDA		Discussion on Placement of LAN devices	
MEETING MC		Teh Ru Qian	
ATTENDANCE			
NAME		**TIME**	**REASON FOR ABSENCE**
Goe Jie Ying		9:45pm	-
Lam Yoke Yu		9:45pm	-
Tan Yi Ya		9:45pm	-
Teh Ru Qian		9:45pm	-
MINUTES			
NO.	**ITEM DISCUSSED**	**IDEA/SUGGESTIONS AND PERSON GIVING IT**	**PERSON IN CHARGE & DATE**
1	Placement of networking devices	All ● Discuss on the placement and arrangement of the networking devices Yi Ya ● Draft the placement of networking devices on tablet	All 10/12
2	Task Distribution	Ru Qian ● Use Visual Paradigm for the floor plan of the first floor Yi Ya ● Use Visual Paradigm for the floor plan of ground floor Jie Ying ● Use Cisco Packet Tracer for the networking devices connection Yoke Yu ● Calculated the needed cables and estimated length	All 10/12
3	Next Meeting	13/12 - Progress Checking	All
4	Meeting Ended	10:35 pm	All