

Sri Lanka Institute of Information Technology



IT1030 – Data Communication Networks
Year 1, Semester 1- 2025

NETWORK DESIGN GROUP PROJECT

PART 3
Y1S1Mtr6
(Group 06)

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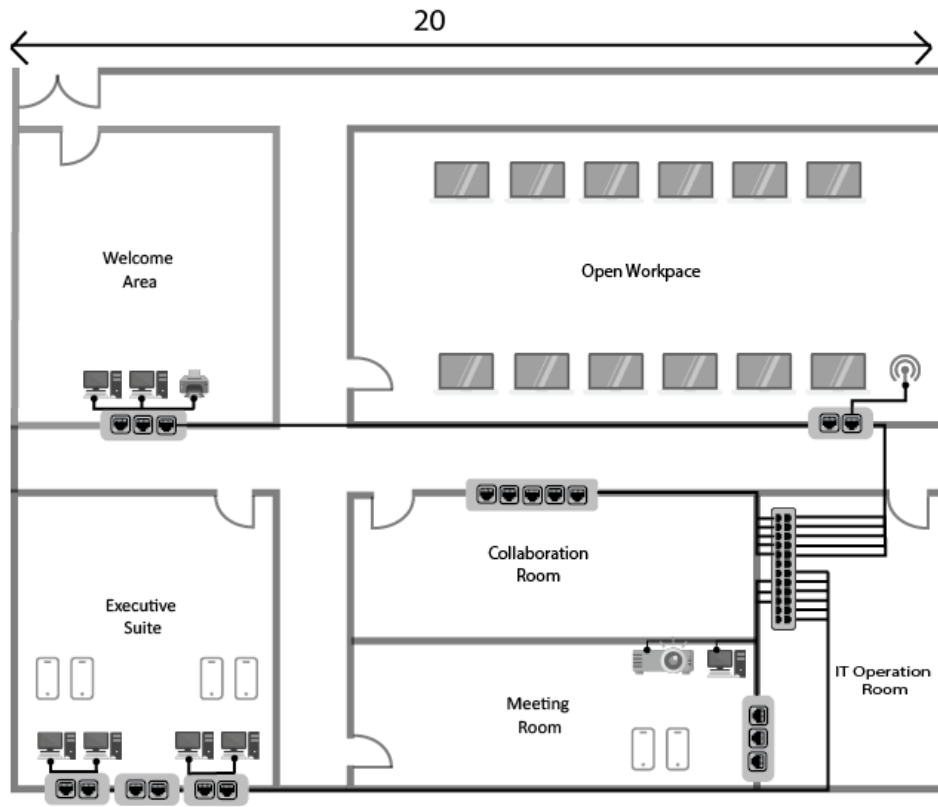


Figure 1 Ground Floor

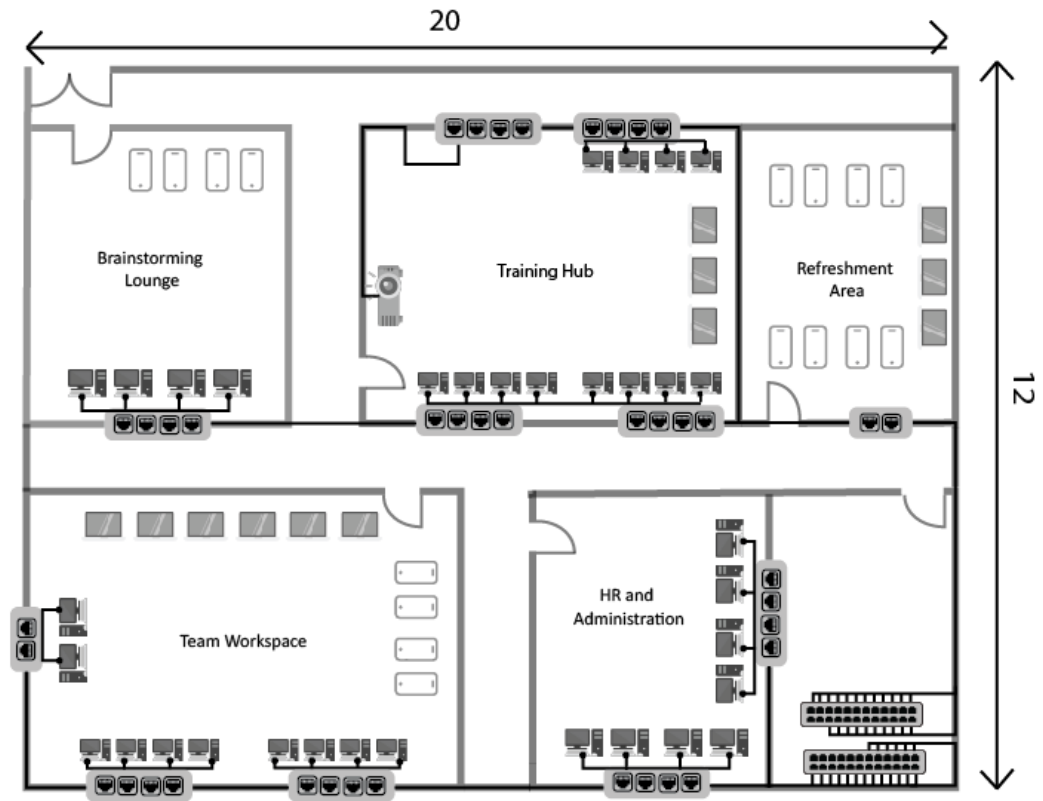


Figure 2 First Floor

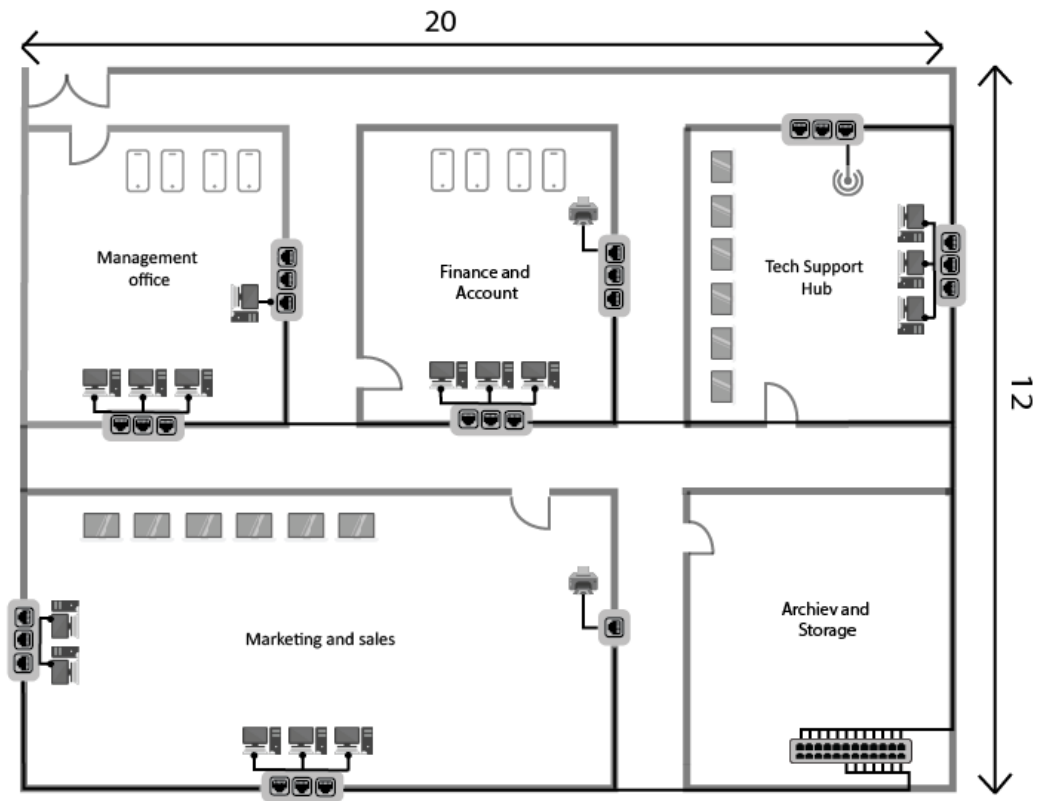


Figure 3 Second floor



Figure 4 References

a. UTP Patch Panels: Port Count

Location	Port Count Required	Recommended Panel	Devices Served	Notes
Ground Floor Rack	10 ports	24-port panel	7 PCs+ projectors 1 +printers 1+ AP 1	Allows future expansion
First Floor Rack	31 ports	48-port panel	27 PCs +printer 1+projectors 2+AP 1	May use two 24-port panels

Second Floor Rack	18 ports	24-port panel	15 PC +printers 2+ AP 1	Allows future expansion
Total	71 ports	120 ports	PC 49 +AP 3 +Printers 4+Projectors 3	25% expansion capacity

b. Fiber Patch Panels: Port Count and Connector Type

Location	Port Count	Connector Type
Ground Floor Rack	8 ports	LC Duplex
First Floor Rack	12 ports	LC Duplex
Second Floor Rack	8 ports	LC Duplex
Total	36 ports	LC Duplex

c. Wall Outlets: Locations

Ground Floor Wall Outlets

Department/Area	Number of Outlets	Outlet Type
Collaboration Room	5	RJ45 Cat6
Welcome area	3	RJ45 Cat6
Executive Suite	6	RJ45 Cat6
Meeting Room	3	RJ45 Cat6
Open workspace	2	RJ45 Cat6
Ground Floor Total	19 outlets	RJ45 Cat6

First Floor Wall Outlets

Department/Area	Number of Outlets	Outlet Type
Brainstorming Lounge	4 outlets	RJ45 Cat6
Training Hub	16 outlets	RJ45 Cat6
HR and Administration	8 outlets	RJ45 Cat6
Team Workspace	10 outlets	RJ45 Cat6
Refreshment Area	2 outlets	RJ45 Cat6
First Floor Total	40 outlets	RJ45 Cat6

Second Floor Wall Outlets

Department /Area	Number of Outlets	Outlet type
Management offices	6	RJ45 Cat6
Finance and Accounts	6	RJ45 Cat6
Tech Support Hub	6	RJ45 Cat6
Marketing And Sales	7	RJ45 Cat6
Second Floor Total	25	RJ45 Cat6

d. Equipment Racks: Location, Type, Height

Rack Location	Type	Height
Ground Floor Network Closet	Floor Standing	32U
First Floor Network Closet	Wall Mounted	12U
Second Floor Network Closet	Wall Mounted	12U