



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECR 1213 - 06
Network Communications

Lecturer: Dr. Ts. Raja Zahilah binti Raja Mohd Radzi

Task 6b
Individual report



Name	Matric No
Abdalla Ali Abdalla Ali	A23CS3022

Group 4: NetLink Solutions

Detail your contribution to the group and the project work:

1. Task 1 (Floor Plan and Layout):

Dimensions of general labs, classrooms and shared spaces like meeting rooms and reception were analysed.

Optimal arrangements proposed to ensure adequate use of space and accessibility of devices.

2. Task 2 (Network Topology):

Designed the core layer to be scalable and efficient traffic flow.

Created the first version of the topology diagram and later developed it after having input from other group members.

3. Task 3 (Device Selection):

Researching and choosing routed and switched that met the faculty's performance and budget constraints.

The group report provided detailed justifications for device choices.

4. Task 4 (Cabling and Connectivity):

Verified room connectivity for general lab and classroom servers, mapped to the proposed topology.

An alternative by which patch panels should be placed for organized and streamlined cable management.

5. Task 5 (IP Addressing Scheme):

Ensured that there's enough scalability as well as addressing will not result in any conflict while allocating IP ranges to general Labs and Classes.

Performed verified subnetting calculations to confirm accuracy.

6. Task 6A (Group Report):

Edited the introduction and project background parts, recapitulating the aim, scope and aims of the project.

Helped through reviewing and formatting and ending the group report.

Other Members' Contributions:

Mohammed Abdelgawwad:

- In Task 1 they were focused on specialized labs (IoT and Cisco Labs) by optimizing the layouts for their unique networking needs.
- In Task 2 they have designed the distribution and an access layer, for logical traffic flow, and redundancy.
- Ad hoc coverage selection of WAPs was chosen for Task 3 and a design of the vertical cabling routes was provided for Task 4.
- In Task 5, Allocated IP ranges for specific labs and wireless devices to ensure logical segmentation.
- In Task 6A, compiled the table of contents and list of figures.

Nouredin Mamdouh:

- In Task 1, designed layouts for shared spaces, e.g. hybrid classrooms and video conference rooms.
- In Task 2 we reviewed and optimized the topology access layer to enhance scalability.
- In Task 3, I was focused on choosing patch panels, printers and projectors, making sure that they will go with the network.
- In Task 4 I calculated total cable lengths, and drafted the financial budget.
- In Task 5, assigned IP ranges to shared spaces and critical devices.
- For Task 6A, you helped draft the abstract and conclusion sections.

Explain how you work as a group.

NetlinkSolution group work is all about collaboration and understanding each other, and working together usually in the meeting until most of the project is nearly done and well understood, while most people think it will take more time but working in a group is generally more productive and faster.

Explain what you have learned from working as a group.

From working in NetlinkSolution as a group I gained essential skills of communication, which is the most important element in working as group, also leadership skills and adapting to new ideas and methods

Explain what you have learned from doing the project.

The whole networking concepts from basic budget management to advanced level of cabling and addressing, also learned how to deal and use different tools and how to write reports, while focusing on communication and collaboration in group meetings.

Your comments and suggestions on the project.

The project was further good, educational and enjoyable, the project can be added to the e portfolio, and can be further developed, modified and deployed in real life given the.