UNIVERSITI TEKNOLOGI MALAYSIA

Task 6b

SECR1213 - NETWORK COMMUNICATION

Semester 3, 2024/2025

Section 01

Group : Mozilla

NAME	MATRIC NUMBER
NURUL ATHIRAH SYAFIQAH BINTI MOHD RAZALI	A23CS0163

LECTURER: DR.MUHAMMAD ZAFRAN BIN MUHAMMAD ZALY SHAH

DATE: 25 JANUARY 2025

GROUP : MOZILLA

TEAM MEMBERS :

- NAZATUL NADHIRAH BINTI SABTU A23CS0144 ,
- NUR AINA SYAFINA BINTI KAMASUAHADI A23CS0153,
- NURUL ATHIRAH SYAFIQAH BINTI MOHD RAZALI A23CS0163,
- WAN NUR RAUDHAH BINTI MASZAMANIE A23CS0195

MY CONTRIBUTION TO THE GROUP AND PROJECT WORK

In this project, I undertook several key responsibilities. I make sure that I recorded meeting minutes for every group meeting that I attended, ensuring all discussions and decisions were properly documented.

During Task 1, I conducted in-depth research on specifications for the general-purpose labs, Cisco Network Lab, Embedded Lab, and hybrid classroom, focusing on their infrastructure, equipment, and design needs. Additionally, I collaborated with Raudhah, who prepared the AutoCAD floor plans, by completing the corresponding sections of the report. This involved adding legends, formatting the layout, and integrating input from all team members to create a cohesive document.

For Task 2, I prepared a detailed list of preliminary analysis questions designed to gather specific insights into the project's requirements. I reached out to approximately 18 faculty members, including Professors, Associate Professors, and Drs, via email to gather expert feedback on networking needs and solutions. This step provided valuable perspectives that informed the project's direction.

In Task 3, I took responsibility for finalizing the report by detailing the devices proposed for each lab and explaining their functionalities. I conducted extensive research to determine the most suitable equipment within the project's budget constraints. Additionally, I calculated the overall budget, ensuring cost-effectiveness while maintaining high-quality standards for the infrastructure and equipment.

For Task 4, I designed network diagrams for General Purpose Labs 1 and 2 using AutoCAD. This required precise placement of workstations, network devices, and cabling paths to optimize efficiency and usability. I also calculated the required cable lengths for the network infrastructure and included these details in the report. These tasks ensured that the labs would be functional and meet the Faculty's needs.

Finally, in Task 5, I played a significant role in subnetting and IP addressing. I supported the calculation of subnet masks and subnet addresses, ensuring accurate segmentation of the network. I also assisted in determining the ranges of usable and host IP addresses, verifying that the assignments met the project's technical requirements and allowed for future scalability.

CONTRIBUTIONS OF OTHER GROUP MEMBERS

Raudhah was instrumental in creating detailed floor plans using AutoCAD, ensuring that the designs were accurate and aligned with the project's requirements. She took the lead in formatting and organizing the project report, ensuring clarity and coherence throughout. As a leader, she effectively managed the distribution of tasks, keeping the team on track and ensuring that deadlines were met. Additionally, she contributed to proofreading the final report to maintain quality and consistency.

Syafina played a critical role in drafting the project report, particularly in elaborating on the infrastructure and equipment requirements for each lab. She focused on the hybrid classroom design, conducting research on optimal technologies and layouts to enhance teaching and learning experiences. She also reviewed and verified the technical specifications of the proposed devices to ensure their alignment with the project's goals and standards.

Naza contributed significantly to the Cisco Networking Lab by researching and proposing suitable networking devices and configurations for teaching purposes. She designed the layout for the Embedded Lab, considering the placement of devices and peripherals to ensure workflow efficiency and functionality. Additionally, she assisted in verifying calculations for cable lengths and subnetting, ensuring technical accuracy and feasibility. Naza also reviewed the overall report, providing constructive feedback and suggesting improvements to enhance the document's quality.

HOW WE WORKED AS A GROUP

Our group collaborated effectively by assigning specific roles based on individual strengths and expertise. We held regular face-to-face meetings to discuss progress, address challenges, and share updates, which helped maintain strong communication and team cohesion. Online platforms like WhatsApp and Google Drive were also used to supplement our collaboration, enabling efficient coordination and file sharing. By fostering a supportive and inclusive environment, we ensured that everyone's contributions were acknowledged, valued, and integrated into the project's success.

WHAT I LEARNED FROM WORKING AS A GROUP

Working as a group taught me the importance of clear communication and teamwork. I learned how to manage differing opinions constructively and leverage the unique strengths of each team member. This experience reinforced the value of collaboration and mutual respect in achieving common goals.

WHAT I LEARNED FROM DOING THE PROJECT

Through this project, I gained insights into designing educational spaces and infrastructure to support modern learning. I enhanced my understanding of scalable and secure networking solutions and the considerations required for future-proofing technology infrastructure. The experience also helped me improve my research and technical skills, particularly in areas like budgeting and subnetting.

COMMENTS AND SUGGESTIONS ON THE PROJECT

Future projects could benefit from incorporating sustainability measures, such as energy-efficient systems and eco-friendly materials, to align with modern environmental standards. Preparing for future advancements, like 5G connectivity, would enhance the building's wireless infrastructure and ensure long-term usability. Additionally, implementing a mechanism to collect feedback from students on the building design could help address their needs more effectively. Lastly, developing a detailed phased implementation plan would provide clarity and facilitate better management of construction and equipment installation processes, minimizing disruptions and ensuring smooth execution.