# Reflection

## The most important things I learnt:

The journey of working in group through this unit has been a dynamic experience, surpass a lot of topics which help me to inquire more about project planning, database management and SQL queries. These are key learning points of my journey in this unit:

1. Project Planning with Jira:

With the use of Jira for project planning and deadline setup, the tasks of group work have been instrumental organized and setting up a clear roadmap for finishing the project. Jira is a powerful tool for creating and tracking tasks. This tool help to break down larger goals into manageable tasks, assign responsibilities and track progress, which has boosted the project efficiency. All the members need to regularly updates and task management were crucial in ensuring that the project stayed on course.

1. Collaboration tools on Atlassian service:

Atlassian offer a lot of collaborative features such as draw.io, whiteboard, GitHub integration has help to facilitated seamless communication and documentation. I discovered the benefits of using code spaces to store and manage SQL queries. It provided a centralized location for easy access and version control.

1. Performance of database and query performance:

Applying indexes to the database, it significantly impacts query speed and overall database efficiency provided valuable insights into optimizing database performance. I have learned how to write and execute SQL queries to retrieve, modify, and delete data from MySQL databases. I also learned deeper about the use of different SQL queries.

1. Relational Modelling database:

Understanding how entities and relationships are linked to each other. Refining models, normalization, naming conventions, and constraints was a comprehensive exploration of database design principles. This knowledge is foundational for creating robust and efficient databases.

1. Physical implementation in MySQL:

Implementing from the logical models to physical implementation using tools like PHPMyAdmin, XAMPP and MySQL Workbench was a practical application of theoretical knowledge. I also have tried to connect to databases through SSH and executing queries and managing added data.

## The things that helped me most were:

I allow to make errors and learn from it so that I can gain hands-on experience and get the feedback from the lecturer to be better. My lecturer was helpful and supportive, he always available to answer questions and provide assistance. Sometimes, he gave useful advice from his experience which help me out a lot. The unit provided a variety of resources (LinkedIn Learning, Canvas video, lecture notes) which help me out a lot in learning about different topics covered in the unit. Moreover, Confluence has helped me a lot when it can generate the template of reports with beautiful visual display and make the content more attractive.

## I found the following topics particularly challenging:

I found the database performance optimization is the most challenging when I need to understand the use of index and implementing them effectively. However, with learning from different resources and develop the database with my teammates has helped me to overcome this challenge.

## I found the following topics particularly interesting:

From this unit, I have found that cyber security aspects are interesting, especially focusing on securing databases against potential threats like SQL injection. The unit has highlighted the importance of secure coding practices and data protection in the lecturer note and in the LinkedIn Learning contents. I also found that the topic of database performance to be particularly interesting. While the data around the world is getting bigger every day, this unit has highlighted ways to boost up the performance of the database.

## I feel I learnt these topics, concepts, and/or tools well:

I feel that I have learned well of how to use Jira to plan and manage projects. I can create and track tasks, assign them to team members, and set deadlines. This skill will undoubtedly be valuable in my future studies and career.

I also help other learn how to use GitHub and code spaces to store and commit it. I can create a code space for my project, and I am able to use it to store queries and when I needed, I just need to copy and paste my code.

I feel that I have learned well how to use indexes to improve the performance of SQL queries. I can determine when an index is needed and when it is not. I have learned well how to model entities and relationships in a relational database using MySQL. I can design a relational database schema that is normalized and efficient.

## I still need to work on the following areas:

I would like to improve my understanding of relational modelling. I would like to be able to design more complex database schemas, and to optimize my database schemas for performance. By dedicating more time to practice and research in this field, I aim to enhance my skills and become more proficient in SQL query optimization.

I would like to learn more about SQL injection, and about techniques for preventing SQL injection attacks. I would like to be able to identify and mitigate SQL injection vulnerabilities in my own code and queries.

## My progress in this unit was …:

## Overall, my progress in this unit was steady and satisfactory. I maintained a consistent approach to completing tasks and assignments, and I managed my time effectively to meet deadlines. I found the unit to be challenging, but I also found it to be rewarding. I learned a lot about database design, SQL, and database performance. I am confident that the skills that I have learned in this unit will be valuable to me in my future career.

## This unit will help me in the future:

## This unit will help me in the future by providing me with valuable skills and knowledge related to database management. The ability to model entities and relationships, refine database structures, and optimize queries will allow me to work with large datasets efficiently and effectively. These skills will be useful in my future studies and career, especially if I pursue a career in cyber security.

## If I did this unit again, I would do the following things differently:

## If given the opportunity to revisit this unit, adjustments in the approach to learning would include dedicating more time to cybersecurity aspects and seeking additional resources to deepen understanding. Emphasizing further collaboration within the team and exploring alternative tools for specific tasks could also enhance the overall learning experience. I would spend more time on the relational modelling exercises. I found this topic to be challenging, and I think I would have benefited from spending more time on it.

# Self-Assessment

## Contributing to the Team's Work

Assessment of this part is high. I have ensured that the team’s progress by completing assigned tasks efficiently. My proactive approach and commitment to achieving the team’s goals positively influenced the overall quality and quantity of our work. I also have distributed the work fairly, interacting respectfully with teammates. I also have listened to others and given my opinions so that we can all become better in database design and report presentation.

## Interacting with Teammates

Assessment for this part is also high. I have interacted with teammates respectfully and often replied to the latest messages. I also have been open to feedback and have tried to incorporate it into my work. During all the meetings, I balanced effective communication with active listening, contributing to a collaborative atmosphere where ideas and opinions were valued. Overall, my interactions with team members were positive and contributed to a supportive and productive team dynamic.

## Keeping the Team on Track

As the team member in charge of checking quality and task distribution, I played a key role in keeping the team on track. Regularly monitoring progress, ensuring everyone was on the right tasks, and distributing work fairly contributed to the team's overall effectiveness. I have also been willing to take on additional tasks when needed.

## Expecting Quality

I assess this as High. I consistently expressed a belief in the team's capability for quality work and encouraged a collective strive for excellence. This positive mindset contributed to a culture of continuous improvement and a commitment to delivering high-quality outcomes. I have also been willing to give feedback on my teammates' work and to help them improve. I actively sought out additional resources, such as Udemy and YouTube, to enhance my knowledge and skills in database design. By sharing my research findings and offering advice, I motivated the team to continuously improve and produce work of the highest quality.

## Having related knowledge, skills, and abilities

I assess this as High. Leveraging my prior experience with databases, including using PHPMyAdmin and terminal for executing queries, I brought valuable knowledge and skills to the team. Additionally, I actively sought further learning from external resources like Udemy and YouTube to enhance my capabilities and contribute effectively to the team. I also was prepared to perform other roles if needed and actively sought opportunities to expand my knowledge in the field of database design.

## Did you participate in a process of performance improvement of a teammate?

Yes, I did. Being responsible for checking the quality of the work, I ensured that the team's outputs met the desired standards. This involved providing constructive feedback and suggestions for improvement. I took the initiative to research beyond the immediate project requirements. Utilizing resources like Udemy and YouTube, I gathered additional insights that benefited the team's overall knowledge and performance. I also frequently provided advice on enhancing the quality of teamwork and improving team documents. By sharing opinions and actively participating in discussions, I contributed to the team's collective growth in the field of designing databases and creating comprehensive reports. Ensuring fair distribution of work, I allowed every team member the opportunity to contribute ideas on improving project quality. This inclusive approach fostered a sense of ownership and collaboration within the team.

# Assessment of teammate Nguyen Quoc Thang

## Contributing to the Team's Work

I assess this part is high. Thang Has made significant contributions to the team’s work, actively working towards improving overall team quality. His dedication and proactive approach positively impact the team's goals and objectives.

## Interacting with Teammates

I assess this part of him is high. Thang stands out as a respectful and interactive team member. His consistent engagement with teammates, understanding of various project aspects, and open communication contribute to a positive and collaborative team environment.

## Keeping the Team on Track

I assess this part is high. Thang's expertise in Jira makes him instrumental in keeping the team on track. His consistent monitoring of tasks and effective use of Jira contribute to the team's progress, ensuring that everyone is aligned with project goals.

## Expecting Quality

I assess this part is high. Thang consistently delivers work of high quality, surpassing the standard. His commitment to early task completion and seeking feedback reflects a strong belief in and expectation of producing excellent results.

## Having related knowledge, skills and abilities

I assess this part is high. Thang's expertise in Jira, combined with his strong research skills, positions him as an asset to the team. His practical knowledge is not only good but is also effectively implemented in the current project.

# Assessment of teammate Nguyen Do Nhat Nam

## Contributing to the Team's Work

I assess this part for him is high. Nam has shown a commendable effort in contributing to the team’s work by completing assigned tasks. While his contributions are substantial, he just need a little bit of improvement in terms of overall impact and dept of his input.

## Interacting with Teammates

I assess this part is high. He has demonstrated positive interactions within the team, fostering a supportive environment. His active participation in meetings and willingness to share opinions contribute positively to team dynamics.

## Keeping the Team on Track

I assess this part is Medium. Nam generally keeps the team on track by completing tasks on time and understanding his current progress. However, there is a tendency to get distracted, which can affect the overall focus and efficiency of the team in some cases.

## Expecting Quality

I assess this part is medium. While Nam completes tasks on time, there is a need for a more explicit focus on expecting and delivering high-quality work. This includes a deeper understanding of the project requirements and actively seeking ways to enhance the quality of the deliverables.

## Having related knowledge, skills and abilities

I assess this part is Medium. Nam faces difficulties in database knowledge and skills, which initially posed challenges. While he has tried to research extensively for his part, there is a need for further development in acquiring the necessary KSA’s for the assigned tasks.

# Assessment of teammate Le Huu Tuong

## Contributing to the Team's Work

I assess this part is high. Tuong has made substantial contributions to the team's work, demonstrating a commitment to collective success. His efforts positively impact the team's ability to achieve its goals.

## Interacting with Teammates

I assess this part is high. Tuong effectively engages with team members, fostering positive interactions. His communication skills contribute to a collaborative team environment where ideas are shared and understood. This creative touch contributes to making the project documentation visually appealing and engaging.

## Keeping the Team on Track

I assess this part is medium. While Tuong interacts effectively, there are instances where deadlines are not consistently met. This can result in delays for the team, impacting overall project timelines. Improved time management and adherence to set timelines would further enhance his overall impact.

## Expecting Quality

I assess this part is high. The quality of Tuong's work consistently meets the set standards. His commitment to delivering work of high quality aligns with the team's expectations.

## Having related knowledge, skills, and abilities

I assess this part is high. Tuong's efforts to enhance his understanding of the database for better development showcase a high level of knowledge, skills, and abilities. His commitment to improvement is commendable. Tuong's proactive efforts to develop a better understanding of the database are commendable. This commitment to improvement directly contributes to enhancing the team's overall capabilities in the realm of database development.

# Assessment of teammate Trinh Quy Khang

## Contributing to the Team's Work

I assess this part of him is low. Khang's contribution to the group has been limited, and he hasn't actively assisted others in the team. The imbalance in workload distribution may impact the overall efficiency of the team. Khang's contribution to group tasks has been minimal, and he hasn't actively assisted other team members. A more collaborative approach in sharing the workload is essential for a balanced and effective team.

## Interacting with Teammates

I assess this part is low. Khang's minimal interaction with other team members and difficulty in communication hinder effective collaboration. Limited interaction and difficulty in communication make it challenging for team members to collaborate effectively with Khang. Improved communication skills and engagement would contribute to a more cohesive team dynamic.

## Keeping the Team on Track

I assess this part is low. Khang's consistent lateness for deadlines poses a challenge in keeping the team on track. Timely task completion is crucial for maintaining project timelines and overall team efficiency.

## Expecting Quality

I assess this part is low. The quality of Khang's work is below the set standards, requiring additional efforts from other team members to rectify and enhance the overall output. The below-standard quality of Khang's work requires additional efforts from other team members to rectify and enhance the overall output. Focusing on improving the quality of individual contributions is crucial for the team's success.

## Having related knowledge, skills, and abilities

I assess this part is low. Khang exhibits minimum skills and knowledge, facing difficulties in grasping the foundational aspects of the project. There is a need for significant improvement in building essential skills for effective contribution. Addressing the identified challenges in collaboration, time management, communication, and skill development will be pivotal for Khang to contribute more effectively to the team's success. Continuous learning and proactive engagement with team tasks will significantly enhance his overall performance and impact within the group.

# Assessment of teammate Tran Thai Duy Khang

## Contributing to the Team's Work

I assess this part is very low. Duy Khang's minimal attendance in class, lack of participation in discussions, and rare contributions to teamwork and ideas indicate a very low level of engagement. This significantly impacts the team's overall effectiveness. Duy Khang's rare presence and contributions make it difficult to coordinate team efforts and maintain progress. Regular participation is vital for keeping the team on track and ensuring timely task completion.

## Interacting with Teammates

I assess this part is very low. Duy Khang's infrequent participation in class and team discussions reflects a lack of interaction with team members. Effective collaboration requires active engagement and communication, which is currently lacking.

## Keeping the Team on Track

I assess this part is very low. Duy Khang's rare presence and contributions make it challenging to keep the team on track. Timely task completion and progress monitoring are compromised, affecting the overall team efficiency.

## Expecting Quality

I assess this part is low. Due to limited engagement, Duy Khang's ability to meet quality standards and contribute to the team's ideas is compromised. There is a need for a more active and participatory approach to ensure quality outcomes. Limited engagement and participation negatively affect Duy Khang's ability to meet quality standards and contribute valuable ideas. Actively involving oneself in discussions and tasks is crucial for ensuring high-quality outcomes.

## Having related knowledge, skills, and abilities

I assess this part is very low. Duy Khang's rare attendance in class and minimal contribution to teamwork suggest a lack of foundational knowledge, skills, and abilities needed for effective participation. Development in these areas is crucial.