

Unit 12 – Reflection:

This week, I focused on studying the last unit of the Object-Oriented Programming module, which covered design patterns and their use in organising code. Design patterns are practical tools in software development that enable the creation of adaptable, scalable, and maintainable solutions to common programming issues. Design patterns play a significant role in establishing code structure and improving its effectiveness.

During my studies, I discovered that software development design patterns provide reusable solutions to common problems, like architectural patterns for buildings. They consist of a name, problem, resolution, and consequences. Creational, structural, and behavioural patterns serve different purposes. Combining patterns can improve code structure and adaptability, enhancing multithreaded applications. Design patterns help create organised, maintainable, adaptable code for real-world challenges.

Additionally, this week I discussed with a colleague Sebastien in Collaborative Discussion 2 from Unit 8's topic of 'OO Design for IoT', who revealed the security risks of using metamodels. This revelation has further motivated me to conduct in-depth research, take meticulous notes, and create a comprehensive article detailing my findings, which I intend to include in my ePortfolio. Consequently, I know the substantial effort required to develop and enhance my knowledge of metamodels and effectively address my colleague's insights.

Furthermore, watching the seminar on the topic regarding 'Design Patterns in a Python Program' was beneficial in solidifying my understanding of the concepts covered in the unit. Although this is still a complex topic to understand regarding implementation, the reading and training I have been carrying have improved my knowledge. I found it

intriguing how developers approached similar problems with different design pattern combinations.

I have dedicated much time to studying and practising the concepts in this unit. The time I have spent reading and the extra hours spent on formative activities have paid off, as I now have a solid understanding of applying design patterns to structure my code. Overall, I am confident in my ability to use design patterns confidently.

The rest of the days from the time I publish this reflection, I will invest in Codio activities and review and finalise my ePortfolio for my final assignment.