

## Final Reflection of Secure Software Development module

### Introduction

In this reflective essay, I will document my expedition of learning through this module, with its brightness and challenges.

### What I Encountered

I was thrilled with the topic of Secure Software Development, because, accompanied by AI, are for me the areas with the best professional prospects for the job market and value. Also, as an App Developer, security is a must and a plus. So I started my journey with enthusiasm, and I found the content useful, but sometimes hard to master, and the assignments sometimes hard to do but useful. Due to my background, as a Taiwanese and Spanish who lived and studied in Taiwan, I am not very used to being assertive, talking much, or going against the opinions of others directly. But there is a part of me that is also critical and can be creative. Since my moving to Europe a few months ago, I am experiencing a lot of challenges, and I need to work and study at the same time, and this subject needs a lot of time and dedication, testing me to the end also personally and psychologically.

About the assignments, I found some of the theoretical ones hard but felt more comfortable with the practical ones. I have been working in App Development for a few years, and have some experience useful for this subject.

Regarding studying and doing the homework, one of my major challenges has been time management and prioritising, because I faced three fronts: adjusting to a new environment and doing all the needed bureaucratic paperwork, doing my job as an App Developer, and studying for my Master's.

In the team project, I proactively suggested leveraging communication platforms like WhatsApp and Google Documents, but this did not solve the problems of coordinating meetings across disparate time zones. Personal setbacks exacerbated the situation: an unforeseen malfunction in my computer during my relocation to Europe disrupted our workflow, and I got very nervous, frustrated, and handicapped without the tools needed. That made me less confident in the meetings. For example, I didn't insist on my opinions. My background was not helpful, and I understood the critical importance of personal change, technical preparedness, and resilience in overcoming adversity.

Assigned to manage authentication, I ventured into unfamiliar terrain. Despite these setbacks, I was happy to explore back-end development, enriching my skill set and expanding my career horizons, because as an App Developer, I knew more about frontend. The hands-on implementation of security measures deepened my understanding of concepts like XSS and DoS attacks, emphasising the significance of rigorous testing and adherence to coding standards. Besides, I gained more knowledge about testing, and the importance of using Pylint for collaboration, because it facilitated for teammates to understand and get quickly your code by following standards.

In the study and tasks, I found very useful the practice of integrating software security development practices at each stage of the Agile SDLC, the Codio activity, Python, linters to

support Python testing, OWASP Security, attacks, API, JWT, implementations for protecting API, the debate criticising people, The debate was quite interesting. Reviewing and giving feedback to peers, I've learned that even when on the same side, you could still criticise through research and not trust every source. Everything should be valued, including the collaboration team, Rolfe et al.'s (2001) approach reflection model taught is good to think step by step, creatively and logically.

Overall, the course structure and deadline were good for our progress, but the seminar before the assignments should be scheduled at least one week before the deadline so that we know in detail the requirements, thus we can do the assignment accordingly. Some of us have work, and even if we start doing the assignments before the seminar, we might not do it as required and need to do a lot of reviewing after the seminar and feel pressed by the deadline. So I needed to stay late over the whole weekend because the seminar was on Friday.

In the lectures, there was a topic on Awareness of Cybersecurity Challenges, which interested me a lot. Since technology is evolving rapidly, even with advancements in semiconductors, supercomputers, and quantum computers, there will be significant security challenges in the future, and the impact on Cybersecurity will be profound and game-changing, and even create a crisis in this sector. And I feel that the module should address this more because a big part of the content might get obsolete in a few years.

## **So What? Analysing and Interpreting**

Reflecting on my experiences, I gained profound insights into Secure Software, my growth areas, teamwork, communication, and personal and professional development. Despite facing logistical hurdles and technical setbacks, I discovered that it is possible to improve remote collaboration through some agile tools. Furthermore, I think the main points to do so are fostering the following: clear communication, technical preparedness, resilience, self-awareness, assertiveness, exploring new domains, enhancing my organisational skills to maximise learning efficiency as a part-time learner, peer or teacher review, and using UML diagrams for effective collaboration.

## **Now What: Strategies for Growth and Continuous Learning**

Armed with newfound insights, I will implement strategies to enhance my effectiveness in study, assignments, and collaboration, and improve in personal and professional areas, with this action plan:

1. Time Management Mastery and Optimising Learning Efficiency: Recognizing the value of time, my work outside of studies, and my shortcomings in this area, I will proactively prioritise tasks.
2. Building Confidence and Assertiveness: Recognizing my growth areas, I will actively work on expressing opinions confidently.
3. Learning from Criticisms and embracing Diversity of Thought: I commit to seeking out dissenting viewpoints, including criticisms from colleagues and teachers, to fuel innovation, find novel solutions, and challenge group thinking. And
4. Continuous Learning and Adaptability.

## **Conclusion**

Reflecting on this intricate journey, I've gained insights into my own growth areas. I've stepped outside my comfort zone, deepening my understanding of back-end development and security measures. This has enriched my skill set and broadened my career horizons.

However, there's still much to do in terms of personal and professional growth. I recognize the need to be more proactive in overcoming challenges, fostering open communication, and prioritising ongoing learning and adaptation. I've also learned the value of persistence—of not giving up and not allowing myself to become my obstacle.

In this module, I believe I've made progress in overcoming some of my defects and placing greater importance on personal growth, regardless of external circumstances and setbacks.

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