Secure Software Development - Final Reflection

Throughout this module, I have been able to reflect on aspects of Secure Software Development, their importance and how I can use this in my professional life. Having started my first role within a software development environment earlier this year, it has been useful to see some of the academic principles that I have learned be reflected in my work, with me being able to put these into practice to become a more efficient professional. This module has also allowed me to develop my teamwork and communication skills, with a core part of the learning taking place in groups. This was a useful task both for my professional development and my personal development. All of these have allowed me to feel engaged in the learning and enthused about how I can carry this forward into my career.

The majority of the early part of the module involved working as a small development team to design a secure system that can be used in a school environment. As a relatively new developer, I found myself feeling self conscious about my skills and how I could contribute to this, however I believe I was still able to contribute in a meaningful way. I took the lead on the majority of the risk assessment aspects of the design, as this is something that I have both experience with and an interest in, with the rest of the work being split between the team to play to both strengths and opportunities for learning. We met frequently to discuss updates and all contributed to a deliverable that we were proud of, which in turn set each of us up for success in the second assignment.

Despite this, however, we did encounter some slight issues with the team. It was clear early on that there was a vast amount of difference in people's skills, with some team members having developed for a long time and others being very new. One thing I did aim to do early on is assert myself and ensure that we were designing a product that all could deliver on. A particular member of the team did try to take control of this and offered up solutions that while suitable to a professional environment, would have not allowed all members of the team to learn at a good pace. I challenged this, and we mutually agreed that we should ensure all could complete the task. These are skills I have translated to my professional environment too, as I have recently been working with some work placement students on a

deliverable. Knowing that these students are very new to development, I have ensured that I am working to the group and not leaving anyone behind. This in turn ensures that team members feel comfortable challenging processes and can contribute in a meaningful way. Overall, I believe that the group exercise was beneficial to me and has given me crucial experience of a different development environment to the one I currently work in.

Turning to the individual work in this module, I found that it came at a good time to build on my previous study. Having recently completed modules on Network Security and Information Security Management, I was able to build on parts of this within this module, such as protection against methods used within penetration testing and some of the legal standards that need to be met during secure software development. As previously touched upon, I can sometimes lack confidence in my programming skills and I believe this may have impacted some of my work on the second assignment, which involved the implementation of the system designed in assignment one. The design was complex, and some of the parts within the design were difficult for me to implement. This resulted in me having to leave parts out. Despite this, I did still ensure that the key parts of a secure build were there. These challenges led me to ensure that I make further developments in this area, as these will be critical to my career. I aim to continue with the development I started, and try to get this to a better point in the future to evidence my continued development in this area.

This module has given me a deep understanding of the importance of security within development. I have an interest in cyber security in general, and being able to build more skills in this area has only further enhanced this interest. As I move towards my final assignment as part of my MSc, I feel more confident in wanting to take an issue within security as the core part of this, using the research to help me better understand these concepts and work towards a career in that field. It has also

positioned me well with my current career in development, as the environment I work in (a local authority) has responsibility for a considerable amount of sensitive data which needs to be kept as secure as possible. I can now identify when my designs are flawed in terms of security, and can identify how my approach to development may need to change to ensure that I comply with all required laws. While I still

believe that I have a long way to go in order to fully feel confident with this, I feel more secure in my fundamental knowledge relating to secure software development. I hope to continue to explore this topic in more detail as changes come in the future, and work to make myself the best professional that I can be.

Word Count: 930