

Information Security Management – Reflection

The Information Security Management module introduced key principles of risk assessment, threat modelling and security governance. This reflection follows the What, So What, What Now model suggested by Rolfe et al. (2001).

What?

At first, the module appeared more business oriented than technical, which made it harder to relate to from a computing perspective. Topics such as the role of international suppliers in digitisation were challenging and although I researched them, feedback indicated I had not explored the subject in sufficient depth. This reflected how some computing modules still carry influences from their business roots.

With only three students enrolled, forum discussion was limited. I did find the posts easier to complete by applying techniques from previous modules. The guiding questions provided clarity, and one forum felt more productive than two in previous six-week modules.

Although the reading list had been updated, the threat modelling task still referred to an outdated textbook though I found it through the library. The module introduced several new concepts, and I found the learning curve steep.

Seminar two's threat modelling task took much longer than expected as I found it difficult with no examples. When I began the first assignment, I realised I lacked a clear understanding of how to structure a risk assessment. I applied frameworks such as STOW, STRIDE and DREAD, although I was unsure whether I was applying them effectively. Shostack (2014) argues that threat modelling is most effective when frameworks are tailored to the specific system and understood in context, which takes time and experience to develop.

Assignment two required creating a graphical interface in Python, which I had never done before. I initially researched tools such as p5.py (a python port of p5.js) and NetworkX with Matplotlib but found them less suitable for my aims. I eventually used Plotly with NiceGUI, which allowed me to build an interactive front-end interface.

Both tools worked well with Replit, my preferred IDE and gave me valuable experience working with user interfaces in Python.

The completed application successfully met the project requirements. It allowed users to input and adjust threat likelihoods interactively, visualised risks using Plotly sunburst charts and provided real-time summaries of overall system risk. It supported pre and post digitisation comparisons using structured JSON files. Automated testing with pytest and code validation using pylint helped maintain reliability and code quality throughout development.

The disaster recovery diagram task in Seminar four lacked clarity. Without an example, it was difficult to know what to include. Most diagrams appeared similar, with minor differences based on system context. The GDPR case study used outdated examples, and the Unit five wiki task seemed to reference a previous version of the course. I selected my own topic and used the reading list, although several sources had been removed and not replaced.

I was unable to attend the live seminars due to scheduling. With few participants, group work was not practical. However, I watched the recordings and completed the tasks independently.

So What?

Despite these challenges, the module helped me adopt a more independent learning approach. I relied less on course materials and sought external resources when content was unclear or outdated. This reflects Petty's (2014) emphasis on developing independent learners by encouraging students to take responsibility for their own progress, supported by clarity of objectives and opportunities to build confidence through practice. Writing discussion posts based on structured questions improved my clarity and efficiency.

The graphical task was particularly rewarding, as it pushed me to explore unfamiliar tools and approaches. It showed me how Python could be used not only for logic and back-end development but also to create functional and user-friendly interfaces.

The inconsistencies in content and sequencing also made me more aware of the importance of structure in learning. According to Biggs and Tang (2011), effective

teaching and learning depend on alignment between content, activities and outcomes. The disconnect between reading materials and tasks made parts of the module harder to follow.

What Now?

In future modules I will identify key tools and frameworks early even if they are not included in the module content. This will help me avoid delays and structure my work more effectively.

I plan to keep exploring Python libraries such as Plotly and NiceGUI which have improved my understanding of visual development. These tools encouraged experimentation and increased my confidence in using new technologies. As my confidence grows, I will build on this approach by applying what I learn to practical tasks and reflecting on what works so I can improve over time.

I also intend to manage my time more proactively. Setting clear goals at the start of each module will help me stay on track when tasks are unclear or time consuming.

This module strengthened my ability to work through unfamiliar topics, adapt to unclear instructions and take initiative when course materials were lacking. I now feel more confident in applying a structured, independent approach in future modules and professional projects.

References

Biggs, J. and Tang, C. (2022) *Teaching for Quality Learning at University*. 5th ed. Maidenhead: Open University Press.

Petty, G. (2014) *Teaching Today: A Practical Guide*. 5th ed. Oxford: Oxford University Press.

Rolfe, G., Freshwater, D. and Jasper, M. (2001) *Critical reflection in nursing and the helping professions: a user's guide*. Basingstoke: Palgrave Macmillan.

Shostack, A. (2014) *Threat Modeling: Designing for Security*. Indianapolis: Wiley.