Final Reflection of the NISM Module

The main site is published at: https://zihaadk.github.io/myportfolio/

NISM site: https://zihaadk.github.io/myportfolio/nism.html

The Network Information and Security Management (NISM) module has broadened my perspective on the topics of networking, monitoring and logging tools, principles of information security as well as vulnerability and scanning tools.

Students were placed into 3 groups at the start of the Module, I was part of Group 1. Two projects i.e. a team design document and a team executive summary were completed as part of this module as well various collaboration discussions and vulnerability scanning exercises.

The collaborative discussions created an opportunity for me to learn and understand from my colleagues' viewpoints. Everyone brings a different perception and angle to the discussion. I have learnt the distinct difference between a threat and a vulnerability; this wasn't clear to me prior to completing the unit tasks. As Campbell (2016) states that "the potential cause of an unwanted incident, which may result in harm to a system or organization" is called a threat and "a weakness of an asset or control that can be exploited by one or more threats" is known as a vulnerability. My knowledge has also expanded on the security issues that medical devices faced, as I had very little knowledge on the technology advancements in this area. I have also learnt how to correctly perform a DREAD analysis, which was a new concept to me. From the collaboration tasks it was clear that I had to perform extensive reading on the topics to fill the knowledge gaps that I had.

Group 1 was assigned the website called https://loadedwithstuff.co.uk and was asked to theoretically identify vulnerabilities and provide recommendations as part of the team design document project. Furthermore, regulations such as the General Data Protection Regulation (GDPR), Information Commissioners Office (ICO) as well as Payment Card Industry Data Security Standard (PCI-DSS) needed to be taken into account. Information gathering for this project was a challenging task for me as it

required reading and understanding many research papers based on threats and vulnerabilities specific to e-commerce websites.

The second project (executive summary document) required groups to use various scanning tools to identifying vulnerabilities as well as provide recommendations and mitigating actions to secure the website in question. One of the ways that cybersecurity professionals attempt to secure websites and servers is by performing regular scans and penetration testing using various scanning tools. The purpose of a scanning tool is to acquire more information about a specific host or target (I.T Governance Ltd, 2021).

The two projects mentioned above allowed individuals, and the group as a whole to acquire a great deal of knowledge in identifying and analysing vulnerabilities in systems as well as provide meaningful recommendations. Furthermore, these tasks provided the opportunity to study the governing body and associated regulations (GDPR, ICO, PCI-DSS) in more detail as well as become fluent in using Kali Linux to perform penetration testing exercises.

Scanning exercises provided the opportunity to learn about various scanning tools in the industry. Regarding the team activity, each member produced results in a team discussion. These results were discussed in a team meeting and were then aligned. I was very happy with the results I had obtained as it aligned with the rest of the team confirming and validating my knowledge on the topic. Figures 1 and 2 below provides evidence of collaborating with the team:
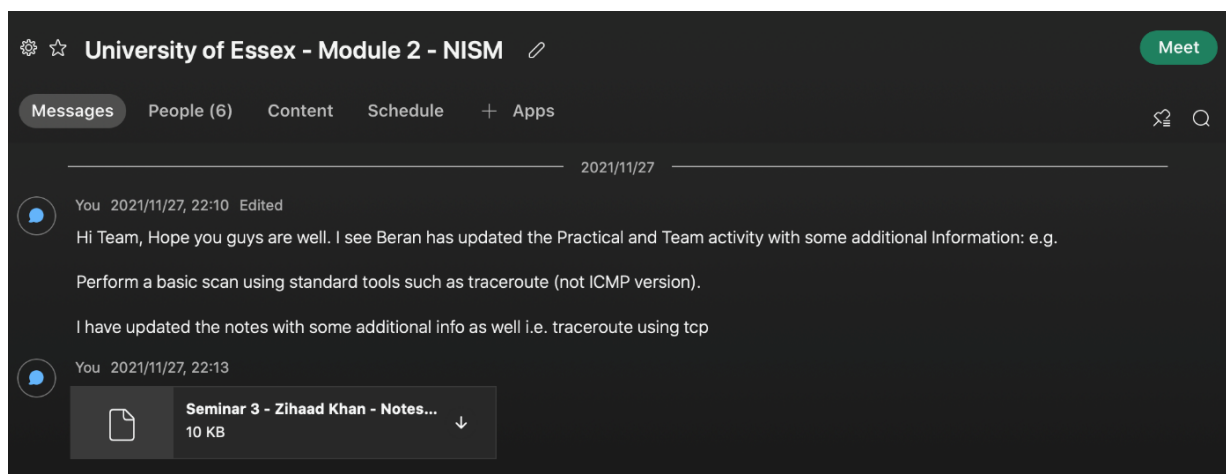
Figure 1: Collaboration Evidence 1

University of Essex - Module 2 - NISM

Messages | People (6) | Content | Schedule | + Apps

Seminar 3 - Zihaad Khan - Notes...
5 KB

You 2021/11/21, 15:27
Hi Team , Michael and I have gone through the questions for Seminar 3, we are in agreement for these answers. Please have a look and comment if there are any changes that need to be made.

You had a meeting (1 hr 4 min) 2021/11/21, 16:01

2021/11/23

Edward van Biljon (@outlook.com) 2021/11/23, 08:25
Hi Zihaad, I have gone through your notes and everything looks spot on. I am guessing this command: sudo mtr loadedwithstuff.co.uk -r is similar to a pathping which also provides information on the longest hop and any dropped traffic?

You 2021/11/23, 08:40
Hi Edward, thanks for going through the notes and you are correct. There are various commands one can use to achieve these results. Do you think Beran is expecting more from us regarding this task?

Edward van Biljon (@outlook.com) 2021/11/23, 12:00
No i dont think so, the information you provided is a lot already so i think we are okay on that front
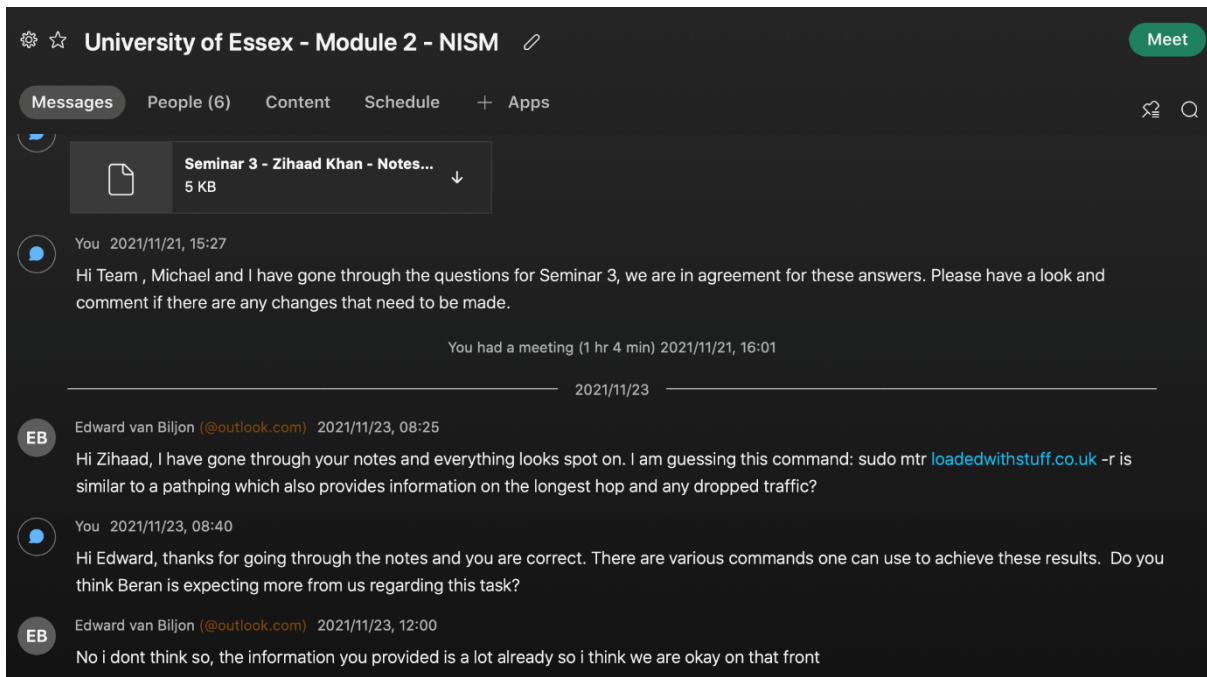
Figure 2: Collaboration Evidence 2

The two projects as well as many activities were completed as a group. Feedback from team members is very beneficial as they provide a different way of thinking and analysing problems. Working in a team has its disadvantages as well, we as group 1 were unfortunate to lose 3 members of the team during the module. This loss placed the team under immense pressure to achieve the desired outcomes planned at the start of the module. This meant that each of the remaining team members (2) had to take on additional responsibilities. During the first unit the group was required to complete a team contract outlining roles and responsibilities of each team member. One item that we did not cover in the team contract was how to handle the workload if team members decide to drop out of the module. After a last-minute discussion, the remaining two members decided that frequent meetings (twice a week) would be required for us to collaborate more closely. This meant that more time had to be dedicated to the module than was originally planned. I was worried that this matter may have an impact on our grades if a good design project is not produced. Managing time was key to completing tasks given to other members who have exited the course. Miqdadi et al. (2014) mentions "that time management is extremely important, especially when it comes to university students because it will boost their grades and

enhance their productivity." On the positive side, the added pressure forced us to work harder and smarter to achieve the objectives and complete tasks ahead of schedule. It is projects like these where you come to learn more about yourself and how you would perform under pressure.

On the contrary, I felt that the time allocated to complete various tasks in the units was not accurate, in some instances it would take double the amount of time allocated to complete a task. For some units seminars were held the day after the unit started for example, the unit started on a Tuesday and seminars were held on a Wednesday. The time required to adequately prepare for these seminars were insufficient.

Lastly the module has provided me with opportunities to explore various concepts on information security, industry regulations, as well as a comparison on the latest scanning tools. It was very intellectually stimulating, motivating and has challenged me to achieve my best work. Furthermore I believe that I have progressed with skills such as time management; from reading essential items in a unit, preparing for seminars and having group discussions, I soon realised that time management became an essential skill to possess.

References

Campbell, T. (2016) Practical Information Security Management. 1st ed. APRESS.

I.T Governance Ltd (2021) Vulnerability scanning: what it is and how it works. Available from: https://www.itgovernance.co.uk/vulnerability-scanning [Accessed 18 December 2021].

Miqdadi, F.Z., Almomani, A.F., Masharqa, S., & Elmousel, N.M. (2014) 'The Relationship between Time Management and the Academic Performance of Students from the Petroleum Institute in Abu Dhabi, the UAE', *ASEE 2014 Zone I Conference*. University of Bridgport, Bridgpeort, CT, USA, 3-5 April. 1-5.