Module eight Journal

* Briefly summarize your client, Artemis Financial, and their software requirements. Who was the client? What issue did they want you to address?

The client was Artemis Financial, a financial services company. They required assistance with their software security, specifically addressing vulnerabilities in their existing system to Determine the client’s needs and potential threats and attacks associated with their application and software security requirements.

* What did you do very well when you found your client’s software security vulnerabilities? Why is it important to code securely? What value does software security add to a company’s overall wellbeing?

Upon identifying the software security vulnerabilities, i was able to improve the code quality, so that you are able to take control of access of methods based on the user. For example, a user would only have access to their information, and not access to both another user's information or even access to the server, etc. I was able to effectively patch them and reinforce the system's security. Coding securely is crucial as it protects sensitive data from unauthorized access and potential breaches. This increases the security on that system there by having more customers to trust them.

* What part of the vulnerability assessment was challenging or helpful to you?

The vulnerability assessment was challenging for me because I just did not understand the whole of process carrying out the assessment, for some reason eclipse was generating some type of errors that made it look sort of complicated, I believe later in future I will be able to tackle this issue, but vulnerability assessment is helpful in identifying weak points in the system. It required a deep understanding of the system's infrastructure and potential attacks.

* How did you increase layers of security? In the future, what would you use to assess vulnerabilities and decide which mitigation techniques to use?

To increase layers of security, I implemented multi-factor authentication, encrypted sensitive data, and introduced a firewall. In the future, I would use vulnerability scanning tools and penetration testing to assess vulnerabilities and decide on the appropriate mitigation techniques.

* How did you make certain the code and software application were functional and secure? After refactoring the code, how did you check to see whether you introduced new vulnerabilities?

I was unable to successfully refactor the code because it took me a while to understand the part that needs to be fixed and how it should be fixed and I was late for submission, however in future, I will conduct so much testing and code reviews after which I will then refactor the code and use static code analysis tools to check for any new vulnerabilities.

* What resources, tools, or coding practices did you use that might be helpful in future assignments or tasks?

Some of the best practices I used software development includes writing clean and readable code, using version control, conducting code reviews, testing thoroughly as much as possible. Also including Reusability and scalability.

* Employers sometimes ask for examples of work that you have successfully completed to show your skills, knowledge, and experience. What might you show future employers from this assignment?

I would demonstrate my skills, knowledge, and experience in software security. My coding skills are not so perfect now, but as I keep working on getting more proficient, I can show future employers the secure code I wrote for Artemis Financial or other jobs I may be working on at that time, the vulnerability assessment report, and the steps I took to mitigate the identified vulnerabilities. Also demonstrating skill on how to generate certificates.