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CS-405 Secure Coding

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Week 8 – Journal: Portfolio Reflection

Secure coding is and forever should be the standard at the beginning of any project, from the simplest input validation to the most complex error handling. SEI CERT C++ standards are reflective of this as they give us tried and true rules that developers can integrate into their everyday workflow. The idea of adding security at the end of a project gives me a sense of foreboding, to say the least. This will only increase costs of the project and leave vulnerabilities exposed as there will be some oversight due to the scope of the project.

A standout was evaluating and assessing risks through the cost-benefit analysis of mitigation. Not everything can be eliminated, but you can determine which threats are most likely (as we have done), and which mitigations give us the highest value. You need to balance usability, cost, and protection when it comes to applying secure coding practices in real-world / professional contexts. Additionally, zero trust also reshaped my view of system security. This means no implicit trust should ever exist, including inside a network. Although potentially burdening to the user, no user, device, or application is trusted and therefore needs to be authenticated and authorized before attempting any actions. This means enforcing least privilege, input validation, and verifying tokens and credentials at every request. Security is no longer a single point check but rather a continuous process, which is completely necessary in this day and age.

It is very important when considering secure development to implement and recommend security policies that will establish expectations and processes for how code should be written, tested, deployed, and further maintained. You could implement a policy that requires code reviews with a security checklist that further requires the review of multiple people. When making recommendations, it’s not just about compliance but rather building the secure coding culture that benefits everyone in the long term.