Andrew Wepplo

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In this course I have learned a lot about secure coding in C++ and secure coding in general. I will always investigate features of security any time working with code now and follow the ideas of not leaving security to the end, to avoid having issues that have resulted from combining bugs and vulnerabilities that were placed into the code through the entire development cycle and have been overlooked.

Guaranteeing businesses have the most layers of security in place to protect personal data is critical for modern businesses. Completing a full risk assessment for every project is essential to ensure maximum security at the lowest possible cost.

Recent software and improvements to hardware and technology has changed radically. Meaning that security standards of the past most likely will no longer be effective enough to protect data and new security protocols must be implemented, such as zero trust. The idea behind Zero Trust is that no one should be blindly trusted with access until they have been validated, and once they gain access, they must still constantly authenticate their identity.

Secure coding practices can vary widely depending on what software, programming languages, and hardware are in use by a certain business. Prevention is almost always a better practice than a retroactive response, and a good step in preventing vulnerabilities is to never trust the any user and that includes any of their input data as untrusted data. Secondly, keeping things simple and secure are important aspects of security. Make the code as simple as possible to get the task completed and choose to use programming languages and tools that are more secure where possible but can be understood if they must be changed at a future point in the lifecycle of a project with minimal confusion. Lastly, it is important to implement defense-in-depth, instead of than relying on one layer of security, have multiple so that if one layer fails there are more layers that can stop vulnerabilities.