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6-1 Journal

CS405

* Explain what the following statement means as a best practice in secure coding: “Don’t leave security to the end.”
* Describe the steps you can take to prevent threats.
* Provide one example that you can include in your Project Two presentation of how you plan to ensure that security is addressed intrinsically and not left until an issue is discovered—for instance, the use of unit testing.

The phrase **“Don’t leave security to the end”** means that security shouldn’t be something we think about only after we finish coding. Instead, it should be built into every stage of the development process, from planning and designing to writing the actual code and testing it. If we wait until the end, we might miss serious issues or have to redo a lot of work, which can be stressful and costly.

To prevent security threats, there are several things I can do during development:

1. Validate all user input to make sure it's safe and doesn’t contain anything harmful.
2. Use trusted libraries and keep them up to date so I’m not using code with known vulnerabilities.
3. Write secure code by following best practices like not hardcoding passwords or exposing sensitive data.
4. Run static code analysis tools to automatically catch security issues early.
5. Do code reviews with a focus on spotting anything that could lead to a security problem.
6. Follow the principle of least privilege, meaning users only get access to what they actually need.

For my Project Two presentation, one example I’ll include is how I’m using unit testing in Visual Studio to check for vulnerabilities. For example, I wrote a unit test to make sure that user input is being sanitized properly, which helps prevent injection attacks. This shows that I’m not just waiting for a problem to pop up as I’m testing for security from the start. By writing tests that simulate potential threats, I can catch issues before they reach production. This kind of built-in security approach is exactly what “don’t leave security to the end” is all about.