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CS-499 Science Capstone

**Journal: What Makes a Productive Code Review?**

To find errors, guarantee consistency to coding standards, and enhance overall quality of code, team members check each other’s work collaboratively through the process called code review process (Thorndyke, 2021). Because it creates learning, knowledge sharing, and team accountability, which ultimately decrease errors and increase maintainability, it is crucial for computer science professionals. Using checklists, keeping sessions under 60 minutes, evaluating no more than 400 lines of code at once, and creating a respectful, cooperative atmosphere are all examples of best practices (SmartBear, 2025). Before the code is merged or made accessible to everyone, code reviews must be done following the last step of a development unit. Later in the development cycle, time and resources are saved since this timing makes sure that problems are identified early and fixed.

Since I use mac mostly, I will be using QuickTime’s screen record function to record my code review. To efficiently organize the review, I created a script with three categories, and they are algorithms and data structures, databases, and software development or design. I will concentrate on the correctness and efficiency of logic in algorithms and data structures. I will examine the codes handling of queries, connections, or data integrity for the database category. I will check the file organization for software development or design to make sure the design complies with the expected features and business logic. I was able to record both technical and critical observations due to this methodical and cooperative approach, which improved the reviews efficiency and securing. By utilized these procedures it improves input validation as part of my own enhancement work. I verify that my changes improved logic clarity and decreased risk exposure using the code review process. My artifact improvement is better because of this practical approach.

Works Cited

SMARTBEAR. (n.d.). *Best Practices for Code Review*. Smartbear.com. <https://smartbear.com/learn/code-review/best-practices-for-peer-code-review/>

Thorndyke, K. (2021, June 17). *How To Review Someone Else’s Code: Tips and Best Practices.* Codecademy Blog. <https://www.codecademy.com/resources/blog/code-review-best-practices/>