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Part 1:

1. A code review is an examination of source code to ensure its functionality and compliance with best practices as well as required quality, functionality, readability, security, and maintainability standards. It is typically performed by peers or senior developers before code is merged into the main codebase.
2. It is always important to analyze a project before it is fully completed to provide the best possible outcome for the final product. This is important specifically for software development because the consequences can be severe such as data breach.
3. Code review is essential for ensuring code quality, readability, and security. Best practices include using a checklist, checking for functionality and clear structure, and giving respectful, constructive feedback. It should occur after code is written but before merging to catch issues early and maintain high standards.

Part 2:

1. I have chosen my final project from CS-340.
2. My approach to creating a code review script starts with outlining the three key categories from the rubric: Functionality, Readability, and Security. For Functionality, I plan to test the code against expected inputs and outputs, checking if it meets the requirements and handles edge cases. In the script, I’ll note whether the logic is correct and if the program behaves as intended. For Readability, I’ll focus on naming conventions, code structure, and comments, making sure the code is easy to follow and maintain. I’ll highlight any unclear areas and suggest improvements. For Security, I’ll use the checklist to look for issues like input validation and error handling, noting any potential vulnerabilities. My script will guide me to provide clear, constructive feedback in each category.