

33 Lecture - CS504

Important Subjective

Question: What is code duplication, and why is it considered a common coding mistake?

Answer: Code duplication refers to having similar or identical code in multiple places. It is a mistake because it increases maintenance efforts, introduces inconsistencies, and makes code harder to manage.

Question: Why is proper error handling important in coding?

Answer: Proper error handling is crucial because it allows a program to gracefully handle unexpected situations and provide informative messages to users. It helps prevent crashes and improves the overall user experience.

Question: Explain why ignoring input validation can be dangerous.

Answer: Ignoring input validation can lead to security vulnerabilities like buffer overflows or SQL injection attacks. It allows malicious users to exploit the application and potentially compromise sensitive data.

Question: What are some potential consequences of excessive use of global variables in code?

Answer: Excessive use of global variables can lead to code coupling, making it harder to understand and maintain. Changes to global variables may have unintended effects throughout the codebase.

Question: How does neglecting code testing impact software quality?

Answer: Neglecting code testing increases the risk of shipping buggy code to production, leading to reduced software quality and potential user dissatisfaction.

Question: What are the benefits of adding appropriate comments to code?

Answer: Appropriate comments help in code documentation, explaining complex logic, and making the codebase more understandable to other developers, improving collaboration.

Question: Why is ignoring proper memory management a common coding mistake?

Answer: Ignoring proper memory management can lead to memory leaks or segmentation faults, resulting in unstable and unreliable software.

Question: How does considering boundary conditions in coding contribute to robustness?

Answer: Considering boundary conditions ensures that code functions correctly for extreme inputs or edge cases, making the software more robust and less prone to unexpected behavior.

Question: What are the potential drawbacks of excessive comments in code?

Answer: Excessive comments can clutter the code and make it harder to read. They may also become outdated, leading to misinformation about the code's functionality.

Question: How can developers avoid common coding mistakes and improve their coding practices?

Answer: Developers can improve their coding practices by following coding standards and best practices, utilizing automated testing tools, and conducting code reviews to catch potential mistakes early in the development process.