

28 Lecture - CS504

Important Subjective

Q: Why is using meaningful variable names important in code? **A:** Meaningful variable names improve code readability and understanding, making it easier for developers to grasp the purpose of the variables. **Q: How can modularizing code benefit software development?** **A:** Modularizing code promotes code reusability, maintainability, and allows developers to focus on specific functionalities independently. **Q: What are coding standards, and why should developers follow them?** **A:** Coding standards are a set of guidelines for code formatting and style. Following them ensures consistent and readable code across the project. **Q: What is the role of comments in code?** **A:** Comments provide explanations for complex logic, making it easier for other developers to understand the code and its intentions. **Q: How does adhering to the DRY (Don't Repeat Yourself) principle improve code quality?** **A:** The DRY principle reduces code duplication, making the codebase more maintainable and less prone to errors. **Q: Explain the significance of unit tests in software development.** **A:** Unit tests verify the correctness of code, help identify bugs early, and ensure changes don't introduce regressions in the future. **Q: What does the Single Responsibility Principle mean in good programming practices?** **A:** The Single Responsibility Principle states that a function or class should have only one reason to change, ensuring it performs a single, well-defined task. **Q: Why should developers avoid using magic numbers in code?** **A:** Using magic numbers makes the code less maintainable and harder to understand. Using named constants enhances code readability and flexibility. **Q: How can version control systems contribute to effective software development?** **A:** Version control systems enable collaboration among developers, track code changes, and provide a safety net to revert to previous versions if needed. **Q: Explain the benefits of following coding standards and best practices in a team.** **A:** Following coding standards fosters a consistent codebase, eases code reviews, and enhances teamwork by making code easily understandable and maintainable.