DWA_01.3 Knowledge Check_DWA1

1. Why is it important to manage complexity in Software?

Managing complexity means creating code that performs at it’s best and with as little bugs as possible. Finding and fixing bugs is tiring and not very cost effective in monetary value or time for everyone working on the project. This can also cause problems in scaling the project.

2. What are the factors that create complexity in Software?

Reusable solutions to common coding problems, promoting efficient and structured design in software development. Code reviews where peers review code for quality, consistency, and potential issues before merging changes. Restructuring code to enhance readability, maintainability, and performance without altering its external behavior.

3. What are ways in which complexity can be managed in JavaScript?

Use meaningful and uniform function names to enhance code clarity and reduce confusion among developers. Divide code into small modules for easier understanding and maintenance, reducing interdependencies and promoting reusability.

4. Are there implications of not managing complexity on a small scale?

Code that lacks organization and structure can quickly become confusing, making it difficult for developers to understand how different pieces of code relate to each other. Poorly managed code is more likely to have bugs that go unnoticed. This can lead to unexpected behaviors and issues down the line. Unmanaged complexity can slow down development cycles, as developers spend more time deciphering existing code rather than building new features.

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5. List a couple of codified style guide rules, and explain them in detail.

Naming conventions that include consistent and descriptive names make your code more readable and maintainable. Proper indentation visually separates different levels of code and helps developers understand the flow of control. This improves code readability. Correct formatting enhances code readability and helps developers quickly identify logical sections of code. It reduces visual clutter and makes the codebase more approachable.

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6. To date, what bug has taken you the longest to fix - why did it take so long?

Debugging JavaScript code to create a search filter. Importing data from different files to create a search function for all those books with different titles, authors and genres was tiring and an exhaustive experience.