

DWA_01.3 Knowledge Check_DWA1

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

Managing complexity in software is important to make code more maintainable, enhance code readability, improve debugging capabilities and be scalable for future use.

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

- Poor code structuring
 - Not using proper documentation and effective comments that will cause technical debt
 - Optimizing for performance
 - Evolving requirements
 - Added Functionality
 - Team dynamics
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3. What are ways in which complexity can be managed in JavaScript?

- Using proper documentation and effective comments that will enhance the readability of complex software.
 - Organizing your code
 - Employ clear naming conventions, proper indentation, and consistent coding style to enhance the readability and maintainability of the code.
 - The use of modularization and breaking down code into smaller, reusable modules.
 - polymorphism and inheritance
 - create state machines
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4. Are there implications of not managing complexity on a small scale?

Yes. Unmanaged complexity leads to harder-to-understand code and reduced productivity.

It hampers collaboration and scalability, increasing the chances of bugs and hindering future modifications.

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

- Avoid single-letter names. Be descriptive with your naming. It gives more explanation and definition to other developers viewing your code.
 - Use single quotes ' ' for strings except to avoid escaping.
 - Use named function expressions instead of function declarations. Function declarations are hoisted, which means that it's easy to reference the function before it is defined in the file. This harms readability and maintainability
 - Always use const or let to declare variables. Not doing so will result in global variables. We want to avoid polluting the global namespace.
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6. To date, what bug has taken you the longest to fix - why did it take so long?

I had to fix a bug when I used a JavaScript keyword as a variable. It took a lot of my time because I haven't read through a javascript style guide that states that you shouldn't use javascript keywords as a variable.
