DWA_01.3 Knowledge Check_DWA1

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

It is important because if you don't manage complexity unwanted things might happen. Like with a bank app you need the information to be private and if there is an issue in your code, people's private information can come in the wrong hands/ sent to the wrong server.

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2. What are the factors that create complexity in Software?
- Size & Scope
- Interactions & Dependencies
- Technological Diversity
- Performance & scalability
- Documentation & understanding

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3. What are ways in which complexity can be managed in JavaScript?
- You can manage it by breaking down the code into smaller groups.
- Use proper naming for const values
- Explain the code in detail with JSDocs
- Code style

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4. Are there implications of not managing complexity on a small scale?
- It will slow you down if the code is hard to understand and modify
- It makes it difficult to find bugs in code and apprehend them
- It will contribute to technical debt, where you had to get a quick solution but at the long run, you as the developer will struggle to add new feathers or make improvements
- It will limit the software to grow and evolve in the future
- It is more prone to throw out errors and be inconsistent

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

Indentation & spacing: it improves readability throughout the code and makes it easier to understand the code's hierarchy, logic flow and the relationship between elements. It also helps for less syntax errors.
Naming Convention: follow a consistent naming convention when creating functions, variables, classes and other identifiers. A good naming convention helps developers to understand what is going on in the code database and will know when it is a function, class or any other identifier.

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

Creating a preview function for a book website. I made a custom function to showcase the books in a file called view.js and the other function to make this custom function work and also just showcase a certain amount of books on a file called scripts.js. It didn't work for a few days no matter how many times I tried to modify the code. I decided to put everything in one file, the scripts.js file. After amending the code and making a function to showcase the books and a function for how many books should be shown the code finally worked.

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