DWA_01.3 Knowledge Check_DWA1

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

- It is important so that we can manage faults that may occur in our codes that can affect user experience.
- Try avoiding making mistakes because one line of faulty code can affect the whole product or cost the company a loss of finances.

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

- Not buildIng code that is resilient.
- Unstructured code.
- Not knowing what is working or not.
- Not caring for your code because it will confuse you.
- Not keeping your code under control.

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

- Be clear when you create / name your variables.
- Style your code correctly > you can refer to websites such as JavaScript standard style and Airbnb JavaScript style guide where they give you rules on how to correctly write and style your code.
- Visually make your code look different for easy find , user readability and scalability.
- Comment out your code, to add clarity.

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

Humans cannot manage large scale code because it will usually result in tons of bugs so we build code in small manageable scale and compose them together to make one

readable and understandable code. In that way you can easily find bugs and errors and can keep related properties together.

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

- Code style - look at common naming conversions and other JavaScript styles to compare.
- Style guide - looking at common ways of styling code e.g
    1. Having properties in an object beyond a new line.
    2. Having indents as things get deeper nested in a property
    3. Using brackets if an IF statement is more than a single line.
    4. Adding documentation such as types and shapes, making the code clearer to what the variables mean and are supposed to do
    5. Indentation and Braces: This rule pertains to the indentation and placement of braces in JavaScript code blocks, such as loops, conditionals, and functions. It suggests using a consistent and readable indentation style, such as using four spaces for indentation and placing opening braces on the same line as the statement or declaration.
    6. Variable and Function Naming Conventions: This rule pertains to the naming of variables and functions in JavaScript code. It suggests following a consistent naming convention, such as camelCase, for better readability and maintainability of the code.
- Modular - Use easy to use functions, keeping related things close and also use two common main methodologies that are used in JavaScript which are Functional Program and Object oriented programming.
- Abstraction - keep the code manageable and expose only what is needed.

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

Errors - I need to fix errors in my code as soon as I encounter them and on a small scale so that they don't build up, because the longer I leave them the more they get and I find it hard to debug or even find where the errors are so I end up scratching the whole code and starting again which takes more of my time and adding pressure to my time

management. So going forth I will fix the errors as soon as I encounter them so that I don’t have a build up of technical debt.
