DWA_01.3 Knowledge Check_DWA1

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

- Having a bug that does not completely stop your program is catastrophic.
- Implications of small bugs can cost a company millions, if not shut them down completely.

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

- As programs grow in size, integration of all functions becomes difficult to manage
- Programmers work in teams, understanding other programmers code is important as a misuse of something as simple as a data type can have big complications for projects.

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

Code Style :
- Naming constants, use get when retrieves a value and Is for booleans.

Document Comments:
- Js Doc is super helpful, Types/Shapes(objects)

Modular:
- Throw errors if properties are not correct
- All code related to one function in one area.

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

- Loss of adaptability: It makes it more difficult to add features as code might be written to solve rigid solutions.
- Loss of accuracy: It is easy to get the wrong output when no checks are in place.

- Collaboration issues: Other developers might not understand the code you have written and misinterpret its function.

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

- Indentation: Consistent indentation helps with readability of code. It makes it easier to understand the flow of control and relationships between statements, when using the block structure. Two spaces are the most widely accepted standard for indentation in JavaScript.

- Naming Convention: camelCase helps provide clarity for variables and constants, especially when dealing with longer or compound names.

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

- Within the web app BookConnect, I struggled the most with filtering the display based on criteria users filled in on the search overlay. Scenarios that could be selected:

- User can input Title, Author and Genre
- User can input any two options
- User can input just one option

- My initial code would display all the books that had one of the filter criteria matching and not the books that had only the filter criteria match, when more than one filter option was given by the user.

eg.Author and Title were given:

Output: All books written by that author and all books that had that title even if it was written by different authors were displayed.

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