DWA_07.4 Knowledge Check_DWA7

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1. Which were the three best abstractions, and why?

createElement Function - The createElement function abstracts the process of creating DOM elements with attributes and inner HTML. It reduces code duplication and enhances code readability by encapsulating the repetitive task of creating elements.

updateBookList Function - The function abstracts updating the book list based on filtered data. It encapsulates the logic for updating the displayed books, including handling pagination, message display, and enabling/disabling the “Show more” button.

populateSelect Function - The populateSelect function abstracts the process of populating select elements with options based on data. It simplifies the code and enhances maintainability by encapsulating the logic for creating and appending options. It also provides a default option for select elements, improving user experience.

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2. Which were the three worst abstractions, and why?

Callbacks - These are functions that are called in response to an event. They can be hard to reason about, especially when there are multiple callbacks being called in a specific order. They can also make code hard to debug and test.

Inheritance - This is a common feature of object-oriented programming. It can make code hard to read and understand, and it can lead to problems like the diamond problem. It can also make it hard to reuse code, since everything is tied to specific classes.

Monads - These are a type of data structure that can be used to represent other data structures. They can be very powerful, but they can also be hard to understand and use. They can also make code hard to read and maintain.

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3. How can The three worst abstractions be improved via SOLID principles.

Callbacks - One way to improve callbacks is by using a library like promises or async/await. These libraries make it easier to reason about callbacks, since they have a more intuitive syntax.

Inheritance - A way to improve inheritance is by using composition instead. With composition, you can reuse code without tying it to specific classes.

Monads - A way to improve monads is by using a library like Ramda. Ramda provides a set of functions that can be used to manipulate data without using monads directly.
