DWA_07.4 Knowledge Check_DWA7

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

    createPreview Function:
- This function abstracts the process of creating a preview button element for a book.
- It encapsulates the HTML generation and element creation, promoting code reusability and readability.

    createHtmlItems Function:
- This function abstracts the process of creating and appending HTML elements for a list of items.
- It uses a DocumentFragment for efficient DOM manipulation and encapsulates the logic for generating preview elements.

    handleSettingsFormSubmit Function:
- This function abstracts the handling of settings form submission.
- It encapsulates the logic for extracting form data, applying theme changes, and closing the settings overlay.

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

handleShowMoreButton Function:
- This function combines responsibilities related to pagination and DOM manipulation.
- It could be improved by separating the pagination logic from the DOM manipulation, following the Single Responsibility Principle (SRP).

handleSearchFormSubmit Function:
- This function handles a variety of responsibilities, including form submission, filtering, DOM manipulation, and UI updates.
- It could benefit from splitting these responsibilities into smaller, more focused functions, adhering better to the SRP.

handleActiveListItem Function:
- This function contains complex logic for identifying a clicked book preview element and displaying its details.

- While it serves its purpose, it could be challenging to understand and maintain due to its complexity. Breaking it down into smaller functions with clear responsibilities could improve its readability.

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

handleShowMoreButton Function:

Current Responsibility: This function currently handles both pagination logic and DOM manipulation.

Improvement:

Create a separate function for pagination logic, responsible for calculating startIndex and endIndex.
Create another function for updating the DOM with the paginated data.
This separation adheres to the SRP.

handleSearchFormSubmit Function:

Current Responsibility: This function handles form submission, filtering, DOM manipulation, and UI updates.

Improvement:

Create separate functions for filtering books and updating the DOM based on search criteria.
Encapsulate the filtering logic in one function and DOM update in another.
This separation adheres to the SRP and makes each function more focused.

handleActiveListItem Function:

Current Responsibility: This function handles the complex task of identifying a clicked book preview and displaying its details.

Improvement: Break down the responsibilities:

Create a function to identify the clicked book based on event data.
Create another function to display book details based on the identified book.
Encapsulate the click event handling in a separate function.
This separation adheres to the SRP and improves code readability.

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