

DWA_07.4 Knowledge Check_DWA7

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

Book Preview Factory Function:

- Encapsulated the creation of book preview components.
- Single Responsibility: Creates book preview components.
- Open/Closed: Easily extended to create different variations of book previews without modifying existing code.
- Could improve by adding dependency injection to enhance flexibility further.

Event Listeners and Handling Functions:

- Manage various interactions within the application.
- Single Responsibility: Each function handles a specific event or action.
- Open/Closed: Can add new event listeners without altering existing functions.

Theme Settings Handler Function:

- Sets the theme based on user preference.
- Single Responsibility: Manages theme settings.
- Open/Closed: Easily adaptable for handling additional theme-related features without altering existing code.

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

Handle Search Function:

- Responsibilities might not be well-separated, handling search and filtering.

- Single Responsibility Principle: This function could be split into separate functions for search and filtering to adhere to SRP.

Display Filtered Books Function:

- Handles both HTML manipulation and pagination.
- Single Responsibility: Could separate pagination logic into a different function.
- Extract pagination logic into a separate function for a cleaner separation of concerns.

Book Item Click Handling Function:

- Handles both DOM interaction and data retrieval for book details.
- Single Responsibility: Separate the DOM interaction from data retrieval for improved maintainability.
- Refactor to delegate DOM-related tasks to one function and data retrieval to another.

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

Handle Search Function (S - Single Responsibility Principle):

- Separate the search functionality from the filtering logic.
- Have one function responsible for obtaining search parameters and another for applying filters based on those parameters.

Display Filtered Books Function (S - Single Responsibility Principle):

- Extract pagination logic into a separate function responsible for managing page numbers and displaying the appropriate book items based on the current page.

Book Item Click Handling Function (S - Single Responsibility Principle):

- Split the function into two parts: one handling the DOM interaction (click event handling) and the other responsible for retrieving book details based on the click event. This separation ensures

