DWA_12 Knowledge Check

To complete this Knowledge Check, ensure you have worked through all the lessons in **Module 12: Declarative Abstractions.**

To prepare for your session with your coach, please answer the following questions. Then download this document as a PDF and include it in the repository with your code.

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1. What are the benefits of direct DOM mutations over replacing HTML?

Direct DOM mutations can be more performant than replacing HTML because they only modify the necessary parts of the DOM tree. You can selectively modify specific elements, attributes, or styles without affecting the rest of the page.
With direct DOM mutations, you can preserve the state by only modifying the necessary parts while keeping the rest of the page intact.

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2. What low-level noise do JavaScript frameworks abstract away?

Instead of manually updating DOM elements and their attributes, frameworks offer components or templates that automatically handle the rendering and updating of the UI based on changes in application state.
Instead of manually attaching event listeners to individual DOM elements, frameworks often offer declarative approaches where developers can specify event handlers directly in the template or component definition.
JavaScript frameworks often include built-in state management solutions or integrate with external libraries for state management. These abstractions provide a centralized approach to managing and updating application state, making it easier to reason about and maintain.

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3. What essence do JavaScript frameworks elevate?

JavaScript frameworks offer higher-level abstractions that simplify complex tasks and abstract away low-level implementation details. They provide predefined structures, components, and patterns that streamline development and allow developers to focus more on application logic rather than boilerplate code. This abstraction promotes code reusability, modularity, and maintainability.

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4. Very broadly speaking, how do most JS frameworks achieve abstraction?

Some JavaScript frameworks, like React, leverage a virtual DOM to optimize updates and minimize unnecessary DOM manipulations. The virtual DOM acts as an abstraction layer between the application's state and the actual DOM. It performs efficient diffing algorithms to determine the minimal set of changes needed to update the UI, reducing the performance overhead associated with direct DOM manipulations.

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5. What is the most important part of learning a JS framework?

Understanding the Core Concepts, Hands-on Practice,
Reading and Analyzing Documentation are most important when learning a framework