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?

It boosts performance because only the elements that need to change are updated, reducing the amount of work the browser has to do. - More control over specific elements and you can choose exactly what to modify. - Direct DOM mutations can preserve the state of existing DOM elements, whereas replacing HTML can reset such state.

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

Imperative updating of the DOM, keeping track of what elements need to change. - Frameworks determine what parts of the DOM need updates and efficiently apply those updates, manually done the process is long and prone to errors.

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3. What essence do JavaScript frameworks elevate?

They allow developers to concentrate on the core functionality and behaviour of the application rather than the implementation details. The division of responsibilities in JavaScript frameworks improves code maintainability and readability.

Structured Architecture: Frameworks often encourage organized, maintainable code through concepts like components, modules, and data-binding.

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4. Very broadly speaking, how do most JS frameworks achieve abstraction?
They hide away the imperative DOM mutations

Declarative Syntax: Using intuitive descriptions of UI behavior instead of low-level imperatives.

Component-Based Architecture: Encapsulating UI elements within reusable components for streamlined complex UI development.

State Management: Automating state handling, eliminating manual DOM and state tracking. Virtual DOM: Efficiently updating the real DOM from an abstracted representation, reducing imperative manipulations.

Event Handling: Providing simplified event management without low-level coding. Data Binding: Automating data synchronization between UI and the data model for easier maintenance.

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

To understand its core concepts and principles, as well as how to effectively use its features and tools to build web applications. understanding the JS framework's core principles enables developers to build efficient and maintainable web applications.