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?

- Performance: Because they only change the precise elements that need to be modified, direct DOM mutations can be more efficient than replacing HTML. It can be expensive, especially for big and complicated DOM structures, to replace HTML since the entire subtree of the replaced element needs to be regenerated and re-rendered. Direct DOM changes, on the other hand, can target particular elements and result in quicker updates.
- Reduced Network Traffic:Direct DOM changes can lessen the amount of data that needs to be transferred over the network when working with dynamic web applications. You can change select data items rather than updating full sections of HTML, which can result in more effective data delivery.
- Better User Experience:Users experience faster and smoother interactions because direct DOM modifications update the current elements without interfering with them. The user experience is improved because there is no visual flickering or delay brought on by replacing entire areas of the page.

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

- DOM Manipulation:The Document Object Model (DOM) can no longer be directly manipulated thanks to frameworks. Frameworks offer abstractions and ways to effectively handle DOM updates, saving time and making it simpler to construct dynamic and

interactive user interfaces than manually maintaining and updating DOM elements.
- Cross-Browser Compatibility:Frameworks take care of a lot of browser-specific quirks and inconsistencies, enabling programmers to build code that consistently functions in a variety of browsers without having to manually account for each browser's peculiarities.

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3. What essence do JavaScript frameworks elevate?
- Performance Optimization:Many frameworks pre-integrate performance optimization strategies or offer instructions for enhancing application performance. This motivates programmers to create quick and effective applications that are advantageous to consumers.
- Code Organization and Modularity:JavaScript frameworks promote the modular construction of applications. Developers can divide up their code into digestible, reusable chunks by using components, modules, or other similar constructs. This improves the maintainability and structure of the code and encourages teamwork.

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4. Very broadly speaking, how do most JS frameworks achieve abstraction?
    Most JavaScript frameworks achieve abstraction by providing a layer of abstraction over the underlying technologies and APIs used in web development.

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

Understanding the essential concepts and principles of a JavaScript framework is the most crucial element of understanding it. While the syntax and specific features of each framework may differ, understanding the core concepts will offer a solid basis for efficiently using and mastering any framework.