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?
When you replace HTML the browser needs to reparse and re-render the HTML which uses more power than when you use direct DOM mutations. DOM mutations can be used to select specific elements and only that element will be re-rendered which is much more efficient.

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

Frameworks abstract the complexities of directly manipulating the DOM using low-level APIs like document.createElement. Frameworks provide higher-level APIs and components that allow developers to declare the structure of the UI and handle updates more efficiently. Frameworks abstract the complexity of handling events and make it easier to attach event handlers. This simplifies the process of adding interactivity to web applications. Different web browsers have varying levels of support for JavaScript features and APIs. JavaScript frameworks help abstract these browser differences by providing an API that works across multiple browsers.

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3. What essence do JavaScript frameworks elevate?
JavaScript frameworks enhance developer **productivity** by providing tools, utilities, and abstractions that streamline the development process. They offer ready-to-use components which reduce the amount of boilerplate code developers need to write. Frameworks help with code **organization and structure** by enforcing conventions and providing patterns. They offer modularization techniques that make codebases easier to understand and maintain over time. JavaScript frameworks elevate code reusability through component-based architectures. Components can be built once and reused across different parts of the code base.

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4. Very broadly speaking, how do most JS frameworks achieve abstraction?
JavaScript frameworks use several techniques such as component structures,
declarative syntax and abstraction layers. This makes it so that developers do not have
to always worry about the low level complexities by providing high level abstractions
that make web development more productive and maintainable.

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

The most important part of learning a JS framework is understanding the foundations
at its core as well as it's principles, this will allow you to leverage its usefulness more
efficiently.