

# 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?

- The overall performance of the app/website is swift because the former approach only results in the mutation of the relevant aspects of the app that are affected or targeted.

In contrast, the latter approach leads to the complete re-rendering of the HTML DOM, which can be inefficient, particularly when the affected parts of the DOM are not numerous or complex. This can impact the overall responsiveness and performance of the app, especially if the app is large and complex in nature.

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

- The imperative aspect of interacting with the HTML DOM:

As this involves defining 'HOW' the program should render your app to the HTML DOM. However, UI frameworks abstract this process, by handling the 'HOW' process, leaving you responsible only for specifying 'WHAT' the framework should render in the HTML DOM.

This allows for a more declarative approach to programming with minimal interaction with the HTML DOM.

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### 3. What essence do JavaScript frameworks elevate?

- Declarative programming
- Abstraction
- Composition
- Enhancement of app/website performance and responsiveness.

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

- "They achieve abstraction by managing the imperative manipulation of the HTML DOM, providing developers with high-level and simplified interfaces and functionalities that encourage a more declarative programming approach. This enables developers to instruct JS frameworks, in a declarative manner, about what to render to the HTML DOM. The frameworks, in turn, handle the 'HOW' aspect of the rendering process."

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

- Understanding the nuances of the UI framework and the problems it aims to solve is crucial. This helps determine the framework's suitability for specific project requirements and complexity.
- Familiarizing oneself with the framework's inner functionalities, interfaces, implementations, and limitations is equally important. This knowledge provides insight into what happens under the hood of the framework, facilitating easier debugging and a better understanding of underlying issues that may affect the app.