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Discussion 1.1

Web 340

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Asynchronous World

Being synchronous in programming has gone somewhat out of style. While some languages are still using synchronous elements, this methodology slower. Asynchronous programming “is a form of parallel programming that allows a unit of work to run separately from the primary application thread. When the work is complete, it notifies the main thread (as well as whether the work was completed or failed). There are numerous benefits to using it, such as improved application performance and enhanced responsiveness” [Stringfellow].

# Ben Grunfeld “*Concurrent Requests in Node.js (Javascript) using Async/Await”*

The above example outlines how synchronous functionality runs one step at a time while asynchronous functionality can run simultaneously and while a process runs another process can begin and even end before the previous process. The process is finishes faster and the user feels a more seamless interaction with a database or API.

According to Mozilla MDN, “async callbacks are functions that are specified as arguments when calling a function which will start executing code in the background. When the background code finishes running, it calls the callback function to let you know the work is done, or to let you know that something of interest has happened.” The feature of “waiting” is made possible by the event loop. “JavaScript host environment, in this case the browser, uses a concept called the event loop to handle concurrency, or parallel events” [Rascia].

From what I understand, async processes allow users to do a task while another task is being completed. This is especially useful when establishing a connection to a database or server or when communication streams are being setup. In all, the async process is aimed at speed and user experience which are the most valuable features of an application.

Reference List

“Introducing asynchronous JavaScript” MDN Webdocs, Accessed 6 January 2021.

https://developer.mozilla.org/en-US/docs/Learn/JavaScript/Asynchronous/Introducing

“Modern Asynchronous JavaScript with Async and Await” MDN Webdocs, Accessed 6 January 2021. <https://nodejs.dev/learn/modern-asynchronous-javascript-with-async->and-await

Stringfellow. "When to Use (and Not to Use) Asynchronous Programming: 20 Pros Reveal the Best Use Cases." Stakify, 25 September, 2017.

https://stackify.com/when-to-use-asynchronous-programming/

"Understanding the Event Loop, Callbacks, Promises, and Async/Await in JavaScript." 10 September, 2020. <https://www.digitalocean.com/community/tutorials/understanding-the-event-loop-> [callbacks-promises-and-async-await-in-javascript](https://www.digitalocean.com/community/tutorials/understanding-the-event-loop-callbacks-promises-and-async-await-in-javascript)