JavaScript /ES6 Promise Research Paper.

Research Project Subject: Promise

- What are the differences between callbacks and promises?
- How does a promise work?

To start this conversation, we must understand the callbacks and promises and how they work. So, we will talk about “What are the differences between callbacks and promises?”

A callback function is a function that passes a function as an argument. The callback function can be synchronous or asynchronous. To define the difference, synchronous is the event in the same timeline; asynchronous is neither simultaneous nor current nor in the same timeline. A Promise is an object with four states: pending, fulfilled, rejected, and complete.

The callback function performs many asynchronistic calls, called chaining, where one asynchronous process depends on the previous callback. Chained callbacks led to many issues, and what the Mozilla developer network page called the callback pyramid of doom. Other articles, like the one on Geeks for Geeks, call it callback hell. The Promise object solves the issue of callback hell and provides easy reporting of errors in then-catch logic while improving the asynchronous performance.

So, how do we use the magical promise? According to the documentation in mdn web docs, the promise is the foundation for all asynchronous programming in modern JavaScript. A promise is instantiated with the new keyword and receives a generic function that accepts two parameters resolve and reject. Once the promise completes, you can use the returned data/results to update the Document Object Model or manipulate the result in chained promises using the next method. The promise also provides the catch method to deal with error handling.

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Promise
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