

1. What are the differences between var, let, and const

In the computer coding language javascript, there are three keywords that can be used to declare variable. These variables are *var*, *let* and *const*. Although these keywords have the ability to declare variable in common, they have some differences in their usage and implications, the biggest of which is that var is function-scoped where as let and const are block scoped. Let and const being block-scoped means that they assign a value to a variable that is only available within a given scope within the code, i.e. within curly braces {}. Let and const have a key difference as well. Inside the curly braced block-scope let can be reassigned, however const remains unchanging, or without the ability to change its value. Where the keyword var really sets itself apart is that it is not only function scoped but can be globally reassigned as well. This means that var can be changed or assigned a different value throughout the entire code, and not just within the scope of the function. This is an important distinction to be aware of as misaligning these variable keywords can result in code that outputs errors or possibly undefined when console.log'd.

How does a Promise work?

In javascript there is an object called a Promise. To understand how it works one must first grasp what asynchronous code means. Asynchronous code is code that allows for many different tasks to be performed or executed concurrently. This code permits the computer system to continue operating while awaiting other tasks to be completed. This is where Promises come in handy. A promise works by being created with a callback function that is performing an asynchronous task. When the task being run is complete a resolve method is used to either resolve or reject that task. The promise object then handles the resolved or rejected output with the 'then()' method. The method calls upon the promise object to handle the either rejected or error output and is returned as an argument within the callback function.

Sources :

<https://tecadmin.net/what-is-var-let-and-const-in-javascript/>

<https://javascript.plainenglish.io/callback-vs-promise-and-async-await-1e46bc1780f4>