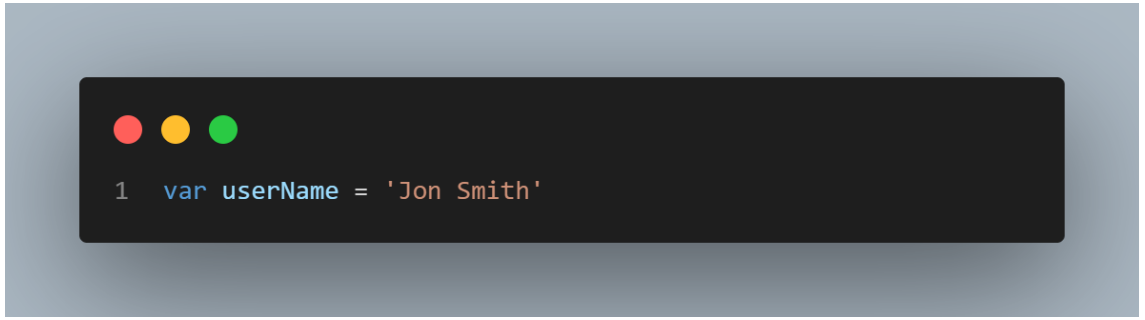
Java Script Variables

A **variable** is a named container used for storing values. A piece of information that we might reference multiple times can be stored in a variable for later use or modification. In JavaScript, the value contained inside a variable can be any JavaScript data type, including a number, string, or object.

In JavaScript, there are three keywords used to declare a variable — **var, let, and const** — and each one affects how the code will interpret the variable differently. **Let** and **const** were introduced when ECMAScript 2015 (ES6) language specification was released.

Concept of a variable



This statement consists of a few parts:

- The declaration of a variable using the `var` keyword
- The variable name (or identifier), `userName`
- The assignment operation, represented by the `=` syntax
- The value being assigned, `"Jon Smith"`

Naming Variables

Variable names are known as identifiers in JavaScript. Here are some rules when naming a variable:

- Variable names can consist only of letters (a-z), numbers (0-9), dollar sign symbols ($), and underscores (_)
- Variable names cannot contain any whitespace characters (tabs or spaces)
- Numbers cannot begin the name of any variable
- There are several reserved keywords which cannot be used as the name of a variable
- Variable names are case sensitive

JavaScript also has the convention of using camel case (sometimes stylized as camelCase) in the names of functions and variables declared with **var** or **let**. This is the practice of writing the first word lowercase, and then capitalizing the first letter of every subsequent word with no spaces between them. The names of variables that are constant, declared with the **const** keyword, are typically written in all uppercase.

Difference Between var, let, and const

The differences between the three are based on scope, hoisting, and reassignment.

Keyword	Scope	Hoisting	Can Be Reassigned	Can Be Redeclared
var	Function scope	YES	YES	YES
let	Block scope	NO	YES	NO
const	Block scope	NO	NO	NO

The following are general rules for using these types of variables:

1. Use **const** as much as possible, unless you need to redeclare or hoist a variable.
2. Use **let** if you are working with loops.
3. Only use **var** if: You need a variable that you can redeclare, or You need a variable accessible everywhere in the program.