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JavaScript Notes

[**Docs: JavaScript**](https://drive.google.com/file/d/1GUC9vvKTX0jOoPQ93wzrE5Z7a4BXVu9j/view)

**Chapter 1: Syntax**

**White space**

* JavaScript does not consider white space meaningful. Even though this is in theory, spaces and line breaks can be added in any fashion you might like.
* In practice, you will most likely keep a well-defined style and adhere to what people commonly use, and enforce this using a linter or a styling tool such as Prettier.

**Case sensitive**

* JavaScript is case-sensitive. A variable named something is different from Something.
* The same goes for any identifier

**Literals**

* Literal is a value that is written in the source code, for example, a number, a string, a boolean, or also more advanced constructs, like Object Literals or Array Literals

**Identifiers**

* An identifier is a sequence of characters that can be used to identify a variable, a function, or an object.
* It can start with a letter, the dollar signs $ or an underscore \_, and it can contain digits. Using Unicode, a letter can be any allowed char.
* The dollar sign is commonly used to reference DOM elements.

**Comments**

* Comments are one of the most essential parts of any program.
* They are important because they let us annotate the code and add important information that otherwise would not be available to other people (or ourselves) reading the code.
* In JavaScript, we can write a comment on a single line using //.
* Another type of comment is a multi-line comment. It starts with /\* and ends with \*/.

**Chapter 2: Semicolons**

**Definition**

* Every line in a JavaScript program is optionally terminated using semicolons.
* In most cases, you can omit semicolons altogether from your programs.

**Chapter 3: Values**

**Definition**

* A hello string is a value. A number like 12 is a value.
* hello, and 12 are values. string and number are the types of those values
* We have many different types of JavaScript, and we'll talk about them in detail later on. Each type has its characteristics.
* When we need to have a reference to a value, we assign it to a variable.

**Chapter 4: Variables**

**Definition**

* A variable is a value assigned to an identifier, so you can reference and use it later in the program.
* A variable must be declared before you can use it.
* We have 2 main ways to declare variables. The first is to use const :
* Ex: const a = 0
* The second way is to use let :
* Ex: let a = 0
* const defines a constant reference to a value. This means the reference can not be changed. You cannot reassign a new value to it.
* Using let, you can assign a new value to it.
* const does not mean "constant" in the way some other languages like C mean. In particular, it does not mean the value cannot change - it means it cannot be reassigned. If the variable points to an object or an array the content of the object or the array can freely change.
* Const variables must be initialized at the declaration time:
* const a = 0
* But let values can be initialized later:
* let a

a = 0