

Chapter 1 - Variables & Data

Just like we follow some rules while speaking english (the grammar), we have some rules to follow while writing a javascript program. The set of these rules is called syntax in javascript.

What is a Variable?

A Variable is a container that stores a value. This is very similar to the containers used to store rice, water and oats (Treat this as an analogy!)

The value of a javascript variable can be changed during the execution of a program.

`var a = 7;` → literal
`let a = 7;` ⇒ Declaring Variables
Identifier assignment operator

Rules for choosing variable names

- Letters, digits, underscores & \$ sign allowed.
- Must begin with a \$, _ or a letter.
- JavaScript reserved words cannot be used as a variable name
- Harry & hARRY are different variable (case sensitive)

Var vs let in JavaScript

- 1> Var is globally scoped while let & const are block scoped
- 2> Var can be updated & re-declared within its scope
- 3> let can be updated but not re-declared
- 4> const can neither be updated nor be re-declared.

5. var variables are initialized with undefined whereas let and const variables are not initialized.
6. const must be initialized during declaration unlike let and var

Primitive Data Types & Objects

Primitive data types are a set of basic data types in javascript

Object is a non primitive datatype in javascript

These are the 7 primitive datatypes in javascript

- Null
- Undefined
- Number
- Boolean
- String
- BigInt
- Symbol

NNSSBBU

Object

An object in JavaScript can be created as follows.

```
const item = {
  key: { name: "Led Bulb", price: "150" }
}
```

Diagram illustrating the structure of an object:

- The object is defined as `const item = {`.
- Inside the object, there is a property `name: "Led Bulb"` and a property `price: "150"`.
- Red arrows point from the word `key` to the opening curly brace `{` and from the closing curly brace `}` to the word `key`.
- Red arrows point from the word `value` to the string `"Led Bulb"` and from the word `value` to the string `"150"`.

Quick Quiz: Write a JavaScript program to store name, phone number and marks of a student using objects.