
What is a Variable?

A **variable** is like a **storage box** for information in JavaScript. You use it to **store values** (like text, numbers, etc.) and **reuse them** later in your code.

Example:

```
var name = "Mark";
```

- Here, **var** is a keyword that tells JavaScript, **"I'm creating a new variable."**
- **name** is the variable's name (you can choose any name).
- **"Mark"** is the value stored in the variable.
- The **equal sign =** assigns the value to the variable.

So, now **name** means **"Mark"** in JavaScript. Whenever you use `name`, JavaScript understands that it refers to **"Mark"**.

Why Use Variables?

Instead of writing `"Mark"` every time, you can just write `name`. This makes coding **easier** and **more flexible**.

Example:

```
alert(name);  // This will show a pop-up with "Mark"
```

Even though we wrote `name`, JavaScript knows it means `"Mark"`, so it displays `"Mark"` in the alert.

Variables Can Change

A variable **does not have to keep the same value forever**. You can change it later.

Example:

```
var name = "Mark";
name = "Ace";
alert(name);  // Now it shows "Ace" instead of "Mark"
```

- At first, `name` was `"Mark"`.
- Then, we changed it to `"Ace"`.
- JavaScript **remembers only the latest value** (`"Ace"`).

☞ **Important:** We didn't write `var` again when updating `name`. This is because we already declared it earlier.

Creating a Variable Without a Value

You can create a variable first and assign a value later.

Example:

```
var nationality;  // The variable is created but empty
nationality = "U.S.";  // Now it has a value
```

This is useful if you don't know the value at first but will add it later.

JavaScript Doesn't Care About Variable Names

You can name a variable anything (as long as it follows the rules).

```
var floogle = "Mark";
```

```
var x = "Mark";
var lessonAuthor = "Mark";
var guyWhoKeepsSayingHisOwnName = "Mark";
```

☞ **JavaScript does not care what you name your variables**, but **you should choose meaningful names** so your code is easy to understand.

Good variable names:

✓ firstName, age, city

Bad variable names:

✗ x, y, thing, data

Text Strings vs. Variables

- A **text string** (words inside " " or ' ') always **needs quotation marks**.
- A **variable never** uses quotation marks.

Example:

```
var nickname = "Bub";  // Correct (nickname is a variable, "Bub" is a string)
alert(nickname);  // Shows Bub
```

If you write `alert("nickname");`, it will display `"nickname"` instead of `"Bub"`.

Using Variables in Alerts

Instead of writing this:

```
alert("Thanks for your input!");
```

You can store the message in a variable:

```
var thanx = "Thanks for your input!";
alert(thanx);
```

☞ **Both versions show the same message!**

This is useful when you want to change the message later without editing multiple places in your code.

Final Summary

- **A variable stores a value** (like a name, number, or message).
- **Use `var` to declare a variable**, and **`=` to assign a value**.
- **Variables can change** (you don't need to use `var` again when changing them).
- **Variable names should be meaningful** for easy understanding.
- **Text strings** need **quotes (" ")**, but **variables don't**.
- **Using variables saves time** and makes code cleaner.