Introduction to *Variables*

CODE CHRYSALIS コードクリサリス

By the end of this lesson, you should be able to...

1. Be able to declare variables and assign values
2. Know when to use:
   - `var`
   - `let`
   - `const`

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Remember these data types?

name	examples
number	`1`, `-5`, `1.0001`
string	`"Hello world!"`, `'I love coding!'`
boolean	`true`, `false`

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What do we do if we want to refer to that data again later?

Use variables!

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```
var month = "January";
var date = 7;
```

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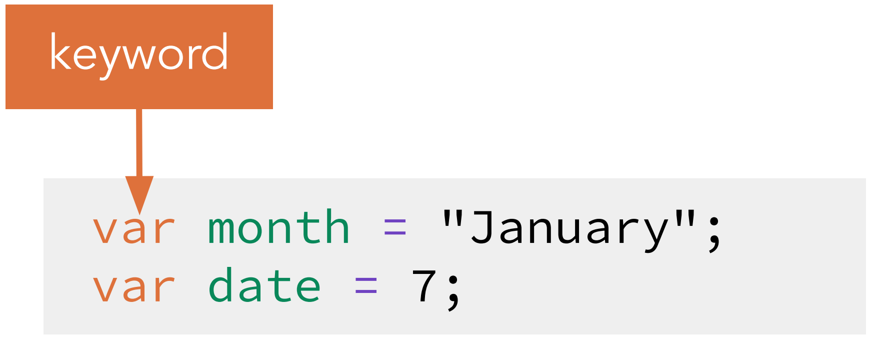

```
var month = "January";
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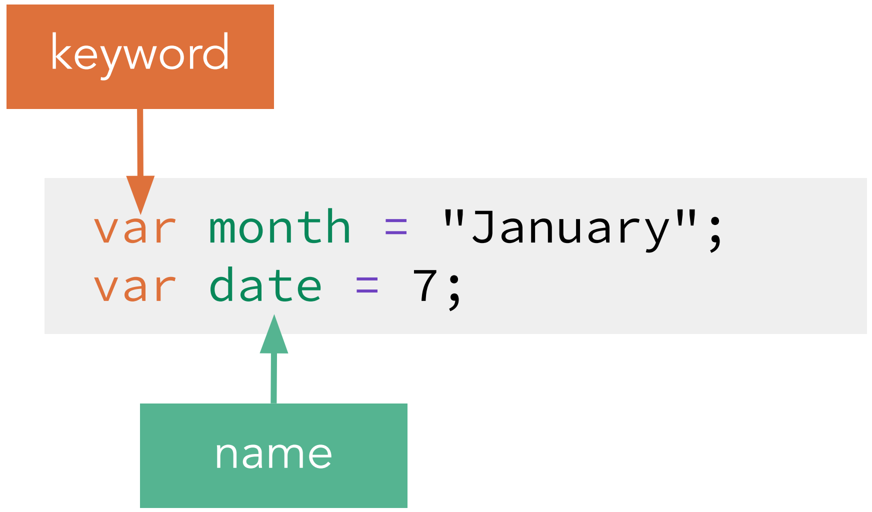

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var month = "January";
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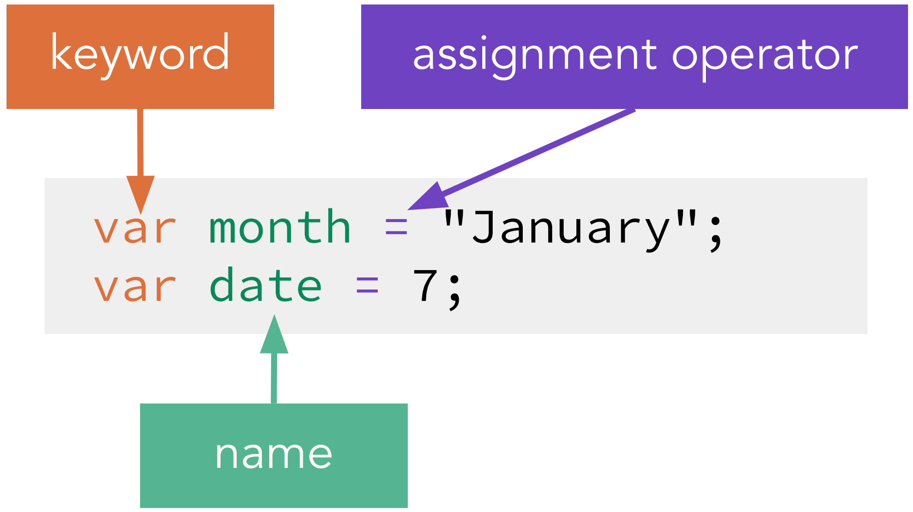

```
var month = "January";
var date = 7;
```

Vocabulary

Assignment:

Copying the value of the right side to the left.

```
var meaningOfLife = (6 * 9).toString(13);
```

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var, let, const?

```
var name = "Alice";

let myLocation = "B2";

const anotherName = "Bob";

name = "Carol";

myLocation = "home";

anotherName = "Dave";
```

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var CAN be *reassigned*.

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Why use `let` instead of `var`?

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`var` CAN be *reassigned*.

`let` CAN also be *reassigned*.

`const` CANNOT be *reassigned*.

Why use `let` instead of `var`?

`let` and `const` are newer syntax and have better error handling, so use of `let` and `const` is preferred.

var, let, const?

```
var name = "Alice";

const anotherName = "Bob";

let myLocation = "B2";

myLocation = "home"

name = "Carol";

anotherName = "Dave";
```

This will *throw* a TypeError: Assignment to constant variable.

var CAN be *re* *signed.*

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Arithmetic Operators (continued)

Variables can be *manipulated* using operators. For example:

```
let myNumber = 0;
const shouldItGetBigger = true;
if (shouldItGetBigger) {
  myNumber = myNumber + 1;
}
```

Arithmetic Operators (continued)

There is another operator, called the *increment operator*, that has a similar effect.

```
let myNumber = 0;
const shouldItGetBigger = true;
if (shouldItGetBigger) {
  myNumber = myNumber + 1;
}
```

```
let myNumber = 0;
const shouldItGetBigger = true;
if (shouldItGetBigger) {
 myNumber++;
}
```

Arithmetic Operators (continued)

++	Increment	3++ => *4*
--	Decrement	9-- => *8*

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REVIEW TIME

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REVIEW TIME

- How do you declare a variable?
- What types of data can you assign to a variable?
- What *is* a variable?
- What are the differences between the keywords `var`, `let`, and `const`?

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Activity

In *Introduction to Variables*, work with the person next to you on the “Paired Activity” section.

Continue with the exercises after you are done.

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