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Window Object Brief & Strings Methods

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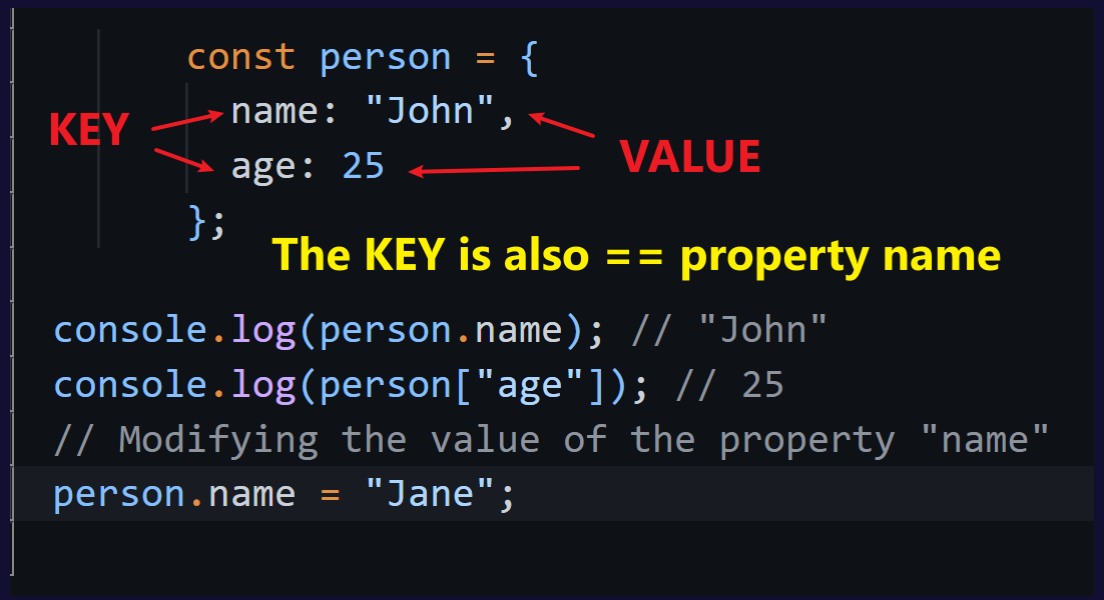
Window Object Brief

- The window object in JavaScript represents the global window or browser window that contains the web page.

- It is a fundamental part of the Document Object Model (DOM) and provides a JavaScript interface for interacting with the browser window and its content. (more on next week)

Jargon in Object

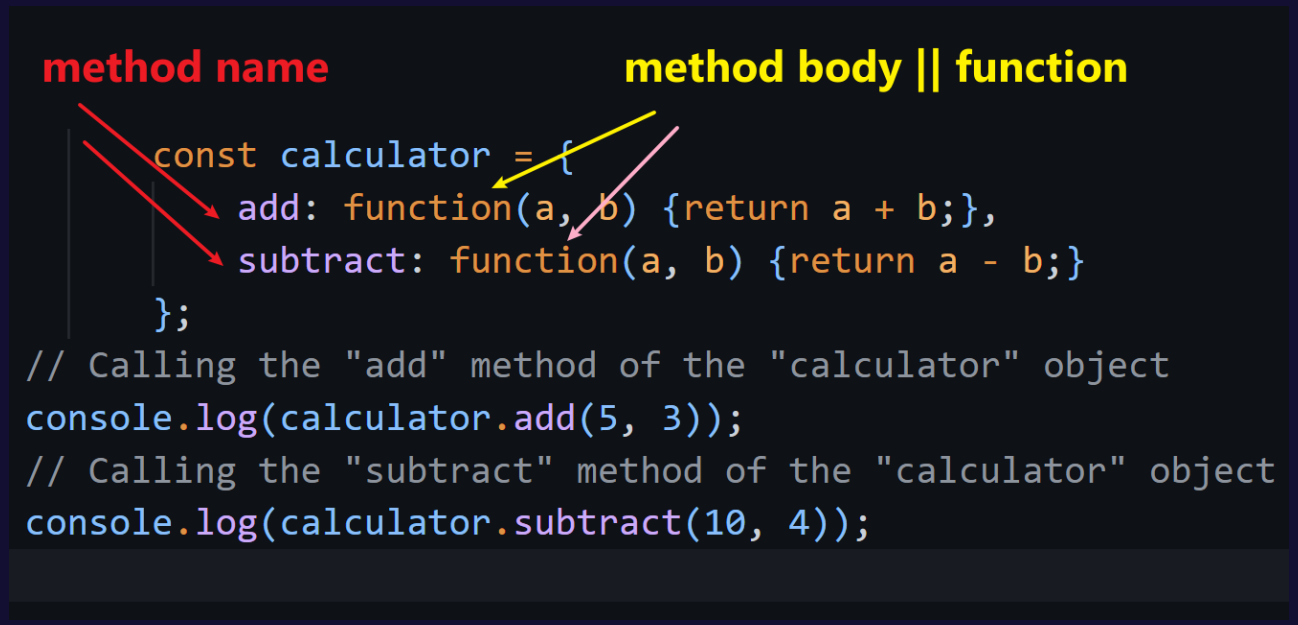


What is **Property** in Object?

- A property is a value associated with an object. It represents some characteristic or data associated with the object.
- Properties can hold any type of value, such as numbers, strings, arrays, or even other objects.
- You can access and modify properties of an object using the dot notation or square bracket notation.

Jargon in Object

What is **Method** in Object?



- A method is a function that is associated with an object. It represents actions or behaviours that the object can perform.
- When a method is called, it is executed within the context of the object it belongs to.

‼You can say add( ) is a property of the 'calculator' object that holds a function value, however, we call the add( ) function is a method of the 'calculator' object.

Properties & Methods of Window Object

The window object provides a range of properties and methods that enable interaction with the browser window.

Properties example：

- Get or set the current URL -> window.location
- Access the browser's history -> window.history

Methods example:

- Display alerts or prompts to the user -> window.alert( ), window.prompt( )

Alerts – JavaScript in the browser

- `alert()` instructs the browser to display a dialog with an optional message, and to wait until the user dismisses the dialog.

```
alert("message");
```

- Example:

```
alert("My alert"); // which is the same as:
window.alert("Still an alert");
```

- Used for messages which do not require any response on the part of the user, other than the acknowledgement of the message.

alert( ) is a function or a method?

- In JavaScript, the alert( ) function is a method of the window object.

What about the function we created in the JavaScript file?

Some common string methods

toLowerCase()

- A string's toLowerCase method in JavaScript returns a copy of the string with its letters converted to lowercase.

toUpperCase()

- A string's toUpperCase method returns a copy of the string with its letters converted to capitals. Note: Numbers, symbols, and other characters are not affected.

trim()

- A string's trim method returns a copy of the string with beginning and ending whitespace characters removed.

Example

```
"CAN YOU HEAR ME".toLowerCase();
// OUTPUT - "can you hear me"

"Is this mic on?".toUpperCase();
// OUTPUT - "IS THIS MIC ON?"

"   trim or not to trim, but keep the middle spaces  ".trim();
// OUTPUT - "trim or not to trim, but keep the middle spaces"
```

String Method

Why we call it String Method?
I thought Methods are only exist in Object!

What happens then?

```
const strPrimitive = "Hello";
console.log(strPrimitive.toUpperCase()); // Output: "HELLO"
```

I am a string
I don't have any
Method or Properties

strPrimitive

Don't worry!
I am an object,
I have everything
you need!

String.prototype

String.split( )

The split() method takes a pattern and divides a String into an ordered list of substrings by searching for the pattern, puts these substrings into an array, and returns the array..

```
const str = "The quick brown fox jumps over the lazy dog.";

console.log(str.split(" "));

console.log(str.split(""));
```

String.split( )

```
const str = "The quick brown fox jumps over the lazy dog.";

console.log(str.split(" "));
//['The', 'quick', 'brown', 'fox', 'jumps', 'over', 'the', 'lazy', 'dog.']
console.log(str.split(""));
//['T', 'h', 'e', ' ', 'q', 'u', 'i', 'c', 'k', ' ', 'b', 'r', 'o', 'w', 'n', '
', 'f', 'o', 'x', ' ', 'j', 'u', 'm', 'p', 's', ' ', 'o', 'v', 'e', 'r', ' ',
't', 'h', 'e', ' ', 'l', 'a', 'z', 'y', ' ', 'd', 'o', 'g', '.']
```

Exercise

```
"CAN YOU HEAR ME".toLowerCase();// OUTPUT - "can you hear me"


"Is this mic on?".toUpperCase();// OUTPUT - "IS THIS MIC ON?"


"   trim or not to trim, but keep the middle spaces  ".trim(); // OUTPUT - "trim or not to trim, but keep the middle spaces"
```

1. Prompt the user to enter a sentence and store the value in a variable called `userMessage`.
2. Use the trim method and store the result in a variable.
3. Create a conditional statement that checks the following:
   a) Checks the length of the trimmed string and returns a different string based on the following conditions
      I. If the length of the string is <= 10, alert the user with the uppercase version of the string
      II. If the length of the string is > 10, alert the user with the lowercase version of the string.

Test Data: If I enter: ' HelloWorld ' I should get 'HELLOWORLD'

If I enter: ' HeLlO EverYone ' I should get 'hello everyone'

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Thank you | Ewan Zhang