JS String Concatenation

Concatenation is the act of linking things together. In this case, strings, which are groups of characters are joined together at the ends to form an even longer string.

String Concatenation in JS

String concatenation is most commonly used when you want a specific word in a sentence to be changeable. For example, in the sentence "The dog wants to jump.", we may want to replace "dog" with another word. If it was only on one place that we had to replace "dog", it'd be trivial to retype dog on that line, but as the number of occurrences of dog increases, it will become more difficult to replace each one. That's why we use a variable and string concatenation in something like this:

Let word = "dog"

Let sentence = "The " + word + " wants to jump."

console.log(sentence)

This is the simplest application, but there are others such as joining a list of strings together.

Methods of Concatenation

In JavaScript there are four ways, strings can be joined together.

Joining with (+) operator

This is the simplest and most common way of joining strings together. The (+) operator is placed between each string that is to be joined together and it returns a new string composed of all the characters in the other strings.

Syntax

Let string1 = "Hello "
Let string2 = "World!"
 Let new_string = string1 + string2
Console.log(new_string)
OUTPUT: HELLO WORLD!

It's also possible to use the (+=) operator to append other strings to the end of an already existing string and return the value

Let new_string = "Hello "
Let string1 = "World!"
New_string += string1
Console.log(new_string)

OUTPUT: HELLO WORLD!

Before concatenation, non-string values are converted to string values if there is at least one string value when using (+) operator and will do so even if there isn't a string value if the existing string is a string when using a (+=) operator.

Let string1 = "Hello"
Let string2 = 2
Let new_string = string1 + string2
Console.log(new_string)
OUTPUT: HELLO1

Let new_string = "Hello"
Let string1 = 1
New_string += string1
Console.log(new_string)
OUTPUT: HELLO1

Joining with the .concat() method

The .concat method is a string method that takes string values as arguments, appends them onto an existing string, and returns the final string. It is used for concatenating strings and returns a new string without modifying the existing strings.

Syntax:

Let new_string = "".concat("Hello ", "World!")
Console.log(new_string)
OUTPUT: HELLO WORLD!
.
It can be used to join an array of strings with the help of the spread operator (…).

Let strings = ["Hello ", "World", "!"]
Let new_string = "".concat(…strings)
Console.log(new_string)
OUTPUT: HELLO WORLD!

Using a non-string variable to call the .concat method will cause an error

Let string = 1
String.concat("Hello ", "World!")
//Raises an error as the string variable is of int type

Joining with the .join method

The .join method is used on an array to join all elements in it into a string and return that string.

A custom separator can be set to space each element out in the final string.

Let string_array = ["I", "ate", "a", "banana."]
Let final_string = string_array.join(" ")

Console.log(final_string)

OUTPUT: I ATE A BANANA.