

FSD Theory Assignment 2

Q. What is a number object in JavaScript? What are the 2 ways to create a string in JavaScript? Explain the use of it with the help of an example.

Ans.

In JavaScript, the **Number object** is a built-in object that provides functionality for working with numeric values. It is associated with the primitive data type "number," which represents both integer and floating-point (decimal) numbers. The Number object provides various properties and methods for performing operations and conversions on numeric values. Here's a brief overview of the Number object and its key aspects:

Properties of the Number Object:

- `Number.MAX_VALUE`: Represents the largest positive finite value that can be represented by a JavaScript number.
- `Number.MIN_VALUE`: Represents the smallest positive nonzero value that can be represented by a JavaScript number.

Methods of the Number Object:

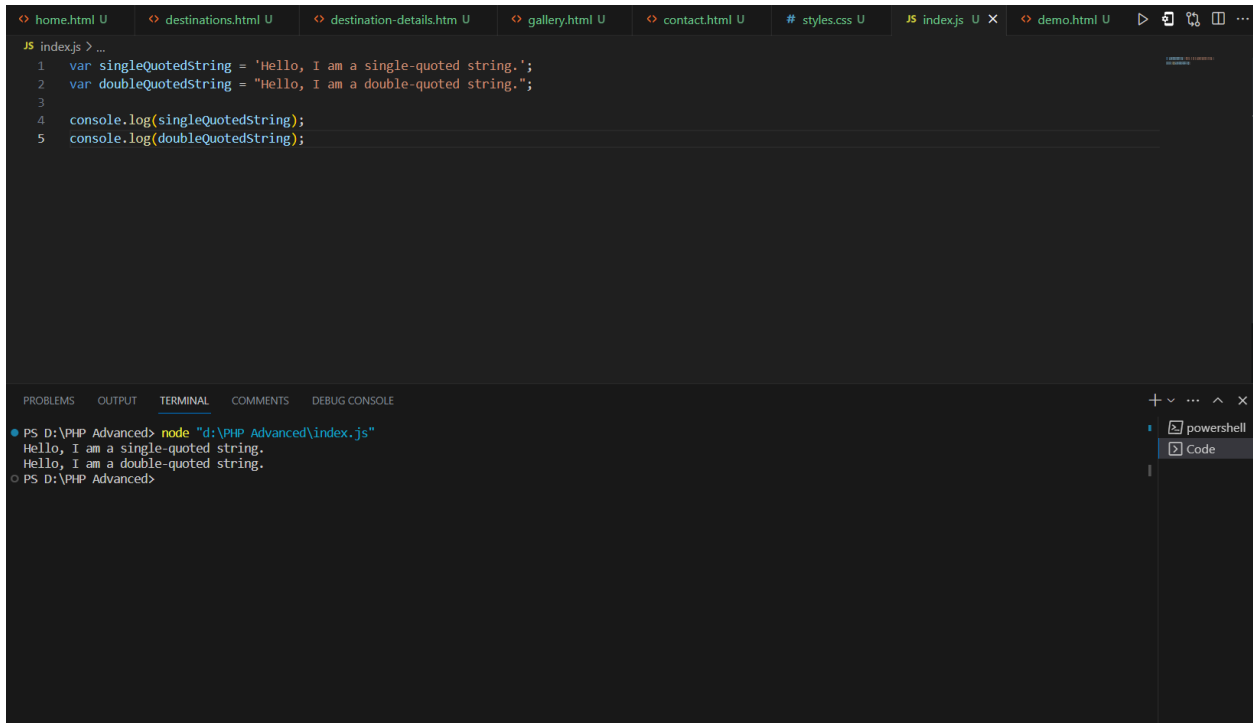
- `Number.parseFloat()`: Parses a string argument and returns a floating-point number.
- `Number.parseInt()`: Parses a string argument and returns an integer.
- `Number.toFixed()`: Formats a number to a specified number of decimal places and returns a string representation.
- `Number.toString()`: Converts a number to a string representation with an optional radix (base).

Two ways to create strings in JavaScript and their usage:

1. Using Single or Double Quotes:

You can create a string by enclosing characters within single (') or double (") quotes. Both single and double quotes are used interchangeably to define strings.

For example:



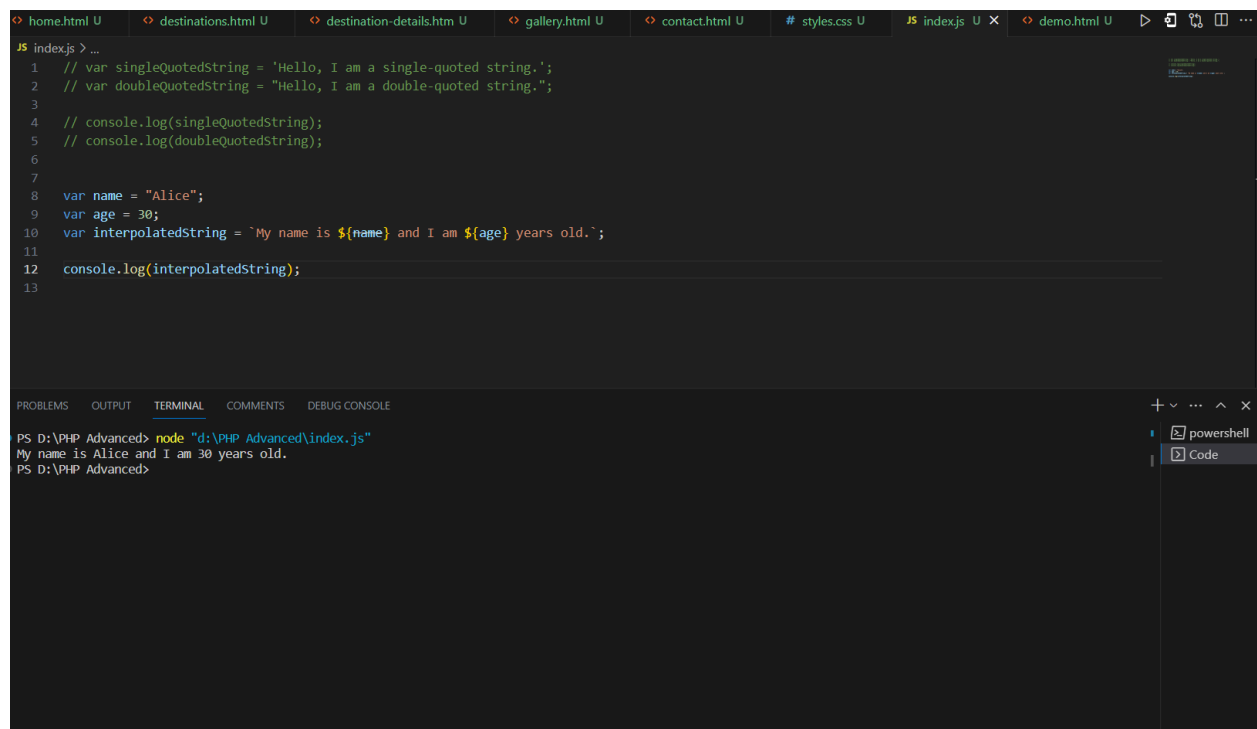
```
JS index.js > ...
1 var singleQuotedString = 'Hello, I am a single-quoted string.';
2 var doubleQuotedString = "Hello, I am a double-quoted string.";
3
4 console.log(singleQuotedString);
5 console.log(doubleQuotedString);
```

```
PS D:\PHP Advanced> node "d:\PHP Advanced\index.js"
Hello, I am a single-quoted string.
Hello, I am a double-quoted string.
PS D:\PHP Advanced>
```

2. Using Template Literals (ES6+):

ES6 introduced template literals, which are enclosed by backticks (`). They allow you to embed expressions and multiline strings within the string. Template literals also support string interpolation, making it easier to combine variables and text.

For example:



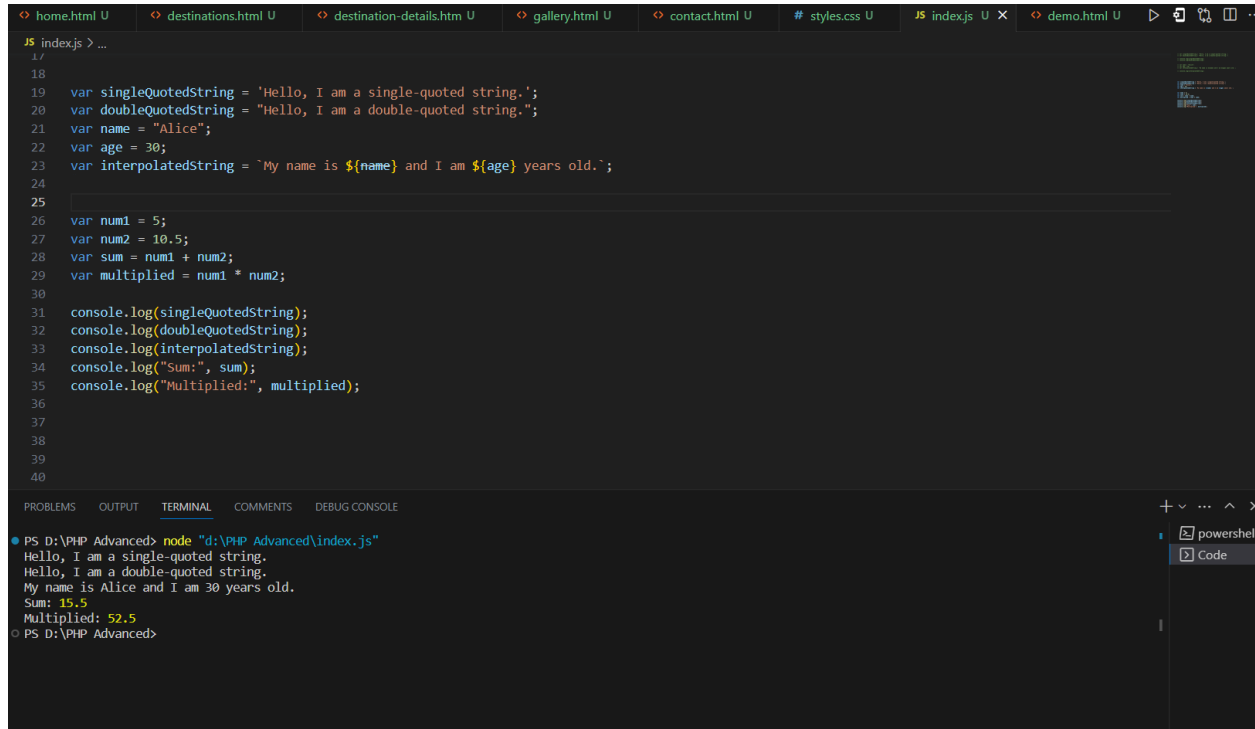
```
JS index.js > ...
1 // var singleQuotedString = 'Hello, I am a single-quoted string.';
2 // var doubleQuotedString = "Hello, I am a double-quoted string.";
3
4 // console.log(singleQuotedString);
5 // console.log(doubleQuotedString);
6
7
8 var name = "Alice";
9 var age = 30;
10 var interpolatedString = `My name is ${name} and I am ${age} years old.`;
11
12 console.log(interpolatedString);
13
```

PROBLEMS OUTPUT TERMINAL COMMENTS DEBUG CONSOLE

```
PS D:\PHP Advanced> node "d:\PHP Advanced\index.js"
My name is Alice and I am 30 years old.
PS D:\PHP Advanced>
```

powerShell Code

Let's consider an example that demonstrates the use of strings and numbers in JavaScript:



The image shows a Visual Studio Code editor window with a file explorer at the top displaying several HTML and CSS files. The main editor area contains a JavaScript file named `index.js` with the following code:

```
17
18
19 var singleQuotedString = 'Hello, I am a single-quoted string.';
20 var doubleQuotedString = "Hello, I am a double-quoted string.";
21 var name = "Alice";
22 var age = 30;
23 var interpolatedString = `My name is ${name} and I am ${age} years old.`;
24
25
26 var num1 = 5;
27 var num2 = 10.5;
28 var sum = num1 + num2;
29 var multiplied = num1 * num2;
30
31 console.log(singleQuotedString);
32 console.log(doubleQuotedString);
33 console.log(interpolatedString);
34 console.log("Sum:", sum);
35 console.log("Multiplied:", multiplied);
36
37
38
39
40
```

Below the editor, the `TERMINAL` panel is active, showing the command `node "d:\PHP Advanced\index.js"` and its output:

```
PS D:\PHP Advanced> node "d:\PHP Advanced\index.js"
Hello, I am a single-quoted string.
Hello, I am a double-quoted string.
My name is Alice and I am 30 years old.
Sum: 15.5
Multiplied: 52.5
PS D:\PHP Advanced>
```