

Basic JavaScript Syntax

`console.log()`

The `console.log()` method is used to log or print messages to the console. It can also be used to print objects and other info.

```
console.log('Hi there!');  
// Prints: Hi there!
```

JavaScript

JavaScript is a programming language that powers the dynamic behavior on most websites. Alongside HTML and CSS, it is a core technology that makes the web run.

Methods

Methods return information about an object, and are called by appending an instance with a period `.`, the method name, and parentheses.

```
// Returns a number between 0 and 1  
Math.random();
```

Built-in Objects

Built-in objects contain methods that can be called by appending the object name with a period `.`, the method name, and a set of parentheses.

```
Math.random();  
// 🙌 Math is the built-in object
```

Numbers

Numbers are a primitive data type. They include the set of all integers and floating point numbers.

```
let amount = 6;  
let price = 4.99;
```

String .length

The `.length` property of a string returns the number of characters that make up the string.

```
let message = 'good nite';  
console.log(message.length);  
// Prints: 9  
  
console.log('howdy'.length);  
// Prints: 5
```

Data Instances

When a new piece of data is introduced into a JavaScript program, the program keeps track of it in an instance of that data type. An instance is an individual case of a data type.

Booleans

Booleans are a primitive data type. They can be either `true` or `false`.

```
let lateToWork = true;
```

Math.random()

The `Math.random()` method returns a floating-point, random number in the range from 0 (inclusive) up to but not including 1.

```
console.log(Math.random());  
// Prints: 0 - 0.9999999999999999
```

Math.floor()

The `Math.floor()` function returns the largest integer less than or equal to the given number.

```
console.log(Math.floor(5.95));  
// Prints: 5
```

Single Line Comments

In JavaScript, single-line comments are created with two consecutive forward slashes `//`.

```
// This line will denote a comment
```

Null

Null is a primitive data type. It represents the intentional absence of value. In code, it is represented as `null`.

```
let x = null;
```

Strings

Strings are a primitive data type. They are any grouping of characters (letters, spaces, numbers, or symbols) surrounded by single quotes ' or double quotes " .

```
let single = 'Wheres my bandit hat?';  
let double = "Wheres my bandit hat?";
```

Arithmetic Operators

JavaScript supports arithmetic operators for:

- + addition
- - subtraction
- * multiplication
- / division
- % modulo

```
// Addition  
5 + 5  
  
// Subtraction  
10 - 5  
  
// Multiplication  
5 * 10  
  
// Division  
10 / 5  
  
// Modulo  
10 % 5
```

Multi-line Comments

In JavaScript, multi-line comments are created by surrounding the lines with `/*` at the beginning and `*/` at the end. Comments are good ways for a variety of reasons like explaining a code block or indicating some hints, etc.

```
/*  
The below configuration must be  
changed before deployment.  
*/  
  
let baseUrl = 'localhost/taxwebapp/country';
```

Remainder / Modulo Operator

The remainder operator, sometimes called modulo, returns the number that remains after the right-hand number divides into the left-hand number as many times as it evenly can.

```
// calculates # of weeks in a year, rounds down to nearest  
integer  
const weeksInYear = Math.floor(365/7);  
  
// calculates the number of days left over after 365 is divided  
by 7  
const daysLeftOver = 365 % 7 ;  
  
console.log("A year has " + weeksInYear + " weeks and " +  
daysLeftOver + " days");
```

