**06**

**Object**

WHAT YOU WILL LEARN

* Class And Object
* Constructor Method
* String Object
* Date Object
* Math Object

Class And Object

ECMAScript 2015, also known as ES6, introduced JavaScript Classes.

JavaScript Classes are templates for JavaScript Objects.

The JavaScript class contains various class members within a body including methods or constructor.

Text

Description automatically generated with medium confidence

Constructor Method

The constructor method is a special method:

* It has to have the exact name "constructor"
* It is executed automatically when a new object is created
* It is used to initialize object properties
* If you do not define a constructor method, JavaScript will add an empty constructor method.

Class Methods

* Class methods are created with the same syntax as object methods.
* Use the keyword class to create a class.
* Always add a constructor() method.

Date Object

The JavaScript date object can be used to get year, month and day. You can display a timer on the webpage by the help of JavaScript date object.

JavaScript Date Methods

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| **Methods** | **Description** |
| getDate() | It returns the integer value between 1 and 31 that represents the day for the specified date on the basis of local time. |
| getDay() | It returns the integer value between 0 and 6 that represents the day of the week on the basis of local time. |
| getFullYears() | It returns the integer value that represents the year on the basis of local time. |
| getHours() | It returns the integer value between 0 and 23 that represents the hours on the basis of local time. |
| getMilliseconds() | It returns the integer value between 0 and 999 that represents the milliseconds on the basis of local time. |
| getMinutes() | It returns the integer value between 0 and 59 that represents the minutes on the basis of local time. |
| getMonth() | It returns the integer value between 0 and 11 that represents the month on the basis of local time. |
| getSeconds() | It returns the integer value between 0 and 60 that represents the seconds on the basis of local time. |

Math Object

The JavaScript math object provides several constants and methods to perform mathematical operation.

JavaScript Math Methods

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| **Methods** | **Description** |
| abs() | It returns the absolute value of the given number. |
| ceil() | It returns a smallest integer value, greater than or equal to the given number. |
| cos() | It returns the cosine of the given number. |
| floor() | It returns largest integer value, lower than or equal to the given number. |
| log() | It returns natural logarithm of a number. |
| max() | It returns maximum value of the given numbers. |
| min() | It returns minimum value of the given numbers. |
| pow() | It returns value of base to the power of exponent. |
| random() | It returns random number between 0 (inclusive) and 1 (exclusive). |
| round() | It returns closest integer value of the given number. |
| sqrt() | It returns the square root of the given number |
| trunc() | It returns an integer part of the given number. |

String Object

The JavaScript string is an object that represents a sequence of characters.

There are 2 ways to create string in JavaScript

1. By string literal

var stringname="string value";

1. By string object (using new keyword)

var stringname=new String("string literal");

JavaScript String Methods

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| **Methods** | **Description** |
| charAt() | It provides the char value present at the specified index. |
| concat() | It provides a combination of two or more strings. |
| indexOf() | It provides the position of a char value present in the given string. |
| lastIndexOf() | It provides the position of a char value present in the given string by searching a character from the last position. |
| search() | It searches a specified regular expression in a given string and returns its position if a match occurs. |
| match() | It searches a specified regular expression in a given string and returns that regular expression if a match occurs. |
| replace() | It replaces a given string with the specified replacement. |
| substring() | It is used to fetch the part of the given string on the basis of the specified index. |
| slice() | It is used to fetch the part of the given string. It allows us to assign positive as well negative index. |
| toLowerCase() | It converts the given string into lowercase letter. |
| toLocaleLowerCase() | It converts the given string into lowercase letter on the basis of host?s current locale. |
| toUpperCase() | It converts the given string into uppercase letter. |
| toLocaleUpperCase() | It converts the given string into uppercase letter on the basis of host?s current locale. |
| toString() | It provides a string representing the particular object. |
| valueOf() | It provides the primitive value of string object. |
| split() | It splits a string into substring array, then returns that newly created array. |
| trim() | It trims the white space from the left and right side of the string. |

JavaScript Array

There are 3 ways to construct array in JavaScript

There are 3 ways to construct array in JavaScript

1. By array literal

var arrayname=[value1,value2.....valueN];

1. By creating instance of Array directly (using new keyword)

var arrayname=new Array();

1. By using an Array constructor (using new keyword)

var emp=new Array("Jai","Vijay","Smith");