

The **JavaScript comments** are meaningful way to deliver message. It is used to add information about the code, warnings or suggestions so that end user can easily interpret the code.

The JavaScript comment is ignored by the JavaScript engine i.e. embedded in the browser.

### Advantages of JavaScript comments

There are mainly two advantages of JavaScript comments

1. **To make code easy to understand** It can be used to elaborate the code so that end user can easily understand the code.
  2. **To avoid the unnecessary code** It can also be used to avoid the code being executed. Sometimes, we add the code to perform some action. But after sometime, there may be need to disable the code. In such case, it is better to use comments.
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## Types of JavaScript Comments

There are two types of comments in JavaScript.

1. Single-line Comment
2. Multi-line Comment

## JavaScript Variable

A **JavaScript variable** is simply a name of storage location. There are two types of variables in JavaScript : local variable and global variable.

There are some rules while declaring a JavaScript variable (also known as identifiers).

1. Name must start with a letter (a to z or A to Z), underscore( \_ ), or dollar( \$ ) sign.
2. After first letter we can use digits (0 to 9), for example value1.
3. JavaScript variables are case sensitive, for example x and X are different variables.

## Correct JavaScript variables

1. var **x** = 10;
  2. var **\_value**="vijay";
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## Incorrect JavaScript variables

1. var **123**=30;
2. var **\*aa**=320;

# Javascript Data Types

JavaScript provides different **data types** to hold different types of values. There are two types of data types in JavaScript.

1. Primitive data type
2. Non-primitive (reference) data type

JavaScript is a **dynamic type language**, means you don't need to specify type of the variable because it is dynamically used by JavaScript engine. You need to use **var** here to specify the data type. It can hold any type of values such as numbers, strings etc. For example:

1. var **a**=**40**//holding number
2. var **b**="**Rahul**";//holding string

## JavaScript primitive data types

There are five types of primitive data types in JavaScript. They are as follows:

<b>a Type</b>	<b>Description</b>
<b>String</b>	represents sequence of characters e.g. "hello"
<b>Number</b>	represents numeric values e.g. 100
<b>Boolean</b>	represents boolean value either false or true
<b>Undefined</b>	represents undefined value
<b>Null</b>	represents null i.e. no value at all

# JavaScript Operators

JavaScript operators are symbols that are used to perform operations on operands. For example:

1. `var sum=10+20;`

Here, + is the arithmetic operator and = is the assignment operator.

There are following types of operators in JavaScript.

1. Arithmetic Operators
2. Comparison (Relational) Operators
3. Logical Operators
4. Assignment Operators
5. Special Operators

## JavaScript Arithmetic Operators

Arithmetic operators are used to perform arithmetic operations on the operands. The following operators are known as JavaScript arithmetic operators.

Operator	Description	Example
+	Addition	$10+20 = 30$
-	Subtraction	$20-10 = 10$
*	Multiplication	$10*20 = 200$
/	Division	$20/10 = 2$
%	Modulus (Remainder)	$20\%10 = 0$
++	Increment	<code>var a=10; a++; Now a = 11</code>
--	Decrement	<code>var a=10; a--; Now a = 9</code>

## JavaScript Comparison Operators

The JavaScript comparison operator compares the two operands. The comparison operators are as follows:

Operator	Description	Example
<code>==</code>	Is equal to	$10==20 = \text{false}$
<code>=====</code>	Identical (equal and of same type)	$10=====20 = \text{false}$
<code>!=</code>	Not equal to	$10!=20 = \text{true}$

<b>!=</b>	Not Identical	20!=20 = false
<b>&gt;</b>	Greater than	20>10 = true
<b>&gt;=</b>	Greater than or equal to	20>=10 = true
<b>&lt;</b>	Less than	20<10 = false
<b>&lt;=</b>	Less than or equal to	20<=10 = false

## JavaScript Logical Operators

The following operators are known as JavaScript logical operators.

Operator	Description	Example
<b>&amp;&amp;</b>	Logical AND	(10==20 && 20==33) = false
<b>  </b>	Logical OR	(10==20    20==33) = true
<b>!</b>	Logical Not	!(10==20) = true

## JavaScript Assignment Operators

The following operators are known as JavaScript assignment operators.

Operator	Description	Example
<b>=</b>	Assign	10+10 = 20
<b>+=</b>	Add and assign	var a=10; a+=20; Now a = 30
<b>-=</b>	Subtract and assign	var a=20; a-=10; Now a = 10
<b>*=</b>	Multiply and assign	var a=10; a*=20; Now a = 200
<b>/=</b>	Divide and assign	var a=10; a/=2; Now a = 5
<b>%=</b>	Modulus and assign	var a=10; a%=2; Now a = 0