

JavaScript
Brendan Eich. →

JavaScript was invented by Brendan Eich in 1995.

HTML - Context
CSS - Styling } T.S - Interactively
Scripting language.
(OOP | Modular)
Coding

Numbers, Floats,

Operations. $(+)$ $(-)$ $(/)$ $(*)$ $(\%)$

→ $15 * 2 - 3 / \% 2$

Priority → BODMAS. → (+) (-)
↓ ↓ ↓ ↓
Brackets () (mult) (/)

$(2) * 2$
const → constant
lit {
lit | var
const $a = 2;$
const $b = 5;$
const $c = 7;$
lit const res = 0;
res = (a + b)
* c
= $(2 + 5) * 7$
= $7 * 7$

float = 7.345...

const res2 = $(\text{float}) \frac{3}{2} = 1.5$
(int) (int)

const res3 = 1,00,000
= 100,000

```

// JavaScript
{
  const a = 10 + 7;
  console.log(a);
  console.log(typeof(a))
  const b = 10/3;
  console.log(b);
  console.log(typeof(b))
  const maxSafe = Number.MAX_SAFE_INTEGER;
  console.log(maxSafe); // Output: 9007199254740991

  console.log(Number.isSafeInteger(maxSafe)); // Output: true
  console.log(Number.isSafeInteger(maxSafe + 1)); // Output: false
  const largestNum = 9_007_199_254_740_991;
  console.log(largestNum);

  const name = "Puneeth"
  const test = "test"
  const space_string = " "

  console.log(name + " is " +
  test + "ing" );
  console.log(name + " is " + 100 + 100 + 34 +
  test + "ing" );
  console.log(name + space_string + test)

  // Boolean - true or false
  // const a = 0; number

  // Logical operator - < > === >= <= !=
  const b1 = "true";

```

$a = "true"$
 $d = "true"$
 $a == d$
 \rightarrow false

$b = "false"$
 $c = "false"$
 $b === c$
 \rightarrow false

\rightarrow Logical Operators.

\Rightarrow $!$ $==$ $<$ $>$ $<=$ $>=$
 \Rightarrow $!$ $===$

$\rightarrow 3 + 2 \rightarrow '3' + 2$
 \downarrow \downarrow
 Operands $'32'$

$\rightarrow '3' == 3 \Rightarrow \text{true/false}$
 $'3' === 3 \Rightarrow \text{true/false}$

```

HTML < // console.log(a);
<!DOCTYPE html> // const b = 10/3;
<html> // console.log(b);
<head> // console.log(typeof(b))
<meta charset="utf-8"> // const maxSafe = Number.MAX_SAFE_INTEGER;
<meta name="viewport"> // console.log(maxSafe); // Output: 9007199254740991
<title>JS Bin</title> // console.log(Number.isSafeInteger(maxSafe)); // Output: true
</head> // console.log(Number.isSafeInteger(maxSafe + 1)); // Output: false
<body> // const largestNum = 9_007_199_254_740_991;
</body> // console.log(largestNum);
</html> // console.log(largestNum);

// const name = "Puneeth"
// const test = "test"
// const space_string = " "
// console.log(name + " is " +
// test + "ing" );
// console.log(name + " is " + 100 + 100 + 34 +
// test + "ing" );
// console.log(name + space_string + test)

// Boolean - true or false
// const a = 0; number

// Logical operator - < > === >= <= !=
console.log('2' == 2);
console.log('2' === 2);

```

```

Console
true
false

```

Boolean \rightarrow $\frac{\text{true}}{1}$ / $\frac{\text{false}}{0}$

Bitwise Shift Operators $>>$ $<<$

Auto type Conversion
 $\text{const } b = (2 + '2')$
 $\Rightarrow 22$
 \downarrow
 String

Conditional

If | Switch

if else

if else if

0, 1, 2, 3, 4, ...

switch (condition)

case '1':
break;

↓
case '2':

Default:
break

```
{(cond1){
```

```
==  
} else {
```

```
==  
}
```

```
if (cond2) {
```

```
==  
} else if (cond3) {
```

```
==  
} else {
```

```
}
```

break | continue

Keywords → const let
for if while ...