

# JavaScript for Developers

## *Data Types*

*(part 1: number & string)*

# Data Types

Value Types  
Primitive Types

Reference Type  
Objects



# 1. number

Java

*int*  
*long*  
*float*  
*double*

JavaScript

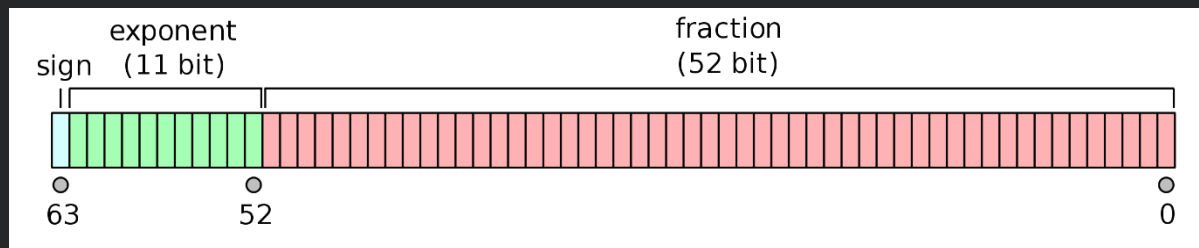
*number*



# 1. number

✓ Object wrapper: *Number*

✓ **Integer** Range:  $-(2^{53} - 1)$  to  $(2^{53} - 1)$



*Number*.MAX\_SAFE\_INTEGER;

✓ Check if it is an integer

*Number*.isSafeInteger(myNumber);

✓ Out of this range it consider as a double.

**Cấu tạo của SỐ NGUYÊN** **Hiện tượng TRÀN SỐ**

Biểu diễn **SỐ ÂM** dưới dạng **NHỊ PHÂN**

00001011  
+ 11110101  
-----  
0

23:24

Học lập trình: Cấu tạo của số nguyên | Hiện tượng tràn...

# 1. number

## ✓ Some special values:

Infinity      (*Number*.POSITIVE\_INFINITY)  
-Infinity    (*Number*.NEGATIVE\_INFINITY);  
NaN          (*Number*.NaN);

isNaN() : true if the given value is NaN; otherwise, false.

Number.isNaN() : true if the given value is NaN and its type is Number; otherwise, false.

	<u>isNaN()</u>	<u>Number.isNaN()</u>
'10'	False	False
'hello'	True	<u>False</u>
NaN	True	True

❖ *Node: Cannot compare NaN*

# 1. number

## ✓ Some helper Functions:

```
Number.parseInt;  
Number.parseFloat;  
Number.isNaN;  
Number.isSafeInteger;  
myNumber.toFixed(2);
```

```
Math.max  
Math.PI  
Math.sqrt  
Math.pow  
Math.sin
```

## ✓ Create Number object:

```
let myNumberObj = new Number(1);
```

# 1. number

## ✓ Refs:

- [https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Number?retiredLocale=vi](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Number?retiredLocale=vi)
- [https://www.w3schools.com/jsref/jsref\\_obj\\_number.asp](https://www.w3schools.com/jsref/jsref_obj_number.asp)
- [https://www.w3schools.com/jsref/jsref\\_obj\\_math.asp](https://www.w3schools.com/jsref/jsref_obj_math.asp)

## 2. string

### ✓ Double quotes | Single quotes

```
const hello = "hello world!";  
const hi = 'hi';
```

### ✓ Some helper Functions:

```
myStr.length;  
myStr.replace;  
myStr.split;  
myStr.charAt;  
...
```

### ✓ Object wrapper: *String*



## 2. string

### ✓ Template Literals

```
`... ${variable} ...`
```

```
const myName = "Jim";  
const age = 20;  
const str = `I'm ${myName} and I'm ${age} years old`;
```

### ✓ Create String object: `let myStrObj = new String("John");`

## 2. string

✓ number <-> string conversion:

```
let a = 2 + "2";  
let b = 2 - "2";  
let c = 2 * "2";  
let d = 2 / "2";
```

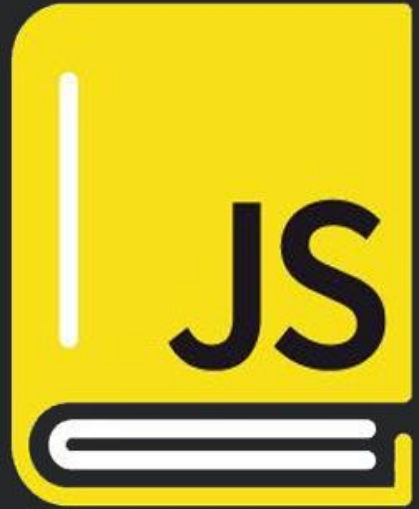
```
console.log(a);  
console.log(b);  
console.log(c);  
console.log(d);
```

```
const x = "2" + "2" - "2";
```

## 2. string

✓ Refs:

- [https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/String](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/String)
- [https://www.w3schools.com/jsref/jsref\\_obj\\_string.asp](https://www.w3schools.com/jsref/jsref_obj_string.asp)



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