

НОВЫЕ ВОЗМОЖНОСТИ ES6 и ES7



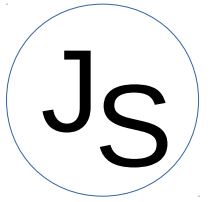
- НОВЫЕ ВОЗМОЖНОСТИ ES6
- НОВЫЕ ВОЗМОЖНОСТИ ES7

НОВЫЕ ВОЗМОЖНОСТИ ES6



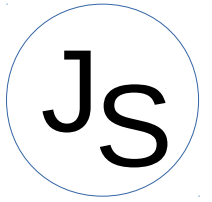
- **Константы (const)**
- **Блочная видимость (let)**
- **Стрелочные функции, лексическое this**
- **Классы**
- **Улучшения в литералах объектов**
- **Строки-шаблоны**
- **Деструктурирование**
- **Параметры функций**
- **Итераторы, for..of**
- **Генераторы**
- **Юникод**

Новые возможности ES6 (продолжение)



- Модули
- Map, Set, WeakMap, WeakSet
- Proxy, Reflection
- Symbol
- Подклассы для встроенных классов
- **Промисы**
- Добавления Math, Number, String, Array, Object
- RegExp lastIndex
- Двоичные и восьмеричные литералы
- i18n

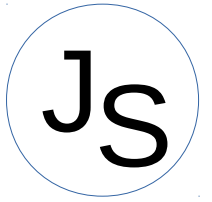
Классы (ES6)



Определение класса

```
class Shape {  
  constructor (id, x, y) {  
    this.id = id  
    this.move(x, y)  
  }  
  move (x, y) {  
    this.x = x  
    this.y = y  
  }  
}
```

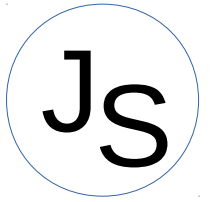
Классы (ES6)



Наследование

```
class Circle extends Shape {  
  constructor (id, x, y, radius) {  
    super(id, x, y)  
    this.radius = radius  
  }  
}
```

Классы (ES6) - продолжение



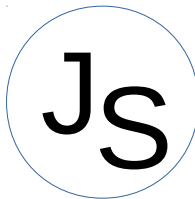
```
var aggregation = (baseClass, ...mixins) => {  
  let base = class _Combined extends baseClass {  
    ...  
  }  
  ...  
  return base  
}
```

```
class Colored {...}  
class ZCoord {...}  
class Shape {...}
```

```
class Rectangle extends  
  aggregation(Shape, Colored, ZCoord) {}
```

```
var rect = new Rectangle(7, 42)  
rect.z    = 1000  
rect.color = "red"  
console.log(rect.x, rect.y, rect.z, rect.color)
```

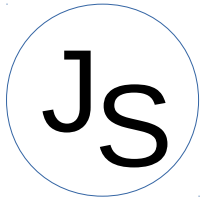
Классы (ES6) - продолжение



Доступ к базовому классу

```
class Shape {
  ...
  toString () {return `Shape(${this.id})`}
}
class Rectangle extends Shape {
  constructor (id, x, y, width, height) {
    super(id, x, y)
    ...
  }
  toString () {return "Rectangle > " + super.toString()}
}
class Circle extends Shape {
  constructor (id, x, y, radius) {
    super(id, x, y)
    ...
  }
  toString () {return "Circle > " + super.toString()}
}
```

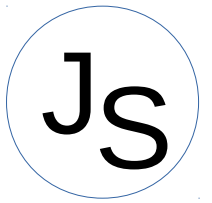
Классы (ES6) - продолжение



Статические члены класса

```
class Rectangle extends Shape {  
  ...  
  static defaultRectangle () {  
    return new Rectangle("default", 0, 0, 100, 100)  
  }  
}  
class Circle extends Shape {  
  ...  
  static defaultCircle () {  
    return new Circle("default", 0, 0, 100)  
  }  
}  
var defRectangle = Rectangle.defaultRectangle()  
var defCircle    = Circle.defaultCircle()
```


Классы (ES6) - продолжение

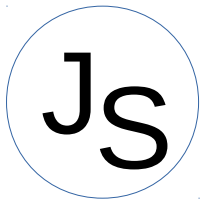


Геттеры и сеттеры

```
class Rectangle {  
  constructor (width, height) {  
    this._width  = width  
    this._height = height  
  }  
  set width  (width)  { this._width = width }  
  get width  ()       { return this._width  }  
  set height (height) { this._height = height }  
  get height ()       { return this._height }  
  get area   ()       { return this._width*this._height }  
}
```

```
var r = new Rectangle(50, 20)  
r.area === 1000
```

Литералы объектов (ES6)

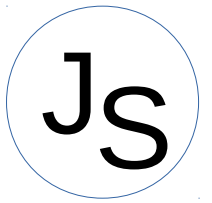


```
obj = { x, y }      // { x: x, y: y }
```

```
let obj = {  
  foo: "bar",  
  [ "baz" + quux() ]: 42  
}
```

```
obj = {  
  foo (a, b) {...},  
  bar (x, y) {...},  
  *quux (x, y) {...}  
}
```

Строки-шаблоны (ES6)



```
var message = `Hello ${customer.name},  
want to buy ${card.amount} ${card.product}  
for  
a total of ${card.amount * card.unitprice}  
bucks?`
```

```
get `http://example.com/foo?bar=${bar} +  
baz` & quux=${quux}`
```

```
String.raw `foo\n${ 42 }bar` // "foo\\n42bar"
```

Деструктурирование (ES6)



```
var list = [ 1, 2, 3 ]  
var [ a, , b ] = list  
[ b, a ] = [ a, b ]
```

```
var { op, lhs, rhs }=getNode();  
var { op: a, lhs: { op: b }, rhs: c }=getNode();
```

```
var obj = { a: 1 }  
var list = [ 1 ]  
var { a, b = 2 } = obj  
var [ x, y = 2 ] = list
```

Деструктурирование (ES6)



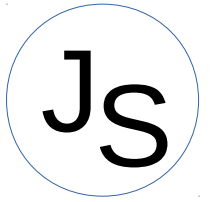
```
function f([ name, val ]) { ... }  
f([ "bar", 42 ])
```

```
function g ({ name: n, val: v }) { ... } // n, v  
g({ name: "foo", val: 7 })
```

```
function h ({ name, val }) { ... }  
h({ name: "bar", val: 42 })
```

```
var list = [ 7, 42 ]  
var [ a = 1, b = 2, c = 3, d ] = list  
// a === 7  
// b === 42  
// c === 3  
// d === undefined
```

Параметры функций (ES6)



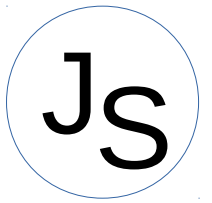
```
function f (x, y = 7, z = 42) {return x + y + z}  
f(1) // 50
```

```
function f (x, y, ...a) {  
    return (x + y) * a.length  
}  
f(1, 2, "hello", true, 7) // 9
```

```
var params = [ "hello", true, 7 ]  
var other = [ 1, 2, ...params ]  
    // [ 1, 2, "hello", true, 7 ]  
f(1, 2, ...params) // 9
```

```
var str = "foo"  
var chars = [ ...str ] // [ "f", "o", "o" ]
```

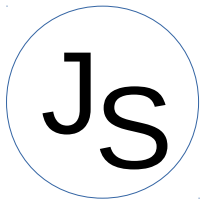
Итераторы, for..of (ES6)



```
let fibonacci = {
  [Symbol.iterator]() {
    let pre = 0, cur = 1
    return {
      next () {
        [ pre, cur ] = [ cur, pre + cur ]
        return { done: false, value: cur }
      }
    }
  }
}

for (let n of fibonacci) {
  if (n > 1000)
    break
  console.log(n)
}
```

Генераторы (ES6)



```
let fibonacci = {
  *[Symbol.iterator]() {
    let pre = 0, cur = 1
    for (;;) {
      [ pre, cur ] = [ cur, pre + cur ]
      yield cur
    }
  }
}

for (let n of fibonacci) {
  if (n > 1000)
    break
  console.log(n)
}
```


Генераторы (ES6) - продолжение



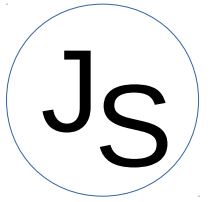
```
function* range (start, end, step) {  
  while (start < end) {  
    yield start  
    start += step  
  }  
}  
  
for (let i of range(0, 10, 2)) {  
  console.log(i) // 0, 2, 4, 6, 8  
}
```

Генераторы (ES6) - продолжение



```
class Clz {  
    * bar () {  
        ...  
    }  
}  
  
let Obj = {  
    * foo () {  
        ...  
    }  
}
```

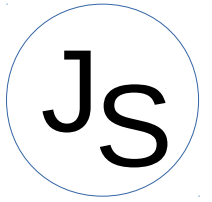
Юникод (ES6)



```
"ㄱ".length === 2
"ㄱ".match(/./u)[0].length === 2
"ㄱ" === "\uD842\uDFB7"
"ㄱ" === "\u{20BB7}"
"ㄱ".codePointAt(0) == 0x20BB7

for (let codepoint of "ㄱ" {
  console.log(codepoint);
}
```

Модули (ES6)

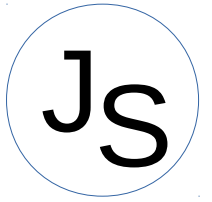


```
// lib/math.js
export function sum (x, y) { return x + y }
export var pi = 3.141593

// someApp.js
import * as math from "lib/math"
console.log("2π = " + math.sum(math.pi, math.pi))

// otherApp.js
import { sum, pi } from "lib/math"
console.log("2π = " + sum(pi, pi))
```

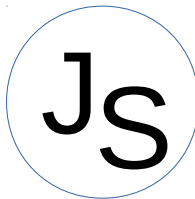
Модули (ES6)



```
// lib/mathplusplus.js
export * from "lib/math"
export var e = 2.71828182846
export default (x) => Math.exp(x)

// someApp.js
import exp, { pi, e } from "lib/mathplusplus"
console.log("e^{ $\pi$ } = " + exp(pi))
```

Map, Set, WeakMap, WeakSet (ES6)

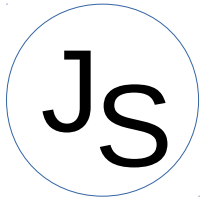


```
let s = new Set()
s.add("hello").add("goodbye").add("hello")
s.size === 2
s.has("hello") === true
for (let key of s.values()) console.log(key)
```

```
let m = new Map()
let s = Symbol()
m.set("hello", 42)
m.set(s, 34)
m.get(s) === 34
m.size === 2
for (let [ key, val ] of m.entries())
    console.log(key + " = " + val)
```

WeakMap, WeakSet – не хранят указатели

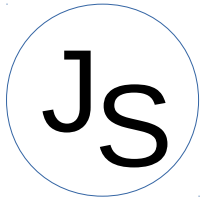
Proxy, Reflection (ES6)



```
let target = {foo: "Welcome, foo"}
let proxy = new Proxy(target, {
  get (receiver, name) {
    return name in receiver ?
      receiver[name] : `Hello, ${name}`;
  }
})
proxy.foo    === "Welcome, foo"
proxy.world  === "Hello, world"
```

```
let obj = { a: 1 }
Object.defineProperty(obj, "b", { value: 2 })
obj[Symbol("c")] = 3
Reflect.ownKeys(obj) // [ "a", "b", Symbol(c) ]
```

СИМВОЛЫ (ES6)



Тип данных для property id

```
Symbol("foo") !== Symbol("foo")
const foo = Symbol()
const bar = Symbol()
typeof foo === "symbol"
typeof bar === "symbol"
let obj = {}
obj[foo] = "foo"
obj[bar] = "bar"
JSON.stringify(obj) // {}
Object.keys(obj) // []
Object.getOwnPropertyNames(obj) // []
Object.getOwnPropertySymbols(obj) // [ foo, bar ]
```


Символы (ES6) - продолжение



Глобальные СИМВОЛЫ

```
Symbol.for("app.foo") === Symbol.for("app.foo")
const foo = Symbol.for("app.foo")
const bar = Symbol.for("app.bar")
Symbol.keyFor(foo) === "app.foo"
Symbol.keyFor(bar) === "app.bar"
typeof foo === "symbol"
typeof bar === "symbol"
let obj = {}
obj[foo] = "foo"
obj[bar] = "bar"
JSON.stringify(obj) // {}
Object.keys(obj) // []
Object.getOwnPropertyNames(obj) // []
Object.getOwnPropertySymbols(obj) // [ foo, bar ]
```

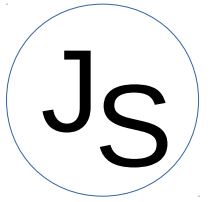
Array, Object (ES6)



```
var dst  = { quux: 0 }  
var src1 = { foo: 1, bar: 2 }  
var src2 = { foo: 3, baz: 4 }  
Object.assign(dst, src1, src2)  
dst.quux === 0  
dst.foo   === 3  
dst.bar   === 2  
dst.baz   === 4
```

```
[ 1, 3, 4, 2 ].find(x => x > 3) // 4  
[ 1, 3, 4, 2 ].findIndex(x => x > 3) // 2
```

String (ES6)



```
" ".repeat(4 * depth)
"foo".repeat(3)
```

```
"hello".startsWith("ello", 1) // true
"hello".endsWith("hell", 4)    // true
"hello".includes("ell")        // true
"hello".includes("ell", 1)     // true
"hello".includes("ell", 2)     // false
```

Number, Math (ES6)



```
Number.isNaN(42) === false
```

```
Number.isNaN(NaN) === true
```

```
Number.isFinite(-Infinity) === false
```

```
Number.isFinite(NaN) === false
```

```
Number.isFinite(123) === true
```

```
Number.isSafeInteger(42) === true
```

```
Number.isSafeInteger(9007199254740992) === false
```

```
console.log(0.1 + 0.2 === 0.3) // false
```

```
console.log(Math.abs((0.1 + 0.2) - 0.3) < Number.EPSILON) //  
true
```

```
console.log(Math.trunc(42.7)) // 42
```

```
console.log(Math.trunc(-0.1)) // -0
```

```
console.log(Math.sign(7)) // 1
```

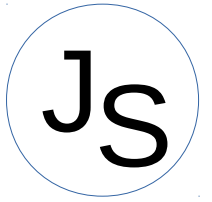
```
console.log(Math.sign(0)) // 0
```

```
console.log(Math.sign(-0)) // -0
```

```
console.log(Math.sign(-7)) // -1
```

```
console.log(Math.sign(NaN)) // NaN
```

RegExp lastIndex (ES6)



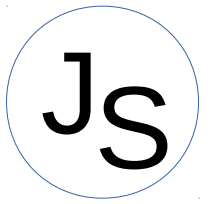
```
var re = /(hi)?/g;

console.log(re.exec('hi')); // ["hi","hi"]
console.log(re.lastIndex);  // 2

console.log(re.exec('hi')); // ["",undefined]
console.log(re.lastIndex);  // 2

re.lastIndex = 0;
console.log(re.exec('hi')); // ["hi","hi"]
```

Двоичные и восьмеричные литералы (ES6)



```
0b111110111 // 503
```

```
0o767 // 503
```

i18n (ES6)



```
var list = [ "ä", "a", "z" ]
var l10nDE = new Intl.Collator("de")
l10nDE.compare("ä", "z") === -1
console.log(list.sort(l10nDE.compare))
// [ "a", "ä", "z" ]
```

```
var l10nDE = new Intl.NumberFormat("de-DE")
l10nDE.format(1234567.89) === "1.234.567,89"
```

```
var l10nGBP = new Intl.NumberFormat(
  "en-GB", { style: "currency", currency: "GBP" });
l10nGBP.format(100200300.40) === "£100,200,300.40"
```

```
var l10nDE = new Intl.DateTimeFormat("de-DE")
l10nDE.format(new Date("2015-01-02")) === "2.1.2015"
```

НОВЫЕ ВОЗМОЖНОСТИ ES7



- **Array.prototype.includes()**

```
let countries = ['UK', 'USA', 'Egypt', 'France'];

countries.includes('UK', 1);           // => false
countries.includes('Ireland', 1);      // => true
countries.includes('USA', 6);          // => false
```

- **Возведение в степень (**)**

```
2**3           // 8
```


Новые возможности ES6 и ES7

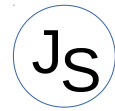


- Новые возможности ES6
- Новые возможности ES7

Новые возможности ES6

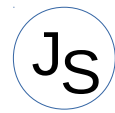


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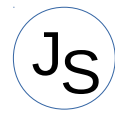
Классы (ES6)



Определение класса

```
class Shape {  
  constructor (id, x, y) {  
    this.id = id  
    this.move(x, y)  
  }  
  move (x, y) {  
    this.x = x  
    this.y = y  
  }  
}
```

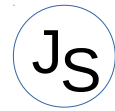
Классы (ES6)



Наследование

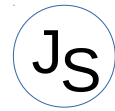
```
class Circle extends Shape {  
  constructor (id, x, y, radius) {  
    super(id, x, y)  
    this.radius = radius  
  }  
}
```

Классы (ES6) - продолжение



```
var aggregation = (baseClass, ...mixins) => {  
  let base = class _Combined extends baseClass {  
    ...  
  }  
  ...  
  return base  
}  
  
class Colored {...}  
class ZCoord {...}  
class Shape {...}  
  
class Rectangle extends  
  aggregation(Shape, Colored, ZCoord) {}  
  
var rect = new Rectangle(7, 42)  
rect.z      = 1000  
rect.color  = "red"  
console.log(rect.x, rect.y, rect.z, rect.color)
```

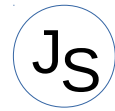
Классы (ES6) - продолжение



Доступ к базовому классу

```
class Shape {
  ...
  toString () {return `Shape(${this.id})`}
}
class Rectangle extends Shape {
  constructor (id, x, y, width, height) {
    super(id, x, y)
    ...
  }
  toString () {return "Rectangle > " + super.toString()}
}
class Circle extends Shape {
  constructor (id, x, y, radius) {
    super(id, x, y)
    ...
  }
  toString () {return "Circle > " + super.toString()}
}
```

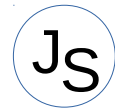
Классы (ES6) - продолжение



Статические члены класса

```
class Rectangle extends Shape {  
  ...  
  static defaultRectangle () {  
    return new Rectangle("default", 0, 0, 100, 100)  
  }  
}  
class Circle extends Shape {  
  ...  
  static defaultCircle () {  
    return new Circle("default", 0, 0, 100)  
  }  
}  
var defRectangle = Rectangle.defaultRectangle()  
var defCircle    = Circle.defaultCircle()
```

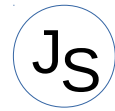

Классы (ES6) - продолжение



Геттеры и сеттеры

```
class Rectangle {  
  constructor (width, height) {  
    this._width  = width  
    this._height = height  
  }  
  set width  (width)  { this._width = width }  
  get width  ()       { return this._width }  
  set height (height) { this._height = height }  
  get height ()       { return this._height }  
  get area   ()       { return this._width*this._height }  
}  
  
var r = new Rectangle(50, 20)  
r.area === 1000
```

Литералы объектов (ES6)



```
obj = { x, y }      // { x: x, y: y }
```

```
let obj = {  
  foo: "bar",  
  [ "baz" + quux() ]: 42  
}
```

```
obj = {  
  foo (a, b) {...},  
  bar (x, y) {...},  
  *quux (x, y) {...}  
}
```

Строки-шаблоны (ES6)

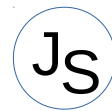


```
var message = `Hello ${customer.name},  
want to buy ${card.amount} ${card.product}  
for  
a total of ${card.amount * card.unitprice}  
bucks?`
```

```
get`http://example.com/foo?bar=${bar} +  
baz}&quux=${quux}`
```

```
String.raw `foo\n${ 42 }bar` // "foo\\n42bar"
```

Деструктурирование (ES6)

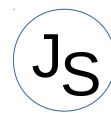


```
var list = [ 1, 2, 3 ]  
var [ a, , b ] = list  
[ b, a ] = [ a, b ]
```

```
var { op, lhs, rhs }=getSNode();  
var { op: a, lhs: { op: b }, rhs: c }=getNode();
```

```
var obj = { a: 1 }  
var list = [ 1 ]  
var { a, b = 2 } = obj  
var [ x, y = 2 ] = list
```

Деструктурирование (ES6)



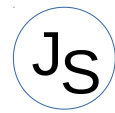
```
function f([ name, val ]) {...}  
f([ "bar", 42 ])
```

```
function g ({ name: n, val: v }) {...} // n,v  
g({ name: "foo", val: 7 })
```

```
function h ({ name, val }) {...}  
h({ name: "bar", val: 42 })
```

```
var list = [ 7, 42 ]  
var [ a = 1, b = 2, c = 3, d ] = list  
// a === 7  
// b === 42  
// c === 3  
// d === undefined
```

Параметры функций (ES6)



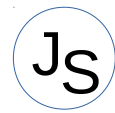
```
function f (x, y = 7, z = 42) {return x + y + z}  
f(1) // 50
```

```
function f (x, y, ...a) {  
    return (x + y) * a.length  
}  
f(1, 2, "hello", true, 7) // 9
```

```
var params = [ "hello", true, 7 ]  
var other = [ 1, 2, ...params ]  
    // [ 1, 2, "hello", true, 7 ]  
f(1, 2, ...params) // 9
```

```
var str = "foo"  
var chars = [ ...str ] // [ "f", "o", "o" ]
```

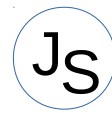
Итераторы, for..of (ES6)



```
let fibonacci = {
  [Symbol.iterator]() {
    let pre = 0, cur = 1
    return {
      next () {
        [ pre, cur ] = [ cur, pre + cur ]
        return { done: false, value: cur }
      }
    }
  }
}

for (let n of fibonacci) {
  if (n > 1000)
    break
  console.log(n)
}
```

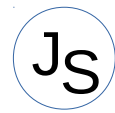
Генераторы (ES6)



```
let fibonacci = {
  *[Symbol.iterator]() {
    let pre = 0, cur = 1
    for (;;) {
      [ pre, cur ] = [ cur, pre + cur ]
      yield cur
    }
  }
}

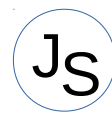
for (let n of fibonacci) {
  if (n > 1000)
    break
  console.log(n)
}
```


Генераторы (ES6) - продолжение



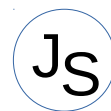
```
function* range (start, end, step) {  
  while (start < end) {  
    yield start  
    start += step  
  }  
}  
  
for (let i of range(0, 10, 2)) {  
  console.log(i) // 0, 2, 4, 6, 8  
}
```

Генераторы (ES6) - продолжение



```
class Clz {  
  * bar () {  
    ...  
  }  
}  
let Obj = {  
  * foo () {  
    ...  
  }  
}
```

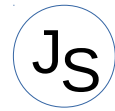
Юникод (ES6)



```
"吉".length === 2
"吉".match(/./u)[0].length === 2
"吉" === "\uD842\uDFB7"
"吉" === "\u{20BB7}"
"吉".codePointAt(0) === 0x20BB7

for (let codepoint of "吉" {
  console.log(codepoint);
}
```

Модули (ES6)

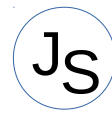


```
// lib/math.js
export function sum (x, y) { return x + y }
export var pi = 3.141593

// someApp.js
import * as math from "lib/math"
console.log("2π = " + math.sum(math.pi, math.pi))

// otherApp.js
import { sum, pi } from "lib/math"
console.log("2π = " + sum(pi, pi))
```

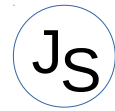
Модули (ES6)



```
// lib/mathplusplus.js
export * from "lib/math"
export var e = 2.71828182846
export default (x) => Math.exp(x)

// someApp.js
import exp, { pi, e } from "lib/mathplusplus"
console.log("e^{π} = " + exp(pi))
```

Map, Set, WeakMap, WeakSet (ES6)



```
let s = new Set()
s.add("hello").add("goodbye").add("hello")
s.size === 2
s.has("hello") === true
for (let key of s.values()) console.log(key)
```

```
let m = new Map()
let s = Symbol()
m.set("hello", 42)
m.set(s, 34)
m.get(s) === 34
m.size === 2
for (let [ key, val ] of m.entries())
    console.log(key + " = " + val)
```

WeakMap, WeakSet – не хранят указатели

Proxy, Reflection (ES6)



```
let target = {foo: "Welcome, foo"}
let proxy = new Proxy(target, {
  get (receiver, name) {
    return name in receiver ?
      receiver[name] : `Hello, ${name}`;
  }
})
proxy.foo    === "Welcome, foo"
proxy.world === "Hello, world"
```

```
let obj = { a: 1 }
Object.defineProperty(obj, "b", { value: 2 })
obj[Symbol("c")] = 3
Reflect.ownKeys(obj) // [ "a", "b", Symbol(c) ]
```

Тип данных для property id

```
Symbol("foo") !== Symbol("foo")
const foo = Symbol()
const bar = Symbol()
typeof foo === "symbol"
typeof bar === "symbol"
let obj = {}
obj[foo] = "foo"
obj[bar] = "bar"
JSON.stringify(obj) // {}
Object.keys(obj) // []
Object.getOwnPropertyNames(obj) // []
Object.getOwnPropertySymbols(obj) // [ foo, bar ]
```


Глобальные символы

```
Symbol.for("app.foo") === Symbol.for("app.foo")
const foo = Symbol.for("app.foo")
const bar = Symbol.for("app.bar")
Symbol.keyFor(foo) === "app.foo"
Symbol.keyFor(bar) === "app.bar"
typeof foo === "symbol"
typeof bar === "symbol"
let obj = {}
obj[foo] = "foo"
obj[bar] = "bar"
JSON.stringify(obj) // {}
Object.keys(obj) // []
Object.getOwnPropertyNames(obj) // []
Object.getOwnPropertySymbols(obj) // [ foo, bar ]
```

Array, Object (ES6)



```
var dst  = { quux: 0 }  
var src1 = { foo: 1, bar: 2 }  
var src2 = { foo: 3, baz: 4 }  
Object.assign(dst, src1, src2)  
dst.quux === 0  
dst.foo   === 3  
dst.bar   === 2  
dst.baz   === 4
```

```
[ 1, 3, 4, 2 ].find(x => x > 3) // 4  
[ 1, 3, 4, 2 ].findIndex(x => x > 3) // 2
```

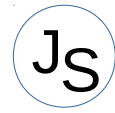
String (ES6)



```
" ".repeat(4 * depth)
"foo".repeat(3)
```

```
"hello".startsWith("ello", 1) // true
"hello".endsWith("hell", 4)   // true
"hello".includes("ell")       // true
"hello".includes("ell", 1)    // true
"hello".includes("ell", 2)    // false
```

Number, Math (ES6)



```
Number.isNaN(42) === false
Number.isNaN(NaN) === true

Number.isFinite(-Infinity) === false
Number.isFinite(NaN) === false
Number.isFinite(123) === true

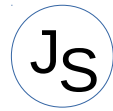
Number.isSafeInteger(42) === true
Number.isSafeInteger(9007199254740992) === false

console.log(0.1 + 0.2 === 0.3) // false
console.log(Math.abs((0.1 + 0.2) - 0.3) < Number.EPSILON) //
true

console.log(Math.trunc(42.7)) // 42
console.log(Math.trunc(-0.1)) // -0

console.log(Math.sign(7)) // 1
console.log(Math.sign(0)) // 0
console.log(Math.sign(-0)) // -0
console.log(Math.sign(-7)) // -1
console.log(Math.sign(NaN)) // NaN
```

RegExp lastIndex (ES6)



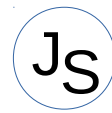
```
var re = /(hi)?/g;

console.log(re.exec('hi')); // ["hi","hi"]
console.log(re.lastIndex); // 2

console.log(re.exec('hi')); // ["",undefined]
console.log(re.lastIndex); // 2

re.lastIndex = 0;
console.log(re.exec('hi')); // ["hi","hi"]
```

Двоичные и восьмеричные литералы (ES6)



```
0b111110111 // 503
```

```
0o767 // 503
```

i18n (ES6)



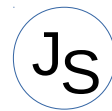
```
var list = [ "ä", "a", "z" ]
var l10nDE = new Intl.Collator("de")
l10nDE.compare("ä", "z") === -1
console.log(list.sort(l10nDE.compare))
// [ "a", "ä", "z" ]
```

```
var l10nDE = new Intl.NumberFormat("de-DE")
l10nDE.format(1234567.89) === "1.234.567,89"
```

```
var l10nGBP = new Intl.NumberFormat(
  "en-GB", { style: "currency", currency: "GBP" });
l10nGBP.format(100200300.40) === "£100,200,300.40"
```

```
var l10nDE = new Intl.DateTimeFormat("de-DE")
l10nDE.format(new Date("2015-01-02")) === "2.1.2015"
```

НОВЫЕ ВОЗМОЖНОСТИ ES7



- `Array.prototype.includes()`

```
let countries = ['UK', 'USA', 'Egypt', 'France'];  
  
countries.includes('UK', 1);      // => false  
countries.includes('Ireland', 1); // => true  
countries.includes('USA', 6);     // => false
```

- Возведение в степень (**)

```
2**3      // 8
```