

Object.defineProperty()

概述

`Object.defineProperty()` 方法在一个对象上添加或修改一个或者多个自有属性，并返回该对象。

语法

`Object.defineProperty(obj, props)`

参数

obj

将要被添加属性或修改属性的对象

props

该对象的一个或多个键值对定义了将要为对象添加或修改的属性的具体配置

例子

```
1  var obj = {};  
2  Object.defineProperty(obj, {  
3    "property1": {  
4      value: true,  
5      writable: true  
6    },  
7    "property2": {  
8      value: "Hello",  
9      writable: false  
10   },  
11   // 等等.  
12 });  
13 alert(obj.property2) //弹出"Hello"
```

兼容旧环境（Polyfill）

下面用 JavaScript 实现的 `defineProperties` 函数几乎完全等价于原生的 `Object.defineProperty`。

```
1 function defineProperties(obj, properties)
2 {
3   function convertToDescriptor(desc){
4     function hasProperty(obj, prop){
5       return Object.prototype.hasOwnProperty.call(obj, prop);
6     }
7
8     function isCallable(v){
9       // 如果除函数以外,还有其他类型的值也可以被调用,则可以修改下面的语句
10      return typeof v === "function";
11    }
12
13    if (typeof desc !== "object" || desc === null)
14      throw new TypeError("不是正规的对象");
15
16    var d = {};
17    if (hasProperty(desc, "enumerable"))
18      d.enumerable = !!desc.enumerable;
19    if (hasProperty(desc, "configurable"))
20      d.configurable = !!desc.configurable;
21    if (hasProperty(desc, "value"))
22      d.value = desc.value;
23    if (hasProperty(desc, "writable"))
24      d.writable = !!desc.writable;
25    if (hasProperty(desc, "get")){
26      var g = desc.get;
27      if (!isCallable(g) && g !== "undefined")
28        throw new TypeError("bad get");
29      d.get = g;
30    }
31    if (hasProperty(desc, "set")){
32      var s = desc.set;
33      if (!isCallable(s) && s !== "undefined")
34        throw new TypeError("bad set");
35      d.set = s;
36    }
37
38    if (("get" in d || "set" in d) && ("value" in d || "writable" in d))
39      throw new TypeError("identity-confused descriptor");
40
41    return d;
42  }
43
44  if (typeof obj !== "object" || obj === null)
45    throw new TypeError("不是正规的对象");
```

```
46 properties = Object(properties);
47 var keys = Object.keys(properties);
48 var desc = {};
49 for (var i = 0; i < keys.length; i++)
50     desc.push([keys[i], convertToDescriptor(properties[keys[i]])]);
51 for (var i = 0; i < desc.length; i++)
52     Object.defineProperty(obj, desc[i][0], desc[i][1]);
53
54 return obj;
55 }
56
```

规范

Specification	Status	Comment
ECMAScript 5.1 (ECMA-262) Object.defineProperty	<div><div></div>ST Standard</div>	Initial definition. Implemented in JavaScript 1.8.5
ECMAScript 2015 (6th Edition, ECMA-262) Object.defineProperty	<div><div></div>ST Standard</div>	

浏览器兼容性

基于[Kangax's compat tables](#).

	Desktop	Mobile			
Feature	Firefox (Gecko)	Chrome	Internet Explorer	Opera	Safari
Basic support	4.0 (2)	5 (previous versions untested)	9	11.60	5

相关链接

- [Object.defineProperty\(\)](#)
- [Object.keys\(\)](#)
- [Enumerability and ownership of properties](#)