

JavaScript Basics

Objects

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Imagine an object as a cabinet with signed files. Every piece of data is stored in its file by the key.

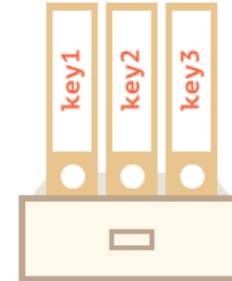
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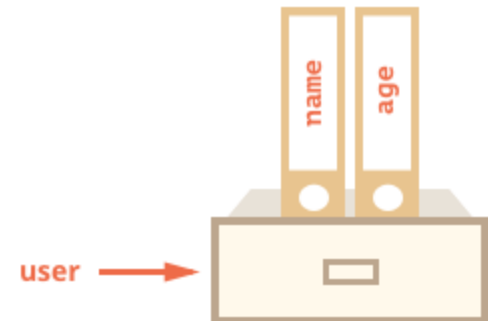
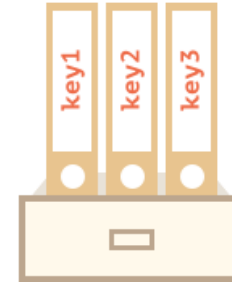

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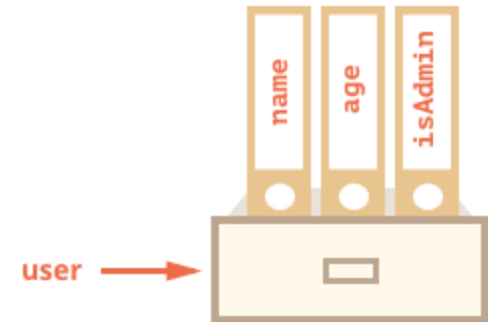
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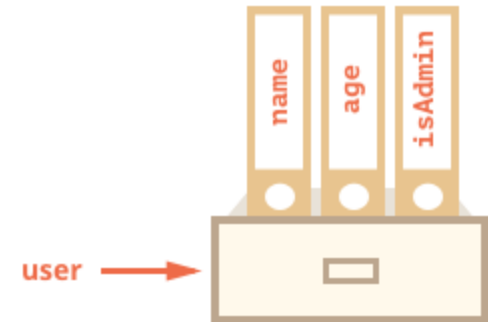
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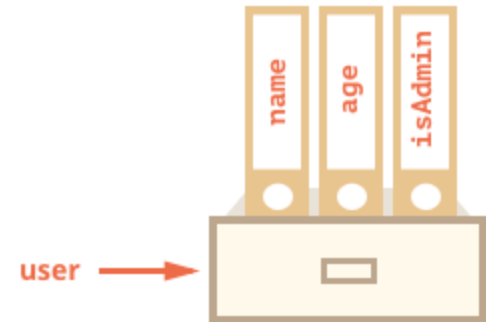
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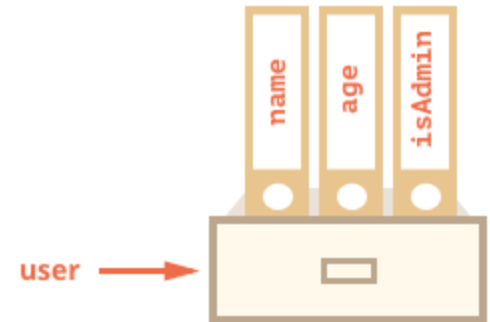
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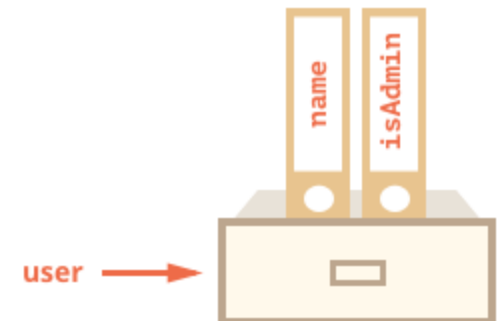
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(user.name === undefined)  
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for..in loop

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for..in loop

To iterate over all keys of an object, there exists a special form of the loop: for..in

Existence check

To check existence of some property, you can use `in` operator :

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("name" in user) //true
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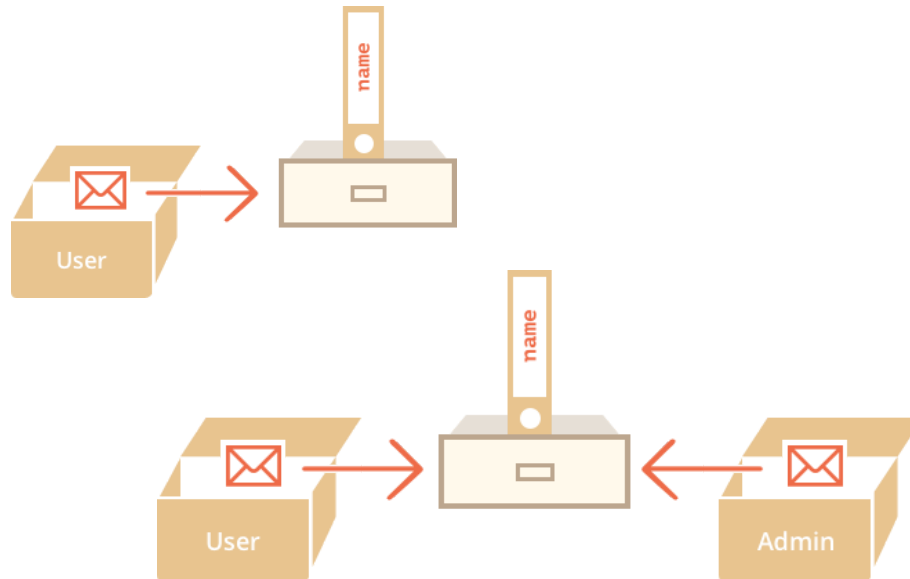
You can also check for `undefined` to check existence but it fails when value stored is `undefined`

```
(user.name === undefined)  
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for..in loop

To iterate over all keys of an object, there exists a special form of the loop: `for..in`

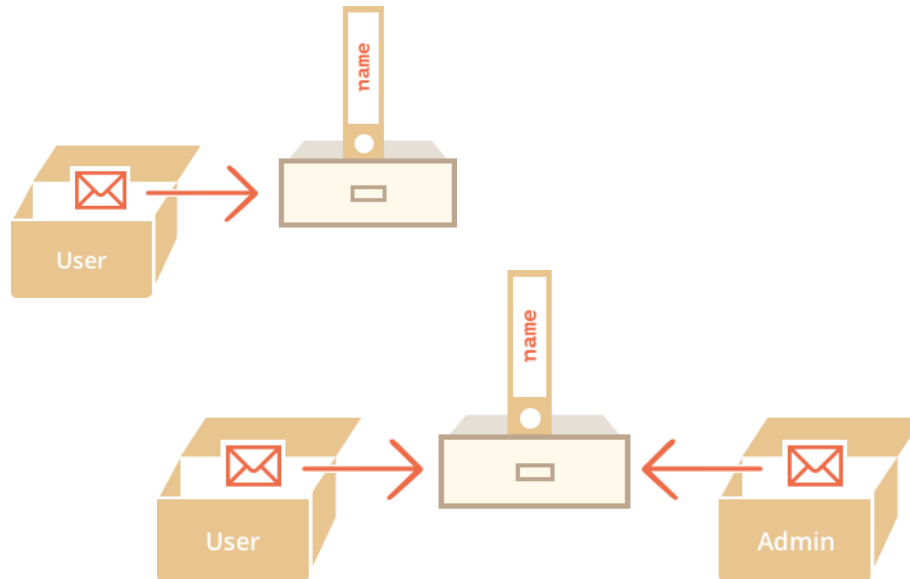
```
let user = {  
  name: "John",  
  age: 30,  
  isAdmin: true  
};  
  
for(let key in user) {  
  alert( key );  
  alert( user[key] );  
}
```



```
let a = {};  
let b = a; // copy the reference  
  
alert( a == b ); // true, both variables point to the same object  
alert( a === b ); // true
```

```
let a = {}  
let b = {}; // two independent objects  
  
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Copying by reference



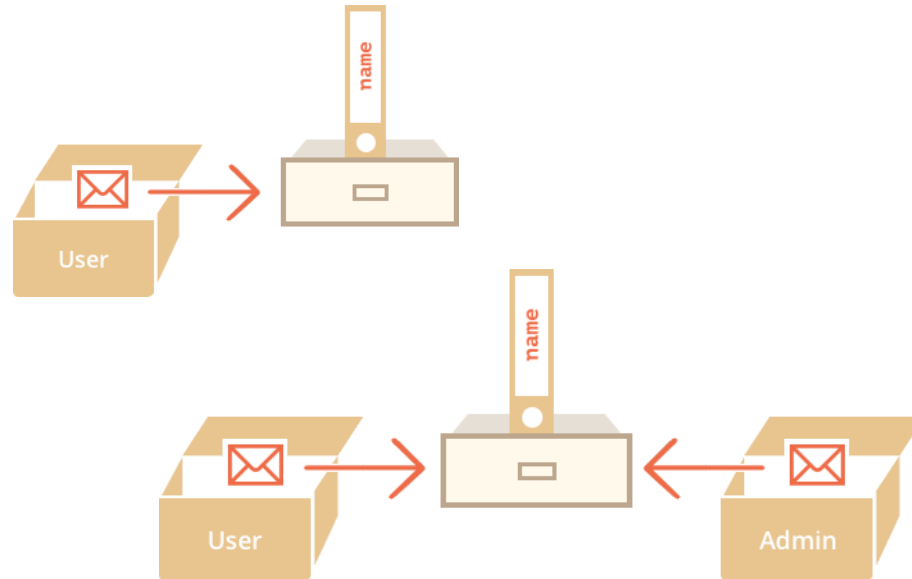
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Objects are copied and stored by reference unlike primitive types are copied by value



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Two objects are equal only if they are the same object.

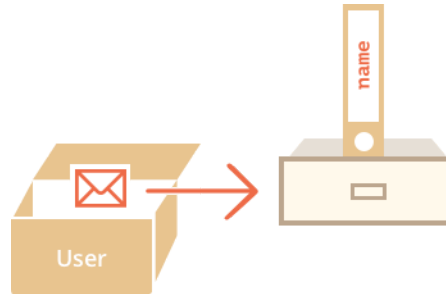
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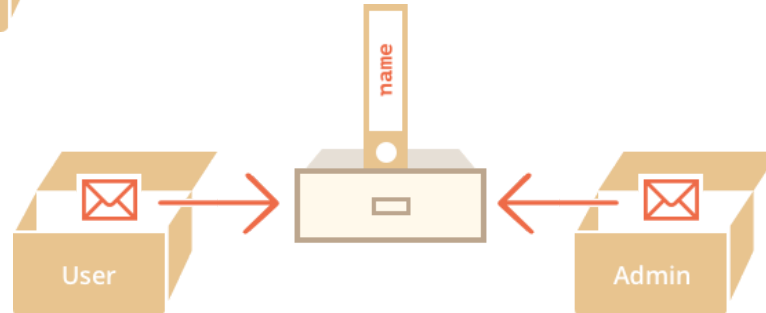

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let user = {  
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```



```
let admin = user;
```



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Const object

An object declared const can be changed.

```
const user = {  
  name: "John"  
};  
  
user.age = 25; //OK  
  
//but you can't do this  
  
user={  
  name: "Varma"  
} //Throws const assignment error
```

Cloning and merging

How to make duplicate copy of object instead of just reference?

We can use method `Object.assign` to clone an object or merge properties of other object in to object

```
//Syntax
// Object.assign(dest[, src1, src2, src3...])

let user = { name: "John" };

let permissions1 = { canView: true };
let permissions2 = { canEdit: true };

// copies all properties from permissions1 and permissions2 into
Object.assign(user, permissions1, permissions2);

// now user = { name: "John", canView: true, canEdit: true }
```

Using Array functions on Objects

Can we use array methods like map on objects? Not directly.

For plain objects, the following methods are available

```
let user = {  
  name: "John",  
  age: 30  
};  
  
//Object.keys(user) = [name, age]  
  
//Object.values(user) = ["John", 30]  
  
//Object.entries(user) = [ ["name", "John"], ["age", 30] ]
```

Nested Objects