JavaScript Object Prototypes

All JavaScript objects inherit properties and methods from a prototype.

In the previous chapter we learned how to use an **object constructor**:

Example

```
function Person(first, last, age, eyecolor) {
  this.firstName = first;
  this.lastName = last;
  this.age = age;
  this.eyeColor = eyecolor;
}

var myFather = new Person("John", "Doe", 50, "blue");
var myMother = new Person("Sally", "Rally", 48, "green");
```

Try it Yourself »

We also learned that you can **not** add a new property to an existing object constructor:

Example

```
Person.nationality = "English";
```

Try it Yourself »

To add a new property to a constructor, you must add it to the constructor function:

Example

```
function Person(first, last, age, eyecolor) {
  this.firstName = first;
  this.lastName = last;
  this.age = age;
  this.eyeColor = eyecolor;
  this.nationality = "English";
}
```

Try it Yourself »

Prototype Inheritance

All JavaScript objects inherit properties and methods from a prototype:

- `Date` objects inherit from `Date.prototype`
- `Array` objects inherit from `Array.prototype`
- `Person` objects inherit from `Person.prototype`

The `Object.prototype` is on the top of the prototype inheritance chain:

`Date` objects, `Array` objects, and `Person` objects inherit from `Object.prototype`.

Adding Properties and Methods to Objects

Sometimes you want to add new properties (or methods) to all existing objects of a given type.

Sometimes you want to add new properties (or methods) to an object constructor.

Using the **prototype** Property

The JavaScript `prototype` property allows you to add new properties to object constructors:

Example

```javascript
function Person(first, last, age, eyecolor) {
  this.firstName = first;
  this.lastName = last;
  this.age = age;
  this.eyeColor = eyecolor;
}

Person.prototype.nationality = "English";
```

Try it Yourself »

The JavaScript `prototype` property also allows you to add new methods to objects constructors:

Example

```javascript
function Person(first, last, age, eyecolor) {
  this.firstName = first;
  this.lastName = last;
  this.age = age;
  this.eyeColor = eyecolor;
}

Person.prototype.name = function() {
  return this.firstName + " " + this.lastName;
};
```

Try it Yourself »

Only modify your **own** prototypes. Never modify the prototypes of standard JavaScript objects.

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