

# JavaScript Object Prototypes

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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");
```

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

## Example

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

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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";  
}
```

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## 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

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

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

## Example

```
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;  
};
```

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

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