

# Chapter 16: Constructor functions

## Section 16.1: Declaring a constructor function

Constructor functions are functions designed to construct a new object. Within a constructor function, the keyword **this** refers to a newly created object which values can be assigned to. Constructor functions "return" this new object automatically.

```
function Cat(name) {  
  this.name = name;  
  this.sound = "Meow";  
}
```

Constructor functions are invoked using the **new** keyword:

```
let cat = new Cat("Tom");  
cat.sound; // Returns "Meow"
```

Constructor functions also have a **prototype** property which points to an object whose properties are automatically inherited by all objects created with that constructor:

```
Cat.prototype.speak = function() {  
  console.log(this.sound);  
}  
  
cat.speak(); // Outputs "Meow" to the console
```

Objects created by constructor functions also have a special property on their prototype called **constructor**, which points to the function used to create them:

```
cat.constructor // Returns the `Cat` function
```

Objects created by constructor functions are also considered to be "instances" of the constructor function by the **instanceof** operator:

```
cat instanceof Cat // Returns "true"
```