JAVASCRIPT TOPIC 8

InfoTech 37
Jomar B. Colao
College Instructor

Intro

Objects are just data, with added properties and methods.

Object Properties and Methods

❑ Properties are values associated with objects.
❑ Methods are actions objects can perform.

A Real Life Example. A Car Object.

In real life, a car is an object. It has properties like weight and color, and methods like start and stop:

Object   Properties   Methods

car.name = Fiat

car.model = 500

car.weight = 850kg

car.color = white

A Real Life Example. A Car Object.
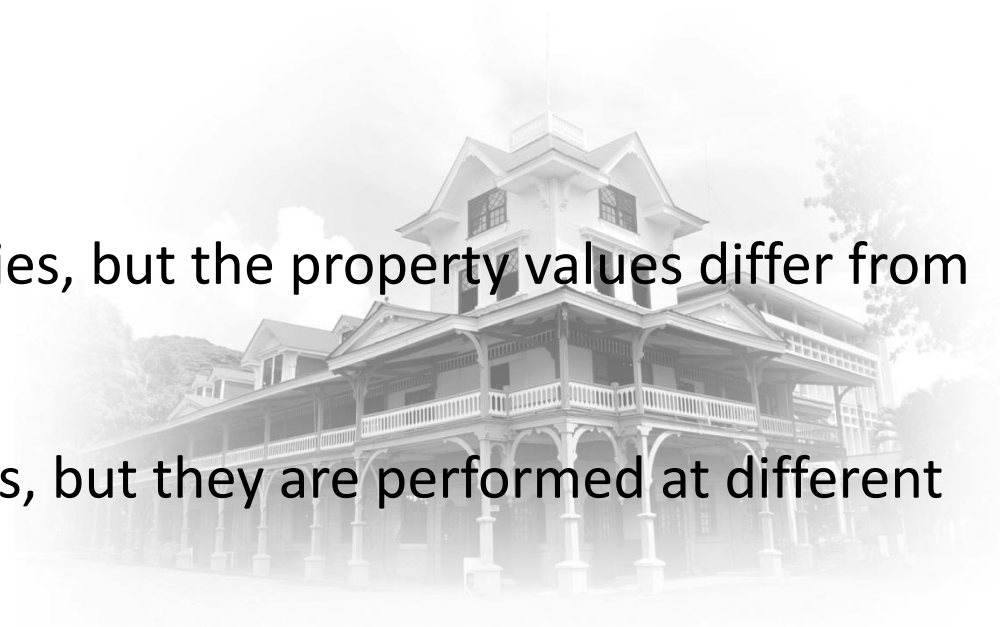
car.start()

car.drive()

car.brake()

car.stop()

All cars have the same properties, but the property values differ from car to car.

All cars have the same methods, but they are performed at different times.

JavaScript Objects

In JavaScript, objects are data (variables), with properties and methods.

Almost "everything" in JavaScript are treated as objects. Dates, Arrays, Strings, Functions....

In JavaScript you can also create your own objects.

This example creates an object called "person", and adds four properties to it:

Example

```
var person = {firstName:"John", lastName:"Doe", age:50,
eyeColor:"blue"};
```

Demo 1

```
<!DOCTYPE html>
<html>
  <body>
  <p id="demo"></p>

  <script>
    var person = {firstName:"John", lastName:"Doe", age:50, eyeColor:"blue"};

    document.getElementById("demo").innerHTML =
    person.firstName + " is " + person.age + " years old.";
  </script>

  </body>
</html>
```

Spaces and Line Breaks

Spaces and line breaks are not important. An object declaration can span multiple lines:

Example

```
var person = {
    firstName:"John",
    lastName:"Doe",
    age:50,
    eyeColor:"blue"
};
```

Demo 2

```html
<!DOCTYPE html>
<html>
  <body>
  <p id="demo"></p>

  <script>
    var person = {
        firstName : "John",
        lastName  : "Doe",
        age       : 50,
        eyeColor  : "blue"
    };

    document.getElementById("demo").innerHTML =
    person.firstName + " is " + person.age + " years old.";
  </script>

  </body>
</html>
```

More On Objects

❏ There are many different ways to create new JavaScript objects.

❏ You can also add new properties and methods to already existing objects.

Accessing Object Properties

You can access the object properties in two ways:

Example

```
person.lastName;
person["lastName"];
```

Demo 3

```html
<!DOCTYPE html>
<html>
  <body>

  <p id="demo"></p>

  <script>
    var person = {
      firstName: "John",
      lastName : "Doe",
      id       : 5566
    };

    document.getElementById("demo").innerHTML = person.firstName + " " + person["lastName"];
  </script>

  </body>
</html>
```

Accessing Object Methods

You can call an object method with the following syntax:

objectName.methodName()

This example uses the fullName() method of a person object, to get the full name:

Example

name = person.fullName();

Demo 4

```html
<!DOCTYPE html>
<html>
  <body>

  <p>Creating and using an object method:</p>

  <p id="demo"></p>

  <script>
    var person = {
      firstName: "John",
      lastName : "Doe",
      id       : 5566,
      fullName : function (){return this.firstName + " " + this.lastName}
    };

    document.getElementById("demo").innerHTML = person.fullName();
  </script>
  </body>
</html>
```

More On Objects

Object methods are ordinary JavaScript functions defined as object properties.

You will learn much more about functions later in this tutorial.

Note

Objects written as name value pairs (lastName: "Doe") is similar to:

Associative arrays in PHP.

Hash tables, hash maps or hashes in C, C++, C#, Java, Perl, and Ruby.

Dictionaries in Python.