

# Javascript Basics

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WEEK 8

## JAVASCRIPT

JavaScript ("JS" for short) is a full-fledged dynamic programming language that, when applied to an HTML document, can provide dynamic interactivity on websites. It was invented by Brendan Eich, co-founder of the Mozilla project, the Mozilla Foundation, and the Mozilla Corporation.

[\*\*JS Basics from Mozilla >>\*\*](#)

[\*\*W3Schools Reference>>\*\*](#)

## JS INTEGRATION

### right inside HTML

could be inside <head> or <body>  
usually place where you want the script to run

```
<script>
  my JS script goes here
</script>
```

### external .js documents

can reuse the scripts in other html documents,  
so much more flexible/modular

```
<script src="myScript.js"></script>
```

[W3Schools Reference >>](#)

## JavaScript is Case Sensitive

**thisItem** is different than **thisitem**

## Value can be expressed as

**Numbers:** **10** or **10.50**

or

**Strings:** **'My name is John'** or **'tree'**

[\*\*W3Schools Reference >>\*\*](#)

## JS SYNTAX

**Variables => storing information.  
Then you can use it in your scripts**

```
var x; //Statement 1  
  
x = 6; //Statement 2
```

```
var x, y; //Statement 1  
  
x = 5; //Statement 2  
  
y = 6; //Statement 3
```

## JS SYNTAX

### Operators

arithmetic operators ( + - \* / ) to compute values

### Expressions

a combination of values, variables, and operators, which computes to a value

```
(5 + 6) * 10 //This is an expression
```

```
"John" + " " + "Doe" //This is an expression too
```

# Operators

Operator	Description
+	Addition
-	Subtraction
*	Multiplication
**	Exponentiation ( <a href="#">ES2016</a> )
/	Division
%	Modulus (Remainder)
++	Increment
--	Decrement

## DATA TYPES

### Number

integers      10  
or decimals    10.5

### String

"John"

### Boolean

true or false

### Object

car = {type:"Fiat",  
model:"500", color:"white"}

```
var length = 16;
```

// Number

```
var lastName = "Johnson";
```

// String

```
var inStock = true;
```

// Boolean

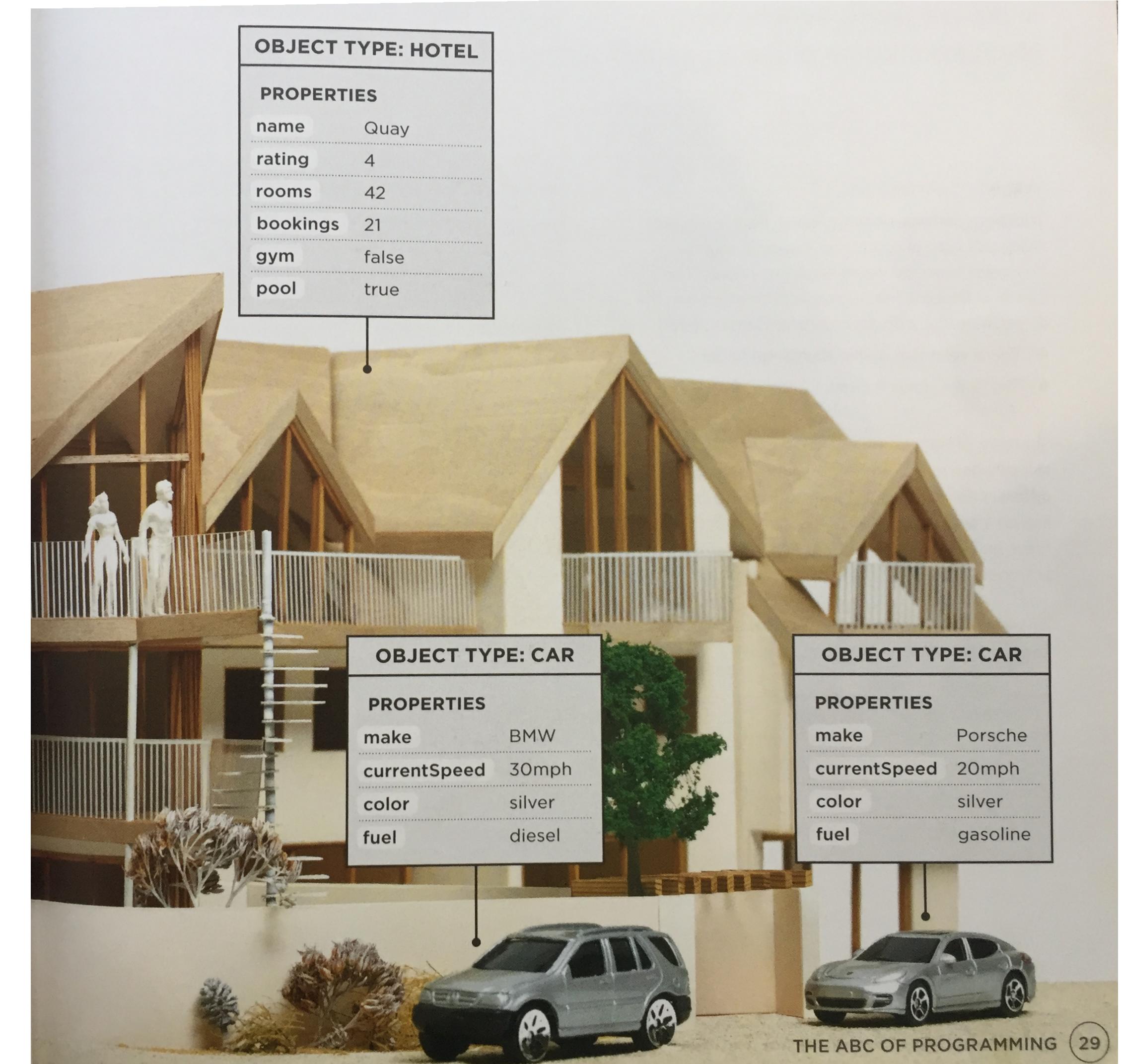
```
var x = {firstName:"John", lastName:"Doe"};
```

// Object

## OBJECTS AND PROPERTIES

**OBJECTS = THINGS**  
have their own properties

**PROPERTIES = CHARACTERISTICS**  
Each property has a name and a value

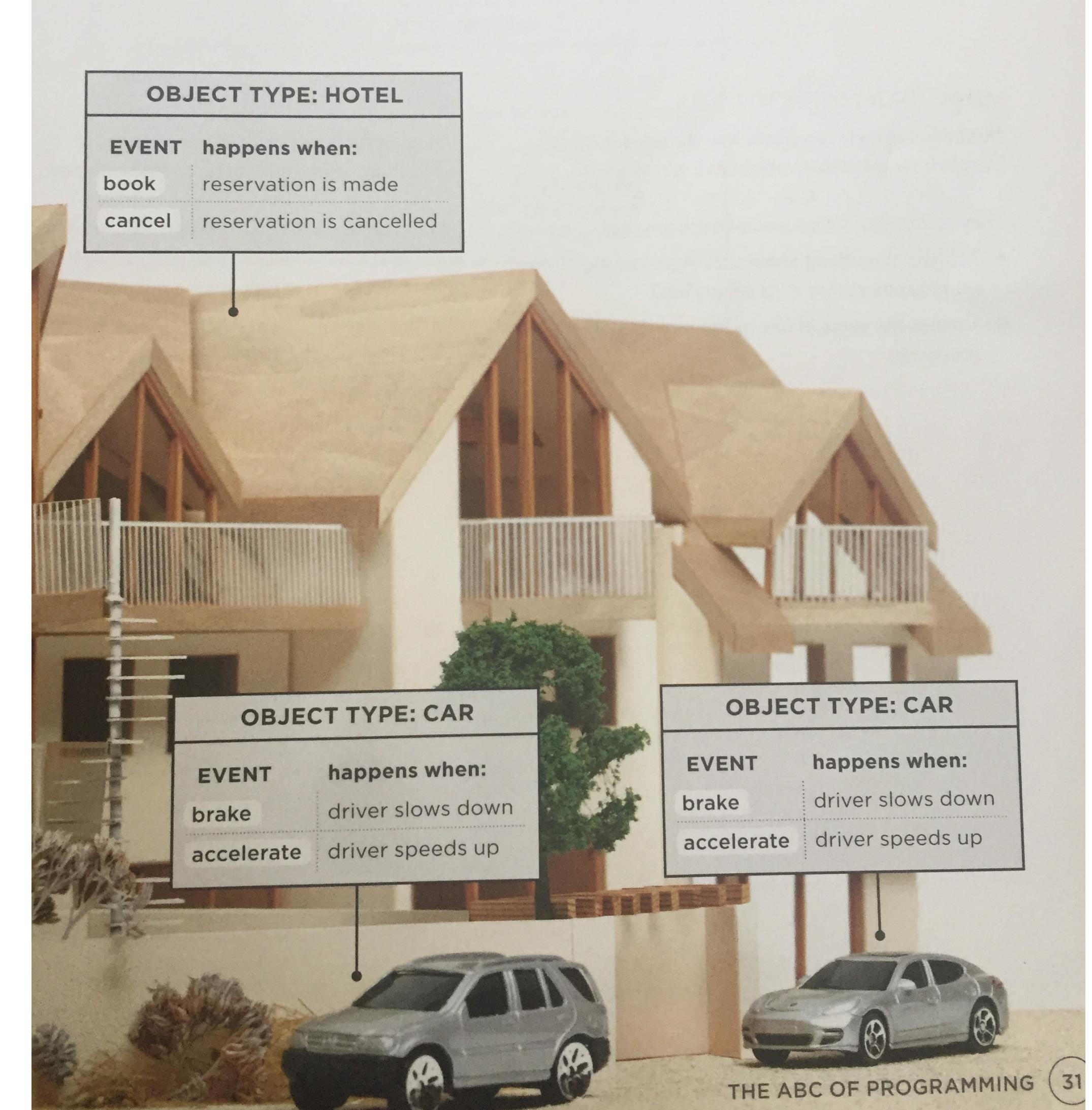


## EVENTS

# EVENTS = SOMETHING HAPPENS

To the browser, or a user does it

- An HTML web page has finished loading
- An HTML input field was changed
- An HTML button was clicked

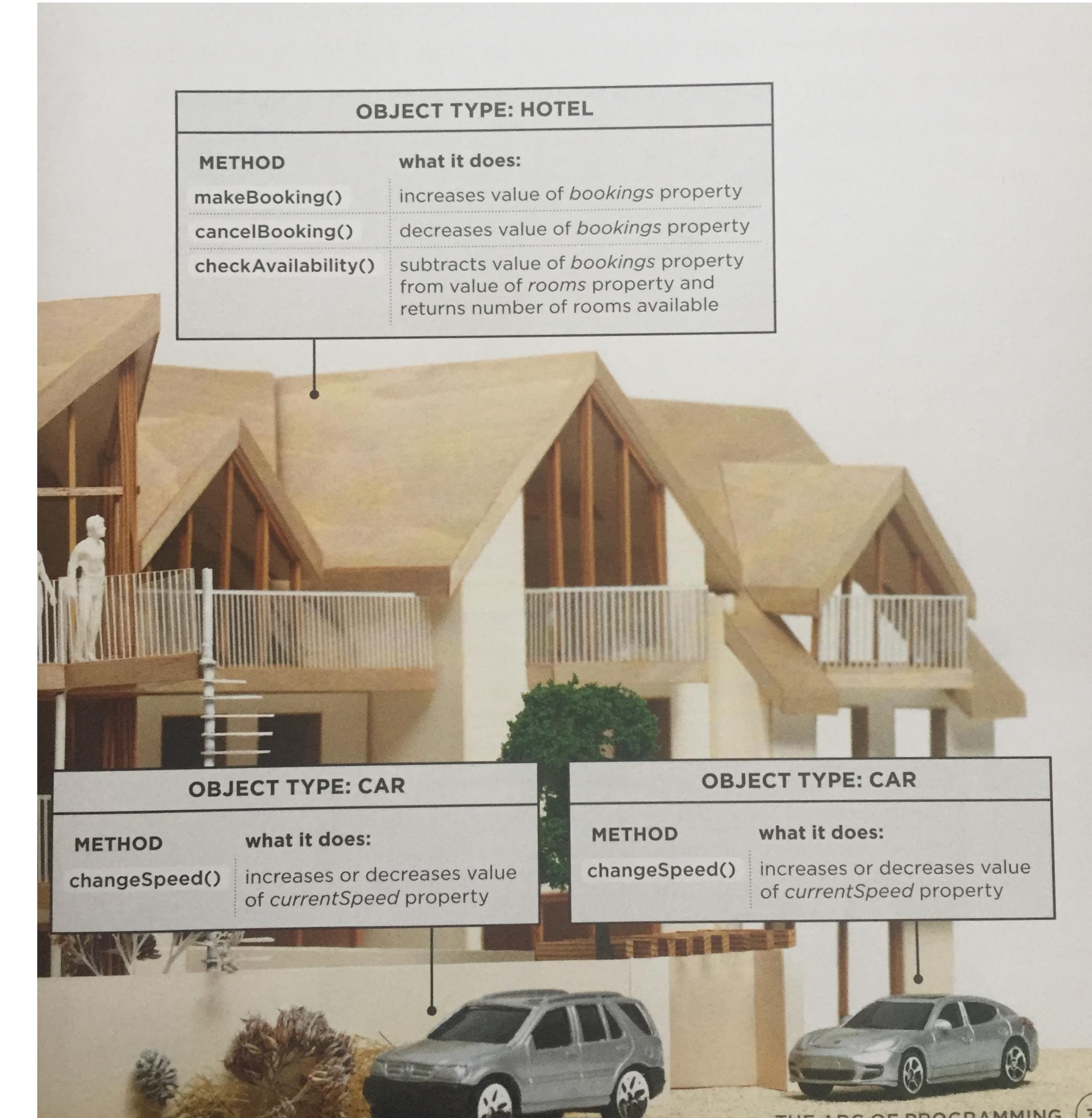


## METHODS

**METHOD = SOMETHING DONE TO OBJECT**

Pre-set things for a type of object

- String methods: **indexOf()**, and **lastIndexOf()**
- Number methods: **toString()**



## FUNCTIONS

### FUNCTION

a block of code designed to perform a particular task

this is a function

take two values and multiply

executes the function and

```
function myFunction(p1, p2) {  
    return p1 * p2;  
}  
  
document.getElementById("demo").innerHTML =  
myFunction(4, 3);
```

## FUNCTIONS

### FUNCTION

a block of code designed to perform a particular task

states the variable



```
var msg = "Sign up for newsletter";
```

this is the function itself



```
function updateMessage() {
```

```
    var el = document.getElementById('message');
```

```
    el.textContent = msg;
```

```
}
```

executes the function



```
updateMessage();
```