

# Background

HTML and CSS are the languages for describing the content and visual appearance of web pages. They let you make very beautiful and useful web sites. But if you want to make an interactive web application, like a game or an interactive data display, you need **JavaScript**.

Every web browser knows how to run JavaScript code. With JavaScript, you can

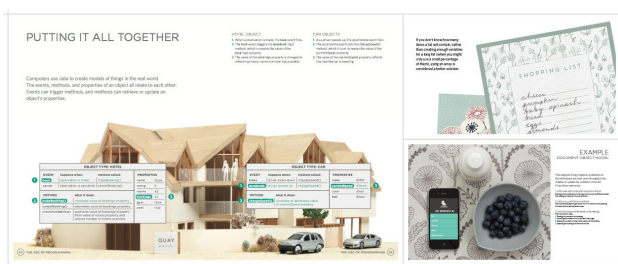
- make parts of web pages appear, disappear, and move around
- respond to mouse clicks, finger taps, drag and drop, and keyboard entry
- calculate complex mathematical formulas
- repeat operations in loops that can run a hundreds or thousands of times

Basically, with JavaScript on a web page, you can do anything you can do in any other programming language, with one exception. JavaScript in a web page is not allow to read or write files on your computer. It is prevented from doing that so that hackers can't write web pages that steal information from you or damage your computer files.

## About the Book

There are great online web sites for learning JavaScript. We link to many of them across the course. However, we also highly recommend getting a good book as well. Why? Because there's a lot more to learning to program than just learning the syntax of a programming language like JavaScript. You also need to learn many fundamental but abstract concepts, such as variables, functions, conditional, loops, and data objects. Sometimes the best way to learn such things is to get away from the computer and just read for a while.

We recommend Jon Duckett's *JavaScript and jQuery*. It is a very visual introduction to many core concepts in programming. For example, here's a page introducing the notion of data objects:



Duckett's book only assumes you know HTML and CSS. Even so, the book still manages to cover many advanced topics.