Phil Ballard

Sixth Edition
New coverage of
ECMAScript 6

Sams Teach Yourself

# JavaScript



#### Phil Ballard

# Sams Teach Yourself

# **JavaScript**®

Sixth Edition



## JavaScript in 24 Hours, Sams Teach Yourself

#### **Table of Contents**

#### **Table of Contents**

Introduction

Part I: First Steps with JavaScript

HOUR 1: Introducing JavaScript

Web Scripting Fundamentals

Server- Versus Client-Side Programming

JavaScript in a Nutshell

Where JavaScript Came From

The <script> Tag

Introducing the DOM

Talking to the User

Summary

Q&A

Workshop

**Exercises** 

#### HOUR 2: Writing Simple Scripts 21

Including JavaScript in Your Web Page

JavaScript Statements

Variables

Operators

Capturing Mouse Events

Summary

Q&A

Workshop

**Exercises** 



#### **HOUR 3: Using Functions**

General Syntax

Calling Functions

Passing Arguments to Functions

Returning Values from Functions

Scope of Variables

Summary

Q&A

Workshop

**Exercises** 

#### HOUR 4: DOM Objects and Built-in Objects

Interacting with the User

Selecting Elements by Their ID

Accessing Browser History

Using the location Object

Browser InformationThe navigator Object

**Dates and Times** 

Simplifying Calculation with the Math Object

Summary

Q&A

Workshop

**Exercises** 

#### Part II: Cooking with Code

#### **HOUR 5: Numbers and Strings**

Numbers

Strings

**Boolean Values** 

Summary

Q&A

Workshop

Exercises



### **HOUR 6: Arrays** Arrays Summary Q&A Workshop Exercise **HOUR 7: Program Control** Conditional Statements Loops and Control Structures Setting and Using Timers Summary Q&A Workshop Exercises Part III: Objects **HOUR 8: Object-Oriented Programming** What Is Object-Oriented Programming? **Object Creation** Extending and Inheriting Objects Using prototype Encapsulation Using Feature Detection Summary Q&A Workshop **Exercises** HOUR 9: Scripting with the DOM **DOM Nodes** Selecting Elements with getElementsByTagName() Reading an Elements Attributes



Mozillas DOM Inspector

Summary

Q&A

Workshop

**Exercises** 

HOUR 10: Meet JSON

What Is JSON?

Accessing JSON Data

Data Serialization with JSON

JSON Data Types

Simulating Associative Arrays

Creating Objects with JSON

JSON Security

Summary

Q&A

Workshop

Exercises

Part IV: HTML and CSS

HOUR 11: JavaScript and HTML5

New Markup for HTML5

Some Important New Elements

Drag and Drop

Local Storage

Working with Local Files

Summary

Q&A

Workshop

**Exercises** 

HOUR 12: JavaScript and CSS

A Ten-Minute CSS Primer

The DOM style Property

Accessing Classes Using className

The DOM styleSheets Object



Summary Q&A Workshop

Exercises

#### **HOUR 13: Introducing CSS3**

Vendor-Specific Properties and Prefixes

**CSS3 Borders** 

**CSS3 Backgrounds** 

**CSS3 Gradients** 

**CSS3 Text Effects** 

CSS3 Transitions, Transformations, and Animations

Referencing CSS3 Properties in JavaScript

Setting CSS3 Properties with Vendor Prefixes

Summary

Q&A

Workshop

**Exercises** 

#### Part V: Using JavaScript Libraries

#### **HOUR 14: Using Libraries**

Why Use a Library?

What Sorts of Things Can Libraries Do?

Some Popular Libraries

Introducing prototype.js.

Summary

Q&A

Workshop

**Exercises** 

#### HOUR 15: A Closer Look at jQuery

Including jQuery in Your Pages

¡Querys \$(document).ready Handler

Selecting Page Elements



Working with HTML Content

Showing and Hiding Elements

**Animating Elements** 

**Command Chaining** 

Handling Events

Summary

Q&A

Workshop

Exercises

#### HOUR 16: The jQuery UI User Interface Library

What jQuery UI Is All About

How to Include jQuery UI in Your Pages

Interactions

Using Widgets

Summary

Q&A

Workshop

**Exercises** 

#### HOUR 17: Ajax with jQuery

The Anatomy of Ajax

Using jQuery to Implement Ajax

Summary

Q&A

Workshop

**Exercises** 

#### Part VI: Advanced Topics

#### **HOUR 18: Reading and Writing Cookies**

What Are Cookies?

The document.cookie Property

Cookie Ingredients

Writing a Cookie



A Function to Write a Cookie Reading a Cookie **Deleting Cookies** Setting Multiple Values in a Single Cookie Summary Q&A Workshop **Exercises** HOUR 19: Coming Soon to JavaScript Classes Arrow Functions Modules Using let and const **Template Strings** Access Arrays with for-of Transpilation Summary Q&A

Workshop

**Exercises** 

#### HOUR 20: Using Frameworks

Software Frameworks

Model-View-Controller (MVC) Architecture

Using an MVC Framework for Web Apps

The AngularJS Framework

Building an AngularJS Application

Summary

Q&A

Workshop

**Exercises** 

HOUR 21: JavaScript Beyond the Web Page



JavaScript Outside the Browser

Writing Google Chrome Extensions

Going Further

Summary

Q&A

Workshop

**Exercises** 

#### Part VII: Learning the Trade

#### **HOUR 22: Good Coding Practice**

Dont Overuse JavaScript

Writing Readable and Maintainable Code

Graceful Degradation

Progressive Enhancement

Unobtrusive JavaScript

Feature Detection

Handling Errors Well

Summary

Q&A

Workshop

**Exercises** 

#### **HOUR 23: Debugging Your Code**

An Introduction to Debugging

More Advanced Debugging

Summary

Q&A

Workshop

Exercises

#### HOUR 24: JavaScript Unit Testing

What Is Unit Testing?

Writing JavaScript for Unit Testing

The QUnit Test Suite



Summary

Q&A

Workshop

Exercises

Part VIII: Appendices

APPENDIX A: Tools for JavaScript Development

**Editors** 

**Validators** 

Debugging and Verifying Tools

APPENDIX B: JavaScript Quick Reference

Index