

Table of Contents

1. JavaScript Basics.....	1
The Name "JavaScript".....	1
What is ECMAScript?.....	1
The HTML DOM.....	2
JavaScript Syntax.....	2
Basic Rules.....	2
Accessing Elements.....	3
Dot Notation.....	3
Square Bracket Notation.....	3
Where Is JavaScript Code Written?.....	4
JavaScript Objects, Methods and Properties.....	8
Methods.....	8
Properties.....	9
<i>Exercise 1: Alerts, Writing, & Changing Background Color.....</i>	<i>11</i>
2. Variables, Arrays and Operators.....	15
JavaScript Variables.....	15
A Loosely Typed Language.....	15
Google Chrome DevTools.....	16
Variable Naming.....	20
Storing User-Entered Data.....	21
<i>Exercise 2: Using Variables.....</i>	<i>25</i>
Constants.....	27
Arrays.....	27
<i>Exercise 3: Working with Arrays.....</i>	<i>31</i>
Associative Arrays.....	37
Array Properties and Methods.....	37
Playing with Array Methods.....	40
JavaScript Operators.....	41
The Modulus Operator.....	44
Playing with Operators.....	45
The Default Operator.....	49
<i>Exercise 4: Working with Operators.....</i>	<i>52</i>
3. JavaScript Functions.....	61
Global Objects and Functions.....	61
parseFloat(object).....	61
parseInt(object).....	62
isNaN(object).....	63
<i>Exercise 5: Working with Global Functions.....</i>	<i>64</i>
User-defined Functions.....	70
Function Syntax.....	70
Passing Values to Functions.....	71
<i>Exercise 6: Writing a JavaScript Function.....</i>	<i>74</i>
Returning Values from Functions.....	80

4. Built-In JavaScript Objects.....	83
String.....	83
Math.....	88
Date.....	91
Helper Functions.....	96
<i>Exercise 7: Returning the Day of the Week as a String.....</i>	<i>97</i>
5. Conditionals and Loops.....	101
Conditionals.....	101
if - else if - else Conditions.....	101
Short-circuiting	106
Switch / Case.....	111
Ternary Operator.....	116
Truthy and Falsy.....	117
<i>Exercise 8: Conditional Processing.....</i>	<i>119</i>
Loops.....	122
while Loop Syntax.....	122
do...while Loop Syntax.....	123
for Loop Syntax.....	124
for...of Loop Syntax.....	125
for...in Loop Syntax.....	126
break and continue.....	126
<i>Exercise 9: Working with Loops.....</i>	<i>129</i>
Array: forEach().....	132
6. Event Handlers and Listeners.....	133
On-event Handlers.....	133
The getElementById() Method.....	134
<i>Exercise 10: Using On-event Handlers.....</i>	<i>136</i>
The addEventListener() Method.....	140
Capturing Key Events.....	147
<i>Exercise 11: Adding Event Listeners.....</i>	<i>149</i>
Benefits of Event Listeners.....	154
Timers.....	155
<i>Exercise 12: Typing Test.....</i>	<i>160</i>

7. The HTML Document Object Model.....	167
CSS Selectors.....	167
Type Selectors.....	168
Descendant Selectors.....	168
Child Selectors.....	168
Class Selectors.....	169
ID Selectors.....	170
Attribute Selectors.....	170
The innerHTML Property.....	171
Nodes, NodeLists, and HTMLCollections.....	171
Accessing Element Nodes.....	172
getElementById().....	172
getElementsByTagName().....	174
getElementsByClassName().....	176
querySelectorAll() and querySelector().....	176
<i>Exercise 13: Accessing Elements.....</i>	<i>184</i>
Dot Notation and Square Bracket Notation.....	189
Collections of Elements.....	189
window is Implicit.....	189
Accessing Elements Hierarchically.....	192
<i>Exercise 14: Working with Hierarchical Elements.....</i>	<i>196</i>
Accessing Attributes.....	201
Creating New Nodes.....	202
Focusing on a Field.....	203
Shopping List Application.....	205
<i>Exercise 15: Logging.....</i>	<i>206</i>
<i>Exercise 16: Adding EventListeners.....</i>	<i>209</i>
<i>Exercise 17: Adding Items to the List.....</i>	<i>213</i>
<i>Exercise 18: Dynamically Adding Remove Buttons to the List Items.....</i>	<i>215</i>
<i>Exercise 19: Removing List Items.....</i>	<i>217</i>
<i>Exercise 20: Preventing Duplicates and Zero-length Product Names.....</i>	<i>219</i>
Manipulating Tables.....	221
8. CSS Object Model.....	229
Changing CSS with JavaScript.....	229
The style Property vs. getComputedStyle().....	234
Hiding and Showing Elements.....	235
Checking and Changing Other Style Properties.....	238
Increasing and Decreasing Measurements.....	241
Making changeFontSize() More Flexible.....	244
Custom data Attributes.....	245
Gotcha with fontWeight.....	251
Font Awesome.....	254
Finding and Using Icons.....	255
classList Property.....	259
<i>Exercise 21: Showing and Hiding Elements.....</i>	<i>260</i>

9. Errors and Exceptions.....269

- Runtime Errors.....269
 - Completely Unhandled Errors.....269
 - Globally Handled Errors.....270
 - Structured Error Handling.....271
 - Throwing custom errors.....273
- Exercise 22: Try/Catch.....274*