

Table of Contents

INTRODUCTION	1
About This Book	1
Foolish Assumptions	2
Icons Used in This Book	3
Beyond the Book	3
PART 1: CODING BASICS	5
CHAPTER 1: What Is Coding?	7
Programming: Making a Computer Do Your Bidding	8
What Is a Programming Language?	9
The Role of Programming Languages	10
Understanding How Code Is Written and Executed	12
Why Learn to Code? Let Me Count the Ways	15
Real-World Uses of Coding	19
CHAPTER 2: Coding Concepts You Need to Know	23
Storing Stuff in Variables	24
Dealing with Data Types	27
Constructing Expressions	29
Making Decisions with Conditionals	33
Automating Repetitive Tasks with Loops	36
Organizing Code into Functions	38
Introducing Objects	41
Documenting Code with Comments	43
Debugging Code and Handling Errors	44
CHAPTER 3: Getting to Know Some Programming Languages	49
Ranking Programming Languages	50
Assembly: Close to the Machine	50
Python: No Experience Required	53
JavaScript: The Glue that Binds the Web	55
Sneaking a Peek at a Few Other Popular Languages	57
Grokking the Difference between Interpreted and Compiled Languages	68

PART 2: LEARNING PYTHON: THE BEGINNER-FRIENDLY LANGUAGE	69
CHAPTER 4: Getting Started with Python	71
Getting to the Command Line	72
Installing Python	75
Running the Python Interpreter	80
Running Your First Python Program	84
CHAPTER 5: Getting Comfy with Some Python Fundamentals	89
Declaring Variables	90
Exploring Python Data Types	91
Constructing Expressions	93
Messing Around with Strings	97
CHAPTER 6: Storing Data and Controlling Your Code	105
Storing Stuff in Lists	105
More Ways to Store Stuff: Tuples and Dictionaries	111
Conditionals in Python	115
Python Loops	119
Adding Comments to Your Code	123
Example: Build Your Own Survey Bot	123
CHAPTER 7: Reusing Code	127
Making Your Code More Efficient with Functions	128
Getting the Hang of Variable Scope	131
Avoiding Wheel Reinvention with Modules	134
Reuse Heaven: Installing External Libraries	141
Reusing Data by Writing and Reading Files	144
Example: Building a Quotations Archive	147
CHAPTER 8: Expanding Your Python Skills	153
Waxing Pythonic	154
Comprehending List Comprehensions	155
Introducing Object-Oriented Programming (OOP)	158
Working with APIs	165
Handling Program Errors	170
Debugging Your Code	174
Example: Cat Fact Cards	176
CHAPTER 9: Building Some Useful Python Projects	179
Project 1: Anagram Guessing Game	180
Project 2: Text Analyzer	193

PART 3: LEARNING JavaScript: THE LANGUAGE OF THE WEB	207
CHAPTER 10: Getting Your Feet Wet with JavaScript	209
JavaScript: Controlling the Machine	210
What You Need to Get Started	211
Basic Script Construction	211
Adding Comments to Your Code	212
Creating External JavaScript Files	213
Getting to Know the Console	214
CHAPTER 11: Getting the Hang of a Few JavaScript Fundamentals	219
I Do Declare: Variables in JavaScript	220
Code Looping in JavaScript	221
Harnessing the Power of Functions	224
Getting the Hang of Variable Scope	227
CHAPTER 12: Tackling Some JavaScript Objects	231
Pulling Strings	231
Dealing with Dates and Times	236
Working with Numbers: The Math Object	240
Working with Arrays	244
CHAPTER 13: Unleashing JavaScript in the Browser	251
Getting to Know the Document Object Model	252
Specifying Elements	253
Traversing the DOM	257
Manipulating Elements	260
Modifying CSS with JavaScript	264
Building Reactive Pages with Events	267
CHAPTER 14: Debugging JavaScript	271
Examining Your Debugging Tools	272
Debugging with the Console Window	273
Pausing Your Code	275
Stepping Through Your Code	279
CHAPTER 15: Putting JavaScript to Work	283
Project 1: A Photo Gallery	284
Project 2: Get a Random Quotation from an API	286

PART 4: THE PART OF TENS	293
CHAPTER 16: Ten Things to Know about AI and Coding	295
Understanding How You Can Use AI	296
Learning What AI Can and Can't Do	296
Crafting Effective Prompts	297
Learning to Code Using AI	298
Avoiding AI Dependency	298
Reviewing the Major AI Coding Tools	299
Vibe Coding Is Fun	300
Best Practices for Integrating AI	300
Avoiding Common Mistakes	301
Understanding Code Before Using It	301
CHAPTER 17: Ten Vital HTML Tags and CSS Properties	303
Ten HTML Tags You Need to Know	304
Ten CSS Properties to Memorize	306
Ten CSS Selectors to Swoon Over	308
INDEX	313