## **CONTENTS**

	About the Author
	Acknowledgments
	Introduction xii
bart one	
	Bits and Bytes: The Practice of Programming
one	Choosing a Language
two	Back to Basics
three	The Joel Test: 12 Steps to Better Code 17
four	The Absolute Minimum Every Software Developer Absolutely, Positively Must Know About Unicode and Character Sets (No Excuses!)
five	Painless Functional Specifications Part 1: Why Bother?
six	Painless Functional Specifications Part 2: What's a Spec?
seven	Painless Functional Specifications Part 3: But How? 65
eight	Painless Functional Specifications Part 4: Tips
nine	Painless Software Schedules
ten	Daily Builds Are Your Friend

eleven	Hard-Assed Bug Fixin'
twelve	Five Worlds
thirteen	Paper Prototyping
fourteen	Don't Let Architecture Astronauts Scare You 111
fifteen	Fire and Motion
sixteen	$Craftsmanship \dots \dots$
seventeen	Three Wrong Ideas from Computer Science 125 $$
eighteen	Biculturalism
nineteen	Get Crash Reports From Users—Automatically! . 139
part two	Managing Developers
twenty	The Guerilla Guide to Interviewing 153
twenty-one	Incentive Pay Considered Harmful 167
twenty-two	Top Five (Wrong) Reasons You Don't Have Testers
twenty-three	Human Task Switches Considered Harmful 179
twenty-four	Things You Should Never Do, Part One 183
twenty-five	The Iceberg Secret, Revealed 189
twenty-six	The Law of Leaky Abstractions 197
twenty-seven	Lord Palmerston on Programming 203
twenty-eight	Measurement
part three	Being Joel: Random Thoughts on Not-So-Random Topics 213
•	Rick Chapman Is In Search of Stupidity 215
•	What Is the Work of Dogs in This Country? 219
thirty-one	Getting Things Done When You're Only a Grunt

vii