## **CONTENTS**

Chapter 1: What You Need to Know to Write Great Code
Chapter 2: Numeric Representation
Chapter 3: Binary Arithmetic and Bit Operations
Chapter 4: Floating-Point Representation
Chapter 5: Character Representation
Chapter 6: Memory Organization and Access
Chapter 7: Composite Data Types and Memory Objects 159
Chapter 8: Boolean Logic and Digital Design
Chapter 9: CPU Architecture
Chapter 10: Instruction Set Architecture
Chapter 11: Memory Architecture and Organization 319
Chapter 12: Input and Output
Chapter 13: Computer Peripheral Buses
Chapter 14: Mass Storage Devices and Filesystems
Chapter 15: Miscellaneous Input and Output Devices 413
Afterword: Thinking Low-Level, Writing High-Level
Appendix A: ASCII Character Set
Glossary 131