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Language Programming; Introduction; Label; Effective Addresses
Pseudo Opcodes Data Storage Directives; Analysis of an Assembly
Language Program; Summary of Chapter 7; Exercises for Chapter 7;
Chapter 8. Programming in Assembly Language; Introduction;
Assembly Language and C++; Stacks and Subroutines; Summary of
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Other Logical Instructions; Summary of the 68K Instructions; Simulated
I/O Using the TRAP #15 Instruction; Compilers and Assemblers
Summary of Chapter 9 Exercises for Chapter 9; Chapter 10. The Intel
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Index and Pointer Registers; Flag Registers; Segment Registers;
Instruction Pointer (IP); Memory Addressing Modes; X86 Instruction
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Arithmetic Instructions; Logic Instructions; String Manipulation; Control
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System Vectors; System Startup; Wrap-Up; Summary of Chapter 10;
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Introduction ARM Architecture; Conditional Execution; Barrel Shifter;
Operand Size; Addressing Modes; Stack Operations; ARM Instruction
Set; ARM System Vectors; Summary and Conclusions; Summary of
Chapter 11; Exercises for Chapter 11; Chapter 12. Interfacing with the
Real World; Introduction; Interrupts; Exceptions; Motorola 68K
Interrupts; Analog-to-Digital (A/D) and Digital-to-Analog (D/A)
Conversion; The Resolution of A/D and D/A Converters; Summary of
Chapter 12; Exercises for Chapter 12; Chapter 13. Introduction to
Modern Computer Architectures; Processor Architectures, CISC, RISC
and DSP
An Overview of Pipelining

Sommario/riassunto

Hardware and Computer Organization is a practical introduction to the architecture of modern microprocessors for students and professional alike. It is designed to take practicing professionals "under the hood" of a PC and provide them with an understanding of the basics of the complex machine that has become such a pervasive part of our everyday life. It clearly explains how hardware and software cooperatively interact to accomplish real-world tasks. Instead of simply demonstrating how to design a computer's hardware, it provides an understanding of the total machine, highlighting streng
