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Autore	Darche Philippe
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Nota di contenuto	Front Matter -- Coding and Addressing Modes -- Instruction Set and Class -- Additional Concepts -- Subroutine -- Interrupt Mechanism -- Conclusion of Volume 4 -- Exercises -- Tables for Encoding and Decoding Instructions -- Acronyms -- References -- Index -- Other titles from iSTE in Computer Engineering
Sommario/riassunto	Since its commercialization in 1971, the microprocessor, a modern and integrated form of the central processing unit, has continuously broken records in terms of its integrated functions, computing power, low costs and energy saving status. Today, it is present in almost all electronic devices. Sound knowledge of its internal mechanisms and programming is essential for electronics and computer engineers to understand and master computer operations and advanced programming concepts. This book in five volumes focuses more particularly on the first two generations of microprocessors, those that handle 4- and 8- bit integers. Microprocessor 4 - the fourth of five volumes - addresses the software aspects of this component. Coding of an instruction, addressing modes and the main features of the Instruction Set Architecture (ISA) of a generic component are presented. Futhermore, two approaches are discussed for altering the flow of execution using mechanisms of subprogram and interrupt. A

comprehensive approach is used, with examples drawn from current and past technologies that illustrate theoretical concepts, making them accessible.
