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Autore	Nisan Noam
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Sommario/riassunto	<p>"Unlike other texts that cover only one aspect of the field, The Elements of Computing Systems gives students an integrated and rigorous picture of applied computer science, as it comes to play in the construction of a simple yet powerful computer systems."</p> <p>"Indeed, the best way to understand how computers work is to build one from scratch, and this textbook leads students through twelve chapters and projects that gradually build a basic hardware platform and a modern software hierarchy from the ground up. In the process, the students gain hands-on knowledge of hardware architecture, operating systems, programming languages, compilers, data structures, algorithms, and software engineering. Using this constructive approach, the book exposes a significant body of computer science knowledge and demonstrates how theoretical and applied techniques taught in other courses fit into the overall picture."</p> <p>"Designed to support one- or two-semester courses, the book is based on an abstraction-implementation paradigm; each chapter presents a key hardware or software abstraction, a proposed implementation that makes it concrete, and an actual project."--BOOK JACKET.</p>