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	Titolo	Guide to Assembly Language [[electronic resource]] : A Concise Introduction / / by James T. Streib
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	Descrizione fisica	1 online resource (XV, 344 p. 612 illus., 35 illus. in color.)
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	Soggetti	Programming languages (Electronic computers) Microprocessors Programming Languages, Compilers, Interpreters Processor Architectures
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	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Variables, Registers, and Data Movement -- Input/Output -- Arithmetic Instructions -- Selection Structures -- Iteration Structures -- Logic, Shifting, Rotating, and Stacks -- Procedures and Macros -- Arrays -- Strings -- Floating-Point Instructions -- 64-bit Processing -- Selected Machine Language Instructions -- Appendix A: Directions for MASM in Visual Studio 2019 Community Edition -- Appendix B: Binary, Hexadecimal, Logic, and Arithmetic -- Appendix C: Glossary -- Appendix D: Selected Assembly Language Instructions -- Appendix E: Answers to Selected Exercises.
	Sommario/riassunto	This concise guide is designed to enable the reader to learn how to program in assembly language as quickly as possible. Through a hands-on programming approach, readers will also learn about the architecture of the Intel processor, and the relationship between high-level and low-level languages. This updated second edition has been expanded with additional exercises, and enhanced with new material on floating-point numbers and 64-bit processing. Topics and features: Provides guidance on simplied register usage, simplied input/output using C-like statements, and the use of high-level control structures Describes the implementation of control structures, without the use of high-level structures, and often with related C program code Illustrates

concepts with one or more complete program Presents review summaries in each chapter, together with a variety of exercises, from short-answer questions to programming assignments Covers selection and iteration structures, logic, shift, arithmetic shift, rotate, and stack instructions, procedures and macros, arrays, and strings Includes an introduction to floating-point instructions and 64-bit processing Examines machine language from a discovery perspective, introducing the principles of computer organization A must-have resource for undergraduate students seeking to learn the fundamentals necessary to begin writing logically correct programs in a minimal amount of time, this work will serve as an ideal textbook for an assembly language course, or as a supplementary text for courses on computer organization and architecture. The presentation assumes prior knowledge of the basics of programming in a high-level language such as C, C++, or Java. Dr. James T. Streib is Professor Emeritus of Computer Science at Illinois College, Jacksonville, IL, USA. His other publications include the Springer textbooks Guide to Data Structures and Guide to Java.