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Nota di contenuto	Front cover; Half title page; Relational Database Design and Implementation; Copyright page; Table of Contents; Preface to the Third Edition; Changes in the Third Edition; What You Need to Know; Acknowledgments; Part I Introduction; Introduction; Chapter 1 The Database Environment; Defining a Database; Lists and Files; Databases; Data "Ownership"; Service-Oriented Architecture; Database Software: DBMSs; Database Hardware Architecture; Centralized; Client/Server; Distributed; The Web; Remote Access; Other Factors in the Database Environment; Security; Government Regulations and Privacy Legacy DatabasesFor Further Reading; Chapter 2 Systems Analysis and Database Requirements; Dealing with Resistance to Change; The Structured Design Life Cycle; Conducting the Needs Assessment; Assessing Feasibility; Generating Alternatives; Evaluating and Choosing an Alternative; Creating Design Requirements; Alternative Analysis Methods; Prototyping; Spiral Methodology; Object-Oriented Analysis; For Further Reading; Part II Database Design Theory; Database Design Theory; Chapter 3 Why Good Design Matters; Effects of Poor Database Design; Unnecessary Duplicated Data and Data Consistency Data Insertion ProblemsData Deletion Problems; Meaningful Identifiers; Chapter 4 Entities and Relationships; Entities and Their Attributes; Entity Identifiers; Single-Valued versus Multivalued Attributes; Avoiding

Collections of Entities; Documenting Entities and Their Attributes; Entities and Attributes for Antique Optical; Domains; Documenting Domains; Practical Domain Choices; Basic Data Relationships; One-to-One Relationships; One-to-Many Relationships; Many-to-Many Relationships; Weak Entities and Mandatory Relationships; Documenting Relationships; The Chen Method; IE Style Diagrams UML Style Diagrams Basic Relationships for Antique Optical; Dealing with Many-to-Many Relationships; Composite Entities; Documenting Composite Entities; Resolving Antique Optical's Many-to-Many Relationships; Relationships and Business Rules; Data Modeling versus Data Flow; Schemas; For Further Reading; Chapter 5 The Relational Data Model; Understanding Relations; Columns and Column Characteristics; Rows and Row Characteristics; Types of Tables; A Notation for Relations; Primary Keys; Primary Keys to Identify People; Avoiding Meaningful Identifiers; Concatenated Primary Keys All-Key Relations Representing Data Relationships; Referential Integrity; Foreign Keys and Primary Keys in the Same Table; Views; The View Mechanism; Why Use Views?; The Data Dictionary; Sample Data Dictionary Tables; A Bit of History; For Further Reading; Chapter 6 Normalization; Translating an ER Diagram into Relations; Normal Forms; First Normal Form; Understanding Repeating Groups; Handling Repeating Groups; Problems with First Normal Form; Second Normal Form; Understanding Functional Dependencies; Using Functional Dependencies to Reach 2NF; Problems with 2NF Relations; Third Normal Form Transitive Dependencies

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### Sommario/riassunto

Fully revised, updated, and expanded, Relational Database Design and Implementation, Third Edition is the most lucid and effective introduction to the subject available for IT/IS professionals interested in honing their skills in database design, implementation, and administration. This book provides the conceptual and practical information necessary to develop a design and management scheme that ensures data accuracy and user satisfaction while optimizing performance, regardless of experience level or choice of DBMS. The book begins by reviewing basic concepts of databases and database des

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