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Nota di contenuto	High-Performance Parallel Database Processing and Grid Databases; Contents; Preface; Part I Introduction; 1. Introduction; 1.1. A Brief Overview: Parallel Databases and Grid Databases; 1.2. Parallel Query Processing: Motivations; 1.3. Parallel Query Processing: Objectives; 1.3.1. Speed Up; 1.3.2. Scale Up; 1.3.3. Parallel Obstacles; 1.4. Forms of Parallelism; 1.4.1. Interquery Parallelism; 1.4.2. Intraquery Parallelism; 1.4.3. Intraoperation Parallelism; 1.4.4. Interoperation Parallelism; 1.4.5. Mixed Parallelism-A More Practical Solution; 1.5. Parallel Database Architectures 1.5.1. Shared-Memory and Shared-Disk Architectures 1.5.2. Shared-Nothing Architecture; 1.5.3. Shared-Something Architecture; 1.5.4. Interconnection Networks; 1.6. Grid Database Architecture; 1.7. Structure of this Book; 1.8. Summary; 1.9. Bibliographical Notes; 1.10. Exercises; 2. Analytical Models; 2.1. Cost Models; 2.2. Cost Notations; 2.2.1. Data Parameters; 2.2.2. Systems Parameters; 2.2.3. Query Parameters; 2.2.4. Time Unit Costs; 2.2.5. Communication Costs; 2.3.

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2.5. Summary; 2.6. Bibliographical Notes; 2.7. Exercises; Part II Basic Query Parallelism; 3. Parallel Search; 3.1. Search Queries; 3.1.1. Exact-Match Search; 3.1.2. Range Search Query; 3.1.3. Multiattribute Search Query; 3.2. Data Partitioning; 3.2.1. Basic Data Partitioning; 3.2.2. Complex Data Partitioning; 3.3. Search Algorithms; 3.3.1. Serial Search Algorithms; 3.3.2. Parallel Search Algorithms; 3.4. Summary; 3.5. Bibliographical Notes; 3.6. Exercises; 4. Parallel Sort and GroupBy; 4.1. Sorting, Duplicate Removal, and Aggregate Queries  
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## Sommario/riassunto

The latest techniques and principles of parallel and grid database processing The growth in grid databases, coupled with the utility of parallel query processing, presents an important opportunity to understand and utilize high-performance parallel database processing within a major database management system (DBMS). This important new book provides readers with a fundamental understanding of parallelism in data-intensive applications, and demonstrates how to develop faster capabilities to support them. It presents a balanced treatment of the theoretical and practical aspects of high-

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