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Nota di contenuto	Software Evolution and Maintenance; Contents; Preface; Who should read this book?; How should this book be read?; Notes for instructors; Acknowledgments; List of Figures; List of Tables; 1 Basic Concepts and Preliminaries; 1.1 Evolution Versus Maintenance; 1.1.1 Software Evolution; 1.1.2 Software Maintenance; 1.2 Software Evolution Models and Processes; 1.3 Reengineering; 1.4 Legacy Systems; 1.5 Impact Analysis; 1.6 Refactoring; 1.7 Program Comprehension; 1.8 Software Reuse; 1.9 Outline of The Book; References; Exercises; 2 TAXONOMY OF SOFTWARE MAINTENANCE AND EVOLUTION; 2.1 General Idea 2.1.1 Intention-Based Classification of Software Maintenance2.1.2 Activity-Based Classification of Software Maintenance; 2.1.3 Evidence-Based Classification of Software Maintenance; 2.2 Categories of Maintenance Concepts; 2.2.1 Maintained Product; 2.2.2 Maintenance Types; 2.2.3 Maintenance Organization Processes; 2.2.4 Peopleware; 2.3 Evolution of Software Systems; 2.3.1 SPE Taxonomy; 2.3.2 Laws of Software Evolution; 2.3.3 Empirical Studies; 2.3.4 Practical Implications of the Laws; 2.3.5 Evolution of FOSS Systems; 2.4 Maintenance of Cots-Based Systems 2.4.1 Why Maintenance of CBS Is Difficult?2.4.2 Maintenance Activities for CBSs; 2.4.3 Design Properties of Component-Based Systems; 2.5 Summary; Literature Review; References; Exercises; 3 Evolution and

Maintenance Models; 3.1 General Idea; 3.2 Reuse-Oriented Model; 3.3 The Staged Model for Closed Source Software; 3.4 The Staged Model for Free, Libre, Open Source Software; 3.5 Change Mini-Cycle Model; 3.6 IEEE/EIA Maintenance Process; 3.7 ISO/IEC 14764 Maintenance Process; 3.8 Software Configuration Management; 3.8.1 Brief History; 3.8.2 SCM Spectrum of Functionality; 3.8.3 SCM Process
 3.9 CR Workflow3.10 Summary; Literature Review; References; Exercises; 4 Reengineering; 4.1 General Idea; 4.2 Reengineering Concepts; 4.3 A General Model for Software Reengineering; 4.3.1 Types of Changes; 4.3.2 Software Reengineering Strategies; 4.3.3 Reengineering Variations; 4.4 Reengineering Process; 4.4.1 Reengineering Approaches; 4.4.2 Source Code Reengineering Reference Model; 4.4.3 Phase Reengineering Model; 4.5 Code Reverse Engineering; 4.6 Techniques Used for Reverse Engineering; 4.6.1 Lexical Analysis; 4.6.2 Syntactic Analysis; 4.6.3 Control Flow Analysis; 4.6.4 Data Flow Analysis
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Sommario/riassunto

Software Evolution and Maintenance: A Practitioner's Approach is an accessible textbook for students and professionals, which collates the advances in software development and provides the most current models and techniques in maintenance.

- Explains two maintenance standards: IEEE/EIA 1219 and ISO/IEC14764
- Discusses several commercial reverse and domain engineering toolkits
- Slides for instructors are available online
- Information is based on the IEEE SWEBOK (Software Engineering Body of Knowledge)
