

## System Analysis Design V Rajaraman

COMPUTER ORGANIZATION AND ARCHITECTURE  
Metrics Suite for Object Oriented Design  
Analysis and Design of Information Systems  
COMPUTER BASICS AND C PROGRAMMING  
ESSENTIALS OF E-COMMERCE TECHNOLOGY  
Quarterly Bulletin  
COMPUTER PROGRAMMING IN C  
Systems Analysis and Design  
Unix and C Programming  
An Introduction to Digital Computer Design  
Computers and Intractability  
Computer Programming in C  
Parallel and Distributed Computation  
INTRODUCTION TO INFORMATION TECHNOLOGY  
DIGITAL LOGIC AND COMPUTER ORGANIZATION  
Self-study Guide to Analysis and Design of Information Systems  
Recommender Systems Handbook  
COMPUTER ORIENTED NUMERICAL METHODS  
Systems Analysis and Design  
Soft Computing and Signal Processing  
COMPUTER-ORIENTED NUMERICAL METHODS  
Systems Analysis and Design  
Chemical Age of India  
Computer Science and Informatics  
Readings in Database Systems  
Object-Oriented Analysis and Design with Applications  
Mining of Massive Datasets  
Advanced Principles for Improving Database Design, Systems Modeling, and Software Development  
Advances in Power Systems and Energy Management  
Analysis and Design of Information Systems  
Automation and Instrumentation for Power Plants  
Simulation Modeling Handbook  
Scheduling and Load Balancing in Parallel and Distributed Systems  
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MANAGEMENT INFORMATION SYSTEMS

### COMPUTER ORGANIZATION AND ARCHITECTURE

This book is a collection of research articles and critical review articles, describing the overall approach to energy management. The book emphasizes the technical issues that drive energy efficiency in context of power systems. This book contains case studies with and without solutions on modelling, simulation and optimization techniques. It covers some innovative topics such as medium voltage (MV) back-to-back (BTB) system, cost optimization of a ring frame unit in textile industry, rectenna for radio frequency (RF) energy harvesting, ecology and energy dimension in infrastructural designs, 2.4 kW three-phase inverter for aircraft application, study of automatic generation control (AGC) in a two area hydrothermal power system, energy-efficient and reliable depth-based routing protocol for underwater wireless sensor network, and power line communication using LabVIEW. This book is primarily targeted at researchers and senior graduate students, but is also highly useful for the industry professional and scientists.

### A Metrics Suite for Object Oriented Design

This comprehensive text on control systems is designed for undergraduate students pursuing courses in electronics and

communication engineering, electrical and electronics engineering, telecommunication engineering, electronics and instrumentation engineering, mechanical engineering, and biomedical engineering. Appropriate for self-study, the book will also be useful for AMIE and IETE students. Written in a student-friendly readable manner, the book explains the basic fundamentals and concepts of control systems in a clearly understandable form. It is a balanced survey of theory aimed to provide the students with an in-depth insight into system behaviour and control of continuous-time control systems. All the solved and unsolved problems in this book are classroom tested, designed to illustrate the topics in a clear and thorough way. **KEY FEATURES :** Includes several fully worked-out examples to help students master the concepts involved. Provides short questions with answers at the end of each chapter to help students prepare for exams confidently. Offers fill in the blanks and objective type questions with answers at the end of each chapter to quiz students on key learning points. Gives chapter-end review questions and problems to assist students in reinforcing their knowledge.

## **Analysis and Design of Information Systems**

Now in its second edition, this book focuses on practical algorithms for mining data from even the largest datasets.

## **COMPUTER BASICS AND C PROGRAMMING**

## **ESSENTIALS OF E-COMMERCE TECHNOLOGY**

Designed as an introductory text for the students of computer science, computer applications, electronics engineering and information technology for their first course on the organization and architecture of computers, this accessible, student friendly text gives a clear and in-depth analysis of the basic principles underlying the subject. This self-contained text devotes one full chapter to the basics of digital logic. While the initial chapters describe in detail about computer organization, including CPU design, ALU design, memory design and I/O organization, the text also deals with Assembly Language Programming for Pentium using NASM assembler. What distinguishes the text is the special attention it pays to Cache and Virtual Memory organization, as well as to RISC architecture and the intricacies of pipelining. All these discussions are climaxed by an illuminating discussion on parallel computers which shows how processors are interconnected to create a variety of parallel computers. **KEY FEATURES** □ Self-contained presentation starting with data representation and ending with advanced parallel computer architecture. □ Systematic and logical organization of topics. □ Large number of worked-out examples and exercises. □ Contains basics of assembly language programming. □ Each chapter has learning objectives and a detailed summary to help students to quickly revise the material.

## **Quarterly Bulletin**

"This book presents cutting-edge research and analysis of the most recent advancements in the fields of database systems and software development"--Provided by publisher.

## **COMPUTER PROGRAMMING IN C**

### **Systems Analysis and Design**

### **Unix and C Programming**

This book presents selected research papers on current developments in the fields of soft computing and signal processing from the Second International Conference on Soft Computing and Signal Processing (ICSCSP 2019). The respective contributions address topics such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning, and discuss various aspects of these topics, e.g. technological considerations, product implementation, and application issues.

### **An Introduction to Digital Computer Design**

This book is a concise and lucid introduction to computer oriented numerical methods with well-chosen graphical illustrations that give an insight into the mechanism of various methods. The book develops computational algorithms for solving non-linear algebraic equation, sets of linear equations, curve-fitting, integration, differentiation, and solving ordinary differential equations. **OUTSTANDING FEATURES**

- Elementary presentation of numerical methods using computers for solving a variety of problems for students who have only basic level knowledge of mathematics.
- Geometrical illustrations used to explain how numerical algorithms are evolved.
- Emphasis on implementation of numerical algorithm on computers.
- Detailed discussion of IEEE standard for representing floating point numbers.
- Algorithms derived and presented using a simple English based structured language.
- Truncation and rounding errors in numerical calculations explained.
- Each chapter starts with learning goals and all methods illustrated with numerical examples.
- Appendix gives pointers to open source libraries for numerical computation.

### **Computers and Intractability**

Case study of hospitals in Delhi, India.

## **Computer Programming in C**

An analysis of power systems, control hardware, modelling and simulation, instrumentation, and computers and distributed systems. The stability of plants and their interaction in a multi-machine system is also discussed, as well as an analysis of the values of LOFT ATWS EVENT for PWR and the new algorithm of on-line ELD for thermal power plants.

## **Parallel and Distributed Computation**

The use of simulation modeling and analysis is becoming increasingly more popular as a technique for improving or investigating process performance. This book is a practical, easy-to-follow reference that offers up-to-date information and step-by-step procedures for conducting simulation studies. It provides sample simulation project support materi

## **INTRODUCTION TO INFORMATION TECHNOLOGY**

This fifth edition continues to build upon previous issues with its hands-on approach to systems analysis and design with an even more in-depth focus on the core set of skills that all analysts must possess. Dennis continues to capture the experience of developing and analysing systems in a way that readers can understand and apply and develop a rich foundation of skills as a systems analyst.

## **DIGITAL LOGIC AND COMPUTER ORGANIZATION**

The latest edition of a popular text and reference on database research, with substantial new material and revision; covers classical literature and recent hot topics. Lessons from database research have been applied in academic fields ranging from bioinformatics to next-generation Internet architecture and in industrial uses including Web-based e-commerce and search engines. The core ideas in the field have become increasingly influential. This text provides both students and professionals with a grounding in database research and a technical context for understanding recent innovations in the field. The readings included treat the most important issues in the database area--the basic material for any DBMS professional. This fourth edition has been substantially updated and revised, with 21 of the 48 papers new to the edition, four of them published for the first time. Many of the sections have been newly organized, and each section includes a new or substantially revised introduction that discusses the context, motivation, and controversies in a particular area, placing it in the broader perspective of database research. Two introductory articles, never before published, provide an organized,

current introduction to basic knowledge of the field; one discusses the history of data models and query languages and the other offers an architectural overview of a database system. The remaining articles range from the classical literature on database research to treatments of current hot topics, including a paper on search engine architecture and a paper on application servers, both written expressly for this edition. The result is a collection of papers that are seminal and also accessible to a reader who has a basic familiarity with database systems.

### **Self-study Guide to Analysis and Design of Information Systems**

This book is designed to acquaint the readers with major aspects of e-commerce with particular emphasis on technology such as cryptography, e-payment and mobile payment security. The book presents a layered architecture of e-commerce systems with six layers. The physical layer (the bottommost layer) described first, provides the basic communication infrastructure needed by e-commerce. The next layer described is the logical layer consisting of Local Area Networks, the Internet, Intranet, etc. which provide connectivity. The layer above is the network services layer which provides e-mail and World Wide Web applications. Above this is a very important messaging layer of e-commerce which provides facilities for exchanging messages securely using the communication infrastructure. Here various methods of encryption, public key infrastructure and digital signature are discussed. It is also explained as to how the messaging layer is used to exchange structured electronic documents, using XML. The next layer called middleman services layer, describes the design of home page of an organization and elaborates various payment services such as credit card, e-cash, smart card, etc. The topmost layer is on applications, namely, B2C, B2B and C2C e-commerce which are defined and described at the beginning of the book. As use of mobile phones and mobile network is rapidly increasing, a whole chapter is devoted to explain m-commerce. Of special interest are detailed discussions of Wireless Application Protocol, security issues and payment methods. A complete chapter is also devoted to new developments in multimedia information goods such as e-books, MP3 compressed audio and digital quality video. A unique feature of these goods is the method of delivery which also uses the mobile Internet infrastructure. Finally, the legal framework of e-commerce provided by the Information Technology Act 2000 (and the amended act of 2008) is explained. This book with its numerous student-friendly features is an ideal text for undergraduate and postgraduate students of Computer Science and Information Technology (BSc and MSc), Computer Applications (BCA and MCA), and for undergraduate engineering students of Computer Science and Engineering and Information Technology. Besides, it would be useful to professionals for quickly understanding the basics of e-commerce.

**Key Features :**

- Gives detailed discussions of security and payment schemes in e-commerce.
- Discusses essentials of m-commerce technology including WAP protocol and mobile security.
- Discusses e-commerce of multimedia such as e-books, MP3 audio and video on demand.
- Provides learning aids such as chapter summaries, over 300 review questions and 350 objective type questions.

## **Recommender Systems Handbook**

Intended as a text for undergraduate and postgraduate students of engineering in Computer Science and Engineering, Information Technology, and students pursuing courses in computer applications (BCA/MCA) and computer science (B.Sc./M.Sc.), this state-of-the-art study acquaints the students with concepts and implementations in computer architectures. Though a new title, it is a completely reorganized, thoroughly revised and fully updated version of the author's earlier book Perspectives in Computer Architecture. The text begins with a brief account of the very early history of computers and describes the von Neumann IAS type of computers; then it goes on to give a brief introduction to the subsequent advances in computer systems covering device technologies, operational aspects, system organization and applications. This is followed by an analysis of the advances and innovations that have taken place in these areas. Advanced concepts such as look-ahead, pipelining, RISC architectures, and multi-programming are fully analyzed. The text concludes with a discussion on such topical subjects as computer networks, microprocessors and microcomputers, microprocessor families, Intel Pentium series, and newer high-power processors. HALLMARKS OF THE BOOK The text fully reflects Professor P.V.S. Rao's long experience as an eminent academic and his professional experience as an adviser to leading telecommunications/software companies. Gives a systematic account of the evolution of computers Provides a large number of exercises to drill the students in self-study. The five Appendices at the end of the text, cover the basic concepts to enable the students to have a better understanding of the subject. Besides students, practising engineers should also find this book to be of immense value to them.

## **COMPUTER ORIENTED NUMERICAL METHODS**

Data Mining: Concepts and Techniques provides the concepts and techniques in processing gathered data or information, which will be used in various applications. Specifically, it explains data mining and the tools used in discovering knowledge from the collected data. This book is referred as the knowledge discovery from data (KDD). It focuses on the feasibility, usefulness, effectiveness, and scalability of techniques of large data sets. After describing data mining, this edition explains the methods of knowing, preprocessing, processing, and warehousing data. It then presents information about data warehouses, online analytical processing (OLAP), and data cube technology. Then, the methods involved in mining frequent patterns, associations, and correlations for large data sets are described. The book details the methods for data classification and introduces the concepts and methods for data clustering. The remaining chapters discuss the outlier detection and the trends, applications, and research frontiers in data mining. This book is intended for Computer Science students, application developers, business professionals, and researchers who seek information on data mining. Presents dozens of algorithms and implementation examples, all in pseudo-code and suitable for use in real-world, large-scale data mining projects Addresses advanced topics such as mining object-relational databases, spatial databases, multimedia

databases, time-series databases, text databases, the World Wide Web, and applications in several fields Provides a comprehensive, practical look at the concepts and techniques you need to get the most out of your data

## **Systems Analysis and Design**

This second edition of a well-received text, with 20 new chapters, presents a coherent and unified repository of recommender systems' major concepts, theories, methodologies, trends, and challenges. A variety of real-world applications and detailed case studies are included. In addition to wholesale revision of the existing chapters, this edition includes new topics including: decision making and recommender systems, reciprocal recommender systems, recommender systems in social networks, mobile recommender systems, explanations for recommender systems, music recommender systems, cross-domain recommendations, privacy in recommender systems, and semantic-based recommender systems. This multi-disciplinary handbook involves world-wide experts from diverse fields such as artificial intelligence, human-computer interaction, information retrieval, data mining, mathematics, statistics, adaptive user interfaces, decision support systems, psychology, marketing, and consumer behavior. Theoreticians and practitioners from these fields will find this reference to be an invaluable source of ideas, methods and techniques for developing more efficient, cost-effective and accurate recommender systems.

## **Soft Computing and Signal Processing**

Numerical methods are powerful problem-solving tools. Techniques of these methods are capable of handling large systems of equations, nonlinearities and complicated geometries in engineering practice which are impossible to be solved analytically. Numerical methods can solve the real world problem using the C program given in this book. This well-written text explores the basic concepts of numerical methods and gives computational algorithms, flow charts and programs for solving nonlinear algebraic equations, linear equations, curve fitting, integration, differentiation and differential equations. The book is intended for students of B.E. and B.Tech as well as for students of B.Sc. (Mathematics and Physics). KEY FEATURES □ Gives clear and precise exposition of modern numerical methods. □ Provides mathematical derivation for each method to build the student's understanding of numerical analysis. □ Presents C programs for each method to help students to implement the method in a programming language. □ Includes several solved examples to illustrate the concepts. □ Contains exercises with answers for practice.

## **COMPUTER-ORIENTED NUMERICAL METHODS**

## **Systems Analysis and Design**

It is widely recognised that the knowledge of information systems is essential in today's business organisations to survive and prosper. This book in its Second Edition, discusses all the major areas in information systems. It includes issues in the design, development and application of organisation-wide information systems and their effect on business and organisations. The issues discussed in the book supports the management of an enterprise in its planning, operation and control functions. SALIENT FEATURES OF THE bOOK • Balanced treatment of both the technical and organisational issues involved • Wide range of topics including databases, decision support systems, expert systems and system analysis • Contemporary examples from the Indian industry Though the main structure of the Second Edition remains the same, the chapters have been updated and revised as per the recent developments in the field of information technology. NEW TO THIS EDITION • Several 'Case-studies' have been incorporated at the end of each chapter. • New references have been included in the text to support the added text. • Learning objectives have been given at the beginning of each chapter. • The text is presented in an attractive manner as numerous new figures and pictures have been added.

## **Chemical Age of India**

For many applications a randomized algorithm is either the simplest algorithm available, or the fastest, or both. This tutorial presents the basic concepts in the design and analysis of randomized algorithms. The first part of the book presents tools from probability theory and probabilistic analysis that are recurrent in algorithmic applications. Algorithmic examples are given to illustrate the use of each tool in a concrete setting. In the second part of the book, each of the seven chapters focuses on one important area of application of randomized algorithms: data structures; geometric algorithms; graph algorithms; number theory; enumeration; parallel algorithms; and on-line algorithms. A comprehensive and representative selection of the algorithms in these areas is also given. This book should prove invaluable as a reference for researchers and professional programmers, as well as for students.

## **Computer Science and Informatics**

This book focuses on the future directions of the static scheduling and dynamic load balancing methods in parallel and distributed systems. It provides an overview and a detailed discussion of a wide range of topics from theoretical background to practical, state-of-the-art scheduling and load balancing techniques.

## **Readings in Database Systems**

This work has been selected by scholars as being culturally important and is part of the knowledge base of civilization as we know it. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. To ensure a quality reading experience, this work has been proofread and republished using a format that seamlessly blends the original graphical elements with text in an easy-to-read typeface. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

## **Object-Oriented Analysis and Design with Applications**

## **Mining of Massive Datasets**

## **Advanced Principles for Improving Database Design, Systems Modeling, and Software Development**

## **Advances in Power Systems and Energy Management**

This book introduces students to the basics of computers, software and internet along with how to program computers using the C language. It is intended for an introductory course that gives beginning engineering and science students a firm rooting in the fundamental principles of computers and information technology, and also provides invaluable insights into key concepts of computing through development of skills in programming and problem solving using C language. To this end, the book is eminently suitable for the first-year engineering students of all branches and MCA students, as per the prescribed syllabus of several universities. C is a difficult language to learn if it is not methodically introduced. The book explains C and its basic programming techniques in a way suitable for beginning students. It begins by giving students a solid foundation in algorithms to help them grasp the overall concepts of programming a computer as a problem-solving tool. Simple aspects of C are introduced first to enable students to quickly start writing programs. More difficult concepts in the latter parts of the book, such as pointers and their use, have been presented in an accessible manner making the learning of C an exciting and interesting experience. The methodology used is to illustrate each new concept with a program and emphasize a good style in programming to allow students to gain sufficient skills in problem solving. KEY

**FEATURES** Self-contained introduction to both computers and programming for beginners All important features of C illustrated with over 100 examples Good style in programming emphasized Laboratory exercises on applications of MS Office, namely, Word processing, Spreadsheet, PowerPoint are included.

### **Analysis and Design of Information Systems**

his textbook is designed to teach a first course in Information Technology (IT) to all undergraduate students. In view of the all-pervasive nature of IT in today's world a decision has been taken by many universities to introduce IT as a compulsory core course to all Bachelor's degree students regardless of their specialisation. This book is intended for such a course. The approach taken in this book is to emphasize the fundamental "Science" of Information Technology rather than a cook book of skills. Skills can be learnt easily by practice with a computer and by using instructions given in simple web lessons that have been cited in the References. The book defines Information Technology as the technology that is used to acquire, store, organize, process and disseminate processed data, namely, information. The unique aspect of the book is to examine processing all types of data: numbers, text, images, audio and video data. As IT is a rapidly changing field, we have taken the approach to emphasize reasonably stable, fundamental concepts on which the technology is built. A unique feature of the book is the discussion of topics such as image, audio and video compression technologies from first principles. We have also described the latest technologies such as 'e-wallets' and 'cloud computing'. The book is suitable for all Bachelor's degree students in Science, Arts, Computer Applications, and Commerce. It is also useful for general reading to learn about IT and its latest trends. Those who are curious to know, the principles used to design jpg, mp3 and mpeg4 compression, the image formats—bmp, tiff, gif, png, and jpg, search engines, payment systems such as BHIM and Paytm, and cloud computing, to mention a few of the technologies discussed, will find this book useful.

**KEY FEATURES**

- Provides comprehensive coverage of all basic concepts of IT from first principles
- Explains acquisition, compression, storage, organization, processing and dis-semination of multimedia data
- Simple explanation of mp3, jpg, and mpeg4 compression
- Explains how computer networks and the Internet work and their applications
- Covers business data processing, World Wide Web, e-commerce, and IT laws
- Discusses social impacts of IT and career opportunities in IT and IT enabled services
- Designed for self-study with every chapter starting with learning objectives and concluding with a comprehensive summary and a large number of exercises.

### **Automation and Instrumentation for Power Plants**

This third edition of the successful information systems guide is a thorough introduction to all aspects of business transformation and analysis. It offers a complex set of tools covering all types of systems, including legacy, transactional, database and web/ecommerce topics and integrates them within a common method for the successful analyst/designer.

With additional chapters on topics such as Web interface tools and data warehouse system design, and providing new case studies, it is a valuable resource for all information systems students, as well as professionals.

## **Simulation Modeling Handbook**

### **Scheduling and Load Balancing in Parallel and Distributed Systems**

This introductory text on 'digital logic and computer organization' presents a logical treatment of all the fundamental concepts necessary to understand the organization and design of a computer. It is designed to cover the requirements of a first-course in computer organization for undergraduate Computer Science, Electronics, or MCA students. Beginning from first principles, the text guides students through to a stage where they are able to design and build a small computer with available IC chips. Starting with the foundation material on data representation, computer arithmetic and combinatorial and sequential circuit design, the text explains ALU design and includes a discussion on an ALU IC chip. It also discusses Algorithmic State Machine and its representation using a Hardware Description Language before shifting to computer organization. The evolutionary development of a small hypothetical computer is described illustrating hardware-software trade-off in computer organization. Its instruction set is designed giving reasons why each new instruction is introduced. This is followed by a description of the general features of a CPU, organization of main memory and I/O systems. The book concludes with a chapter describing the features of a real computer, namely the Intel Pentium. An appendix describes a number of laboratory experiments which can be put together by students, culminating in the design of a toy computer. Key Features • Self-contained presentation of digital logic and computer organization with minimal pre-requisites • Large number of examples provided throughout the book • Each chapter begins with learning goals and ends with a summary to aid self-study by students.

## **Computer System Architecture**

### **Data Mining: Concepts and Techniques**

### **Management Information System (MIS) in Hospitals**

"Shows how to recognize NP-complete problems and offers proactical suggestions for dealing with them effectively. The

book covers the basic theory of NP-completeness, provides an overview of alternative directions for further research, and contains an extensive list of NP-complete and NP-hard problems, with more than 300 main entries and several times as many results in total. [This book] is suitable as a supplement to courses in algorithm design, computational complexity, operations research, or combinatorial mathematics, and as a text for seminars on approximation algorithms or computational complexity. It provides not only a valuable source of information for students but also an essential reference work for professionals in computer science"--Back cover.

### **Computer Organization & Architecture 7e**

Alan Dennis' 5th Edition of Systems Analysis and Design continues to build upon previous issues with its hands-on approach to systems analysis and design with an even more in-depth focus on the core set of skills that all analysts must possess. Dennis continues to capture the experience of developing and analyzing systems in a way that readers can understand and apply and develop a rich foundation of skills as a systems analyst.

### **Randomized Algorithms**

This book introduces computer programming to a beginner using the programming language C. The version of C used is the one standardised by the American National Standards Institute (ANSI C). C has rapidly gained users due to its efficiency, rich data structure, variety of operators and affinity to UNIX operating system. C is a difficult language to learn if it is not methodically approached. Our attempt has been to introduce the basic aspects of C to enable the student to quickly start writing C programs and postpone more difficult features of C to later chapters. The methodology of presentation closely follows the one used by the author in his popular book on PASCAL programming. Those who know PASCAL will find it very easy to learn C using this book.

### **SIGNALS AND SYSTEMS**

The 4th edition of Systems Analysis and Design continues to offer a hands-on approach to SA&D while focusing on the core set of skills that all analysts must possess. Building on their experience as professional systems analysts and award-winning teachers, authors Dennis, Wixom, and Roth capture the experience of developing and analyzing systems in a way that students can understand and apply. With Systems Analysis and Design, 4th edition, students will leave the course with experience that is a rich foundation for further work as a systems analyst.

### **MANAGEMENT INFORMATION SYSTEMS**

Object-Oriented Design with Applications has long been the essential reference to object-oriented technology, which, in turn, has evolved to join the mainstream of industrial-strength software development. In this third edition--the first revision in 13 years--readers can learn to apply object-oriented methods using new paradigms such as Java, the Unified Modeling Language (UML) 2.0, and .NET. The authors draw upon their rich and varied experience to offer improved methods for object development and numerous examples that tackle the complex problems faced by software engineers, including systems architecture, data acquisition, cryptanalysis, control systems, and Web development. They illustrate essential concepts, explain the method, and show successful applications in a variety of fields. You'll also find pragmatic advice on a host of issues, including classification, implementation strategies, and cost-effective project management. New to this new edition are An introduction to the new UML 2.0, from the notation's most fundamental and advanced elements with an emphasis on key changes New domains and contexts A greatly enhanced focus on modeling--as eagerly requested by readers--with five chapters that each delve into one phase of the overall development lifecycle. Fresh approaches to reasoning about complex systems An examination of the conceptual foundation of the widely misunderstood fundamental elements of the object model, such as abstraction, encapsulation, modularity, and hierarchy How to allocate the resources of a team of developers and manage the risks associated with developing complex software systems An appendix on object-oriented programming languages This is the seminal text for anyone who wishes to use object-oriented technology to manage the complexity inherent in many kinds of systems. Sidebars Preface Acknowledgments About the Authors Section I: Concepts Chapter 1: Complexity Chapter 2: The Object Model Chapter 3: Classes and Objects Chapter 4: Classification Section II: Method Chapter 5: Notation Chapter 6: Process Chapter 7: Pragmatics Chapter 8: System Architecture: Satellite-Based Navigation Chapter 9: Control System: Traffic Management Chapter 10: Artificial Intelligence: Cryptanalysis Chapter 11: Data Acquisition: Weather Monitoring Station Chapter 12: Web Application: Vacation Tracking System Appendix A: Object-Oriented Programming Languages Appendix B: Further Reading Notes Glossary Classified Bibliography Index

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