A Concise And Practical Introduction To Programming Algorithms In Java

"Topology can present significant challenges for undergraduate students of mathematics and the sciences. 'Understanding topology' aims to change that. The perfect introductory topology textbook, 'Understanding topology' requires only a knowledge of calculus and a general familiarity with set theory and logic. Equally approachable and rigorous, the book's clear organization, worked examples, and concise writing style support a thorough understanding of basic topological principles. Professor Shaun V. Ault's unique emphasis on fascinating applications, from chemical dynamics to determining the shape of the universe, will engage students in a way traditional topology textbooks do not"--Back cover. Explore a concise and practical introduction to implementation methods and the theory of digital control systems on microcontrollers Embedded Digital Control: Implementation on ARM Cortex-M Microcontrollers delivers expert instruction in digital control system implementation techniques on the widely used ARM Cortex-M microcontroller. The accomplished authors present the included information in three phases. First, they describe how to implement prototype digital control

systems via the Python programming language in order to help the reader better understand theoretical digital control concepts. Second, the book offers readers direction on using the C programming language to implement digital control systems on actual microcontrollers. This will allow readers to solve real-life problems involving digital control, robotics, and mechatronics. Finally, readers will learn how to merge the theoretical and practical issues discussed in the book by implementing digital control systems in real-life applications. Throughout the book, the application of digital control systems using the Python programming language ensures the reader can apply the theory contained within. Readers will also benefit from the inclusion of: A thorough introduction to the hardware used in the book, including STM32 Nucleo Development Boards and motor drive expansion boards An exploration of the software used in the book, including MicroPython, Keil uVision, and Mbed Practical discussions of digital control basics, including discrete-time signals, discrete-time systems, linear and time-invariant systems, and constant coefficient difference equations An examination of how to represent a continuous-time system in digital form, including analog-to-digital conversion and digital-to-analog conversion Perfect for undergraduate students in electrical engineering, Embedded Digital Control: Implementation on ARM Cortex-M Microcontrollers will also earn a place in the libraries of

professional engineers and hobbyists working on digital control and robotics systems seeking a one-stop reference for digital control systems on microcontrollers.

Here is a convenient, concise reference book for pump users, application engineers, technicians, and buyers. It contains, in condensed form, valuable information on selecting centrifugal and positive-displacement pumps for given applications, creating the necessary documentation, choosing equipment manufacturers, and checking vendor data. You will find a complete explanation of the types of pumps and the terms and parameters used in pump applications. This book outlines the data required by the client, engineer, and buyer to obtain a comprehensive quote.

Students with diverse backgrounds will face a multitude of decisions in a variety of engineering, scientific, industrial, and financial settings. They will need to know how to identify problems that the methods of operations research (OR) can solve, how to structure the problems into standard mathematical models, and finally how to apply or develop computational tools to solve the problems. Perfect for any one-semester course in OR, Operations Research: A Practical Introduction answers all of these needs. In addition to providing a practical introduction and guide to using OR techniques, it includes a timely examination of innovative

methods and practical issues related to the development and use of computer implementations. It provides a sound introduction to the mathematical models relevant to OR and illustrates the effective use of OR techniques with examples drawn from industrial, computing, engineering, and business applications Many students will take only one course in the techniques of Operations Research. Operations Research: A Practical Introduction offers them the greatest benefit from that course through a broad survey of the techniques and tools available for quantitative decision making. It will also encourage other students to pursue more advanced studies and provides you a concise, well-structured, vehicle for delivering the best possible overview of the discipline.

Originally developed for the treatment of borderline personality disorder, dialectical behavior therapy, or DBT, has rapidly become one of the most popular and most effective treatments for all mental health conditions rooted in out-of-control emotions. However, there are limited resources for psychologists seeking to use DBT skills with individual clients. In the tradition of ACT Made Simple, DBT Made Simple provides clinicians with everything they need to know to start using DBT in the therapy room. The first part of this book briefly covers the theory and research behind DBT and explains how DBT differs from traditional cognitive behavioral therapy approaches. The second part focuses on strategies

professionals can use in individual client sessions, while the third section teaches the four skills modules that form the backbone of DBT: core mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness. The book includes handouts, case examples, and example therapist-client dialogue—everything clinicians need to equip their clients with these effective and life-changing skills. Introdução aos Sistemas de Informação Geográfica (GIS), sensoriamento remoto, input e output de dados, qualidade e gerenciamento de dados, funções de análise e implementação.

We are all, to some extent, natural psychics; it is an innate ability. Natural Remote Reviewing offers a concise and practical introduction to expanding your awareness through a mental martial art of self-discovery. The goal of this slim guide is that given some free time, a pen and paper, a little effort, and intention you can have your own experience of verifiable psychic functioning. Nothing esoteric is required. A step by step remote viewing procedure guides you through the process - just sit down, relax, and let your mind tell you things not accessible through your regular senses. Amaze yourself and others! A clear and concise explanation of the history, terms, and methods used in the 20 year US government funded research and operational programme are outlined. Resources are offered for those interested in continuing with their research into

this fascinating topic; ourselves.

A concise practical introduction to the history, characteristics, structure, operation, and use of expert systems. Provides programmers with sufficient insight and guidance to enable them to construct an expert system shell using a favorite programming language. Shows how to develp and maintain expert systems, and how to tackle technical problems unique to the field. There's also advice on how to access new applications.

A concise and practical introduction to the foundations and engineering principles of self-adaptation Though it has recently gained significant momentum, the topic of self-adaptation remains largely under-addressed in academic and technical literature. This book changes that. Using a systematic and holistic approach, An Introduction to Self-adaptive Systems: A Contemporary Software Engineering Perspective provides readers with an accessible set of basic principles, engineering foundations, and applications of self-adaptation in software-intensive systems. It places self-adaptation in the context of techniques like uncertainty management, feedback control, online reasoning, and machine learning while acknowledging the growing consensus in the software engineering community that self-adaptation will be a crucial enabling feature in tackling the challenges of new, emerging, and future systems. The author combines cutting-edge technical

research with basic principles and real-world insights to create a practical and strategically effective guide to self-adaptation. He includes features such as: An analysis of the foundational engineering principles and applications of self-adaptation in different domains, including the Internet-of-Things, cloud computing, and cyber-physical systems End-of-chapter exercises at four different levels of complexity and difficulty An accompanying author-hosted website with slides, selected exercises and solutions, models, and code Perfect for researchers, students, teachers, industry leaders, and practitioners in fields that directly or peripherally involve software engineering, as well as those in academia involved in a class on self-adaptivity, this book belongs on the shelves of anyone with an interest in the future of software and its engineering. Previously published by the National League of Cities, this book will enable you to put everything related to zoning in context. As stated in the book's Introduction by renown Land Use Attorney Dwight H. Merriam, FAICP, this book is "essential reading for every citizen who is interested in understanding this important aspect of the operation of their local government.... ZONING 101 will turn the novice into an expert, and reinforce an expert's understanding of ... the seven basic elements that form the center of the universe for all zoning ordinances." The Connecticut Conference of Municipalities finds it "written in a concise, easy-to-

read style, the primer introduces and explains the basic philosophy, and administration of modern zoning ordinances. The book is designed to be accessible and informative for busy local elected officials, and will be a handy reference tool for staff professionals, especially in smaller communities with limited personnel and resources for planning and zoning. The book features a section on "the seven basic elements of zoning," and a glossary. Other focuses include application processing, planned unit developments, overlay zones, subdivisions, performance zoning, and enforcement procedures. There also are practical tips on how to tackle difficult zoning situations and ways to involve the public in a positive manner on zoning issues." The authors also wrote a companion book entitled "Planning Cities 101: A Practical Introduction," as well as a guide published by the International City/County Management Association entitled "Establishing Effective Citizens Advisory Committees," and a book entitled THE NEW CITY MANAGER - A STUDY IN GOVERNMENT ETHICS. A concise and practical introduction to the new European Code of Practice for Design of Concrete Structures, EC2. This book guides the reader through the background to the Eurocodes and explains the main differences between them and the equivalent Standard Codes of Practice. An Introduction to Eurocode 2 will be invaluable for engineers who need to learn about the new code and how it

can be used effectively in design.

This book provides a concise and practical introduction to EU competition law. Written by practitioners with day-to-day experience of advising businesses on the impact of the competition rules, the emphasis is firmly on commercial relevance. First Published in 1996. Routledge is an imprint of Taylor & Francis, an informa company.

Demonstrates how anyone in math, science, and engineering canmaster DFT calculations Density functional theory (DFT) is one of the most frequentlyused computational tools for studying and predicting the propertiesof isolated molecules, bulk solids, and material interfaces,including surfaces. Although the theoretical underpinnings of DFTare quite complicated, this book demonstrates that the basicconcepts underlying the calculations are simple enough to beunderstood by anyone with a background in chemistry, physics,engineering, or mathematics. The authors show how the widespreadavailability of powerful DFT codes makes it possible for studentsand researchers to apply this important computational technique toa broad range of fundamental and applied problems. Density Functional Theory: A Practical Introductionoffers a concise, easy-to-follow introduction to the key conceptsand practical applications of DFT, focusing on plane-wave DFT. Theauthors have many years of experience introducing DFT

to studentsfrom a variety of backgrounds. The book therefore offers severalfeatures that have proven to be helpful in enabling students tomaster the subject, including: Problem sets in each chapter that give readers the opportunityto test their knowledge by performing their own calculations Worked examples that demonstrate how DFT calculations are usedto solve real-world problems Further readings listed in each chapter enabling readers toinvestigate specific topics in greater depth This text is written at a level suitable for individuals from avariety of scientific, mathematical, and engineering backgrounds.No previous experience working with DFT calculations is needed. A Concise and Practical Introduction to Programming Algorithms in Java has two main goals. The first is for novice programmers to learn progressively the basic concepts underlying most imperative programming languages using Java. The second goal is to introduce new programmers to the very basic principles of thinking the algorithmic way and turning the algorithms into programs using the programming concepts of Java. The book is divided into two parts and includes: The fundamental notions of variables, expressions and assignments with type checking - Conditional and loop statements - Explanation of the concepts of functions with pass-by-value arguments and recursion - Fundamental sequential and bisection search techniques - Basic iterative and recursive sorting algorithms. Each chapter of the book concludes with a set of exercises to

enable students to practice concepts covered.

Modern businesses depend on data for their very survival, creating a need for sophisticated databases and database technologies to help store, organise and transport their valuable data. This updated and expanded, easy-to-read textbook/reference presents a comprehensive introduction to databases, opening with a concise history of databases and of data as an organisational asset. As relational database management systems are no longer the only database solution, the book takes a wider view of database technology, encompassing big data, NoSQL, object and object-relational, and in-memory databases. Presenting both theoretical and practical elements, the new edition also examines the issues of scalability, availability, performance and security encountered when building and running a database in the real world. Topics and features: Presents review and discussion questions at the end of each chapter, in addition to skill-building, hands-on exercises Provides new material on database adaptiveness, integration, and efficiency in relation to data growth Introduces a range of commercial databases and encourages the reader to experiment with these in an associated learning environment Reviews use of a variety of databases in business environments, including numerous examples Discusses areas for further research within this fast-moving domain With its learning-by-doing approach, supported by both theoretical and practical examples, this clearly-structured textbook will be of great value to advanced undergraduate and postgraduate students of computer

science, software engineering, and information technology. Practising database professionals and application developers will also find the book an ideal reference that addresses today's business needs.

This work introduces the reader to the world of digital forensics in a practical and accessible manner. The text was written to fulfill a need for a book that introduces forensic methodology and sound forensic thinking, combined with hands-on examples for common tasks in a computer forensic examination. The author has several years of experience as a computer forensics examiner and is now working as a university-level lecturer. Guide to Digital Forensics: A Concise and Practical Introduction is intended for students that are looking for an introduction to computer forensics and can also be used as a collection of instructions for practitioners. The aim is to describe and explain the steps taken during a forensic examination, with the intent of making the reader aware of the constraints and considerations that apply during a fo rensic examination in law enforcement and in the private sector. Upon reading this book, the reader should have a proper overview of the field of digital forensics, starting them on the journey of becoming a computer forensics expert.

Agent-based modeling is a new technique for understanding how the dynamics of biological, social, and other complex systems arise from the characteristics and behaviors of the agents making up these systems. This innovative textbook gives students and scientists the skills to design, implement, and analyze agent-based

models. It starts with the fundamentals of modeling and provides an introduction to NetLogo, an easy-to-use, free, and powerful software platform. Nine chapters then each introduce an important modeling concept and show how to implement it using NetLogo. The book goes on to present strategies for finding the right level of model complexity and developing theory for agent behavior, and for analyzing and learning from models. Agent-Based and Individual-Based Modeling features concise and accessible text, numerous examples, and exercises using small but scientific models. The emphasis throughout is on analysis--such as software testing, theory development, robustness analysis, and understanding full models--and on design issues like optimizing model structure and finding good parameter values. The first hands-on introduction to agent-based modeling, from conceptual design to computer implementation to parameterization and analysis Provides an introduction to NetLogo with nine chapters introducing an important modeling concept and showing how to implement it using NetLogo Filled with examples and exercises, with updates and supplementary materials at http://www.railsback-grimm-abm-book.com/ Designed for students and researchers across the biological and social sciences Written by leading practitioners Leading universities that have adopted this book include: Amherst College Brigham Young University Carnegie Mellon University Cornell University Miami University Northwestern University Old Dominion University Portland State University Rhodes College Susquehanna University University College, Dublin University of

Arizona University of British Columbia University of Michigan University of South Florida University of Texas at Austin University of Virginia

An easily-digestible and fully updated view of CMMI for practitioners as well as executives, managers and the simply curious.

This book makes use of the LISP programming language to provide readers with the necessary background to understand and use fuzzy logic to solve simple to medium-complexity real-world problems. It introduces the basics of LISP required to use a Fuzzy LISP programming toolbox, which was specifically implemented by the author to "teach" the theory behind fuzzy logic and at the same time equip readers to use their newly-acquired knowledge to build fuzzy models of increasing complexity. The book fills an important gap in the literature, providing readers with a practice-oriented reference guide to fuzzy logic that offers more complexity than popular books yet is more accessible than other mathematical treatises on the topic. As such, students in first-year university courses with a basic tertiary mathematical background and no previous experience with programming should be able to easily follow the content. The book is intended for students and professionals in the fields of computer science and engineering, as well as disciplines including astronomy, biology, medicine and earth sciences. Software developers may also benefit from this book, which is intended as both an introductory textbook and self-study reference guide to fuzzy logic and its applications. The complete set of functions that make up the Fuzzy LISP programming

toolbox can be downloaded from a companion book's website.

As a mental health nurse, possessing an ethical sensibility and developing ethical reasoning is vital. This book is a practical introduction to the skills and knowledge the mental health nurse is professionally required to develop in their journey towards effectively managing complex ethical decisions. Written with the training mental health nurse in mind, this book is a clear and concise guide on how to approach common, ethically-complex situations mental health nurses will eventually find themselves faced with. It includes textboxes which take the reader into a 'real world' scenario to help them explore the moral and ethical issues discussed throughout the chapter. To ensure professional currency, the content of this book is mapped to the Nursing and Midwifery Council's pre-registration education standards of 2010, and uses a scenario-based approach in order to provide a pragmatic and robust resource. A Practical Introduction to Mental Health Ethics is essential reading for pre-registration mental health nursing students, while also being of value to registered mental health nurses working in ethically challenged areas such as dementia care, psychiatric intensive care units. The Routledge Introductions to Applied Linguistics series takes an innovative 'practice to theory' approach, with a 'back-to-front' structure. This leads the reader from real-world problems and issues, through a discussion of intervention and how to engage with these concerns, before finally relating these practical issues to theoretical foundations. Exploring Language Assessment and Testing offers a straightforward and

accessible introduction that starts from real-world experiences and uses practical examples to introduce the reader to the academic field of language assessment and testing. Extensively updated, with additional features such as reader tasks (with extensive commentaries from the author), a glossary of key terms and an annotated further reading section, this second edition provides coverage of recent theoretical and technological developments and explores specific purposes for assessment. Including concrete models and examples to guide readers into the relevant literature, this book also offers practical guidance for educators and researchers on designing, developing and using assessments. Providing an inclusive and impartial survey of both classroom-based assessment by teachers and larger-scale testing, this is an indispensable introduction for postgraduate and advanced undergraduate students studying Language Education, Applied Linguistics and Language Assessment.

This book is a concise single volume guide to studying Shakespeare, covering practical as well as theoretical issues. The text deals with the major topics on a chapter-by-chapter basis, starting with why we study Shakespeare, through Shakespeare and multimedia, to a final chapter on Shakespeare and Theory. Current trends and recent developments in Shakespearean studies are also discussed, with an emphasis on the contextualisation of Shakespeare, historical appropriations of his work and the debate concerning his place in the literary canon. Extensive reference is made to a variety of developing media, e.g. film, audio cassette, video, CD-Rom and global digital networks,

bringing the study of Shakespeare into the twentieth century.

For Parents and Teachers! The parent and teacher section defines who capable kids are, the problems and needs they face, and the many ways parents and teachers can help them develop coping strategies. Topics include the definition of giftedness, emotional development, social development, moral development, perfectionism, boredom, drug and alcohol abuse, eating disorders, family functioning, and much more. Extensive and current reference and resource listings are included.

This book provides a concise introduction to important aspects of contemporary innovation policy, with particular emphasis on its impact on economic growth and development. It addresses a non-specialist audience interested in quickly building background knowledge, getting familiar with the terminology, and understanding core concerns and debates in this area of policy. The book has its origins in a more extensive report to the World Bank prepared to impart background information to middle- and upper-level policy decision-makers and analysts as well as stakeholders from industry and universities from developing countries prior to engaging in intensive "how-to" policy training. Our audience also includes upper-level undergraduate and graduate students embarking on the study of innovation policy. Featuring contributions from leading scholars and policy experts, this volume references critical readings presents a wide array of data, on the following topics: Fundamentals of Innovation Policy for Growth and Development University Entrepreneurship Strategic Alliances /

Knowledge-Intensive Partnerships Clusters / Science Parks / Knowledge Business Incubators High Risk Finance Intellectual Property, Standards

This easy-to-read textbook/reference presents a comprehensive introduction to databases, opening with a concise history of databases and of data as an organisational asset. As relational database management systems are no longer the only database solution, the book takes a wider view of database technology, encompassing big data, NoSQL, object and object-relational and in-memory databases. The text also examines the issues of scalability, availability, performance and security encountered when building and running a database in the real world. Topics and features: presents review and discussion questions at the end of each chapter, in addition to skill-building, hands-on exercises; introduces the fundamental concepts and technologies in database systems, placing these in an historic context; describes the challenges faced by database professionals; reviews the use of a variety of database types in business environments; discusses areas for further research within this fast-moving domain.

This book describes the Property Specification Language PSL, recently standardized as IEEE Standard 1850-2005. PSL was developed to fulfill the following requirements: easy to learn, write, and read; concise syntax; rigorously well-defined formal semantics; expressive power, permitting the specification for a large class of real world design properties; known efficient underlying algorithms in simulation, as well as formal

verification. Basic features are covered, as well as advanced topics such as the use of PSL in multiply-clocked designs. A full chapter is devoted to common errors, gathered through the authors' many years of experience in using and teaching the language. A Concise and Practical Introduction to Programming Algorithms in JavaSpringer Science & Business Media Introducing the best one-step source of practical health information management guidance. In this text your students will find information they need to know for every key area of health information management -- information management standards and requirements ... clinical data systems ... computerized patient records ... confidentiality and security issues ... quality improvement ... telemedicine, people management issues ... and much more! A clear, concise introduction to this healing art. Step-by-step techniques and sequences illustrated with colour photos. Modern businesses depend on data for their very survival, creating a need for sophisticated databases and database technologies to help store, organise and transport their valuable data. This updated and expanded, easy-to-read textbook/reference presents a comprehensive introduction to databases, opening with a concise history of databases and of data as an organisational asset. As relational database management systems are no longer the only database solution, the book takes a wider view of database technology, encompassing big data, NoSQL, object and

object-relational, and in-memory databases. Presenting both theoretical and practical elements, the new edition also examines the issues of scalability, availability, performance and security encountered when building and running a database in the real world. Topics and features: Presents review and discussion questions at the end of each chapter, in addition to skill-building, hands-on exercises Provides new material on database adaptiveness, integration, and efficiency in relation to data growth Introduces a range of commercial databases and encourages the reader to experiment with these in an associated learning environment Reviews use of a variety of databases in business environments, including numerous examples Discusses areas for further research within this fast-moving domain With its learning-by-doing approach, supported by both theoretical and practical examples, this clearly-structured textbook will be of great value to advanced undergraduate and postgraduate students of computer science, software engineering, and information technology. Practising database professionals and application developers will also find the book an ideal reference that addresses today's business needs. Konstantinos Domdouzis is senior lecturer in the Communication and Computing Research Centre at Sheffield Hallam University, UK. Peter Lake (now retired) was formerly course leader for the Oracle IT&M MSc and the IT Professional MSc at Sheffield Hallam University. Paul Crowther (now retired) was formerly head of postgraduatetaught programmes in the Faculty of Arts, Computing, Engineering and Sciences at Sheffield Hallam University.

"The Oxford Handbook on Deaf Studies Series began in 2010 with it first volume. The series presents state-of-the art information across an array of topics pertinent to deaf individuals and deaf learners, such as cognition, neuroscience, attention, memory, learning, and language. The present handbook, The Oxford Handbook on Deaf Studies in Literacy, is the 5th in this series, rounding out the topics with the most up-to-date information on literacy learning among deaf and hard of hearing learners (DHH)"--
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