

69mb File Electrical Estimating And Costing By Jb

This report looks at the role of the energy sector in moving towards a green growth model and the policies to facilitate the transition.

Microservices is an architectural style that structures an application as a collection of distributed services. Microservices are certainly appealing but there are many questions that should be asked prior to diving into this architectural style: How do I deal with an unreliable network in a distributed architecture? How do I test my services? How do I monitor them? How do I package and execute them? That's when Quarkus comes into play. In this fascicle, you will learn Quarkus but also its ecosystem. You will discover Quarkus internals and how you can use it to build REST and reactive microservices, bind and process JSON or access datastores in a transactional way. With Cloud Native and GraalVM in mind, Quarkus makes packaging and orchestrating your microservices with Docker and Kubernetes easy. This fascicle has a good mix of theory and practical examples. It is the companion book of Practising Quarkus 1.x where you learn how to develop an entire microservice architecture.

Mixing Secrets for the Small Studio Routledge

Simulation of Power Electronics Converters Using PLECS® is a guide to simulating a power electronics circuit using the latest powerful software for power electronics circuit simulation purposes. This book assists engineers gain an increased understanding of circuit operation so they can, for a given set of specifications, choose a topology, select appropriate circuit component types and values, estimate circuit performance, and complete the design by ensuring that the circuit performance will meet specifications even with the anticipated variations in operating conditions and circuit component values. This book covers the fundamentals of power electronics converter simulation, along with an analysis of power electronics converters using PLECS. It concludes with real-world simulation examples for applied content, making this book useful for all those in the electrical and electronic engineering field. Contains unique examples on the simulation of power electronics converters using PLECS® Includes explanations and guidance on all included simulations for re-doing the simulations Incorporates analysis and design for rapidly creating power electronics circuits with high accuracy

The official hardcover strategy guide from Pokmon for the Pokmon Sun & Pokmon Moon video games! Be prepared for each part of your journey with the step-by-step walkthrough and extensive hints in Pokmon Sun & Pokmon Moon: The Official Strategy Guide! From your first steps as a Trainer and through your adventure, this guide has the info and tips to help you play like the very best. Here's what you'll find inside: -8 high-quality double sided lithographs of concept artwork in a protective sleeve -Premium Hardcover -Detailed walkthrough of the brand-new Pokmon games! -Locations of where to catch Pokmon! -Lists of moves, items, and more--including how to obtain them! -Helpful tips for getting the most out of communication features! -Pullout map of the region!

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500 Common Chinese Proverbs and Colloquial Expressions is a dictionary of key Chinese proverbs or *suyu*. *Suyu* are vivid and colourful expressions widely used in Chinese language. The smooth use of *chengyu* in Chinese writing and of *suyu* in spoken Chinese not only makes communication more effective, it is also an indicator of mastery of the language. This dictionary will provide an ideal resource for all intermediate to advanced learners of Chinese. Concise and practical, it draws upon a large corpus of authentic language data to present 500 of the most commonly used Chinese *suyu*. The *suyu* are listed and organised according to their frequency, enabling easy and convenient access for the reader. Each proverb listing: is given in both simplified and traditional characters offers an English translation, followed by English equivalents is followed by two examples, written in Chinese, Pinyin and English, plus explanations and usage notes. Examples are given in the form of dialogues reflecting typical situations, and helpful cultural annotations are provided throughout. A Pinyin index, a stroke index and a Chinese word index are presented at the back of the book and accompanying audio is also available for free download at www.routledge.com/9780415501491. Recorded by native speakers and covering the whole range of proverbs, expressions and example sentences featured in the book, this invaluable resource will help students to build up strong comprehension and communication skills. This dictionary is suitable both for class use and independent study and will be of keen interest to students and teachers of Chinese alike.

AutoCAD "RM" 2000i from the Autodesk Student Portfolio is a streamlined, forward-looking release of the world's leading CAD software. New features -- including web publishing -- bring the power of the Internet to your fingers and provide real time access to the latest design tools, information and training. This fully functional software, completely compatible with AutoCAD 2000, extends the reach of AutoCAD beyond the classroom or the lab. Expand your horizons and take a big step toward achieving your career goals with this valuable student priced design tool.

This is the first monograph dedicated to this interdisciplinary research area, combining the views of music, computer science, education, creativity studies, psychology, and engineering. The contributions include introductions to ubiquitous music research, featuring theory, applications, and technological development, and descriptions of permanent community initiatives such as virtual forums, multi-institutional research projects, and collaborative publications. The book will be of value to researchers and educators in all domains engaged with creativity, computing, music, and digital arts.

Up to now, the best way to get information on 5-axis machining has been by talking to experienced peers in the industry, in hopes that they will share what they learned. Visiting industrial tradeshow and talking to machine tool and Cad/Cam vendors is another option, only these people will all give you their point of view and will undoubtedly promote their machine or solution. This unbiased, no-nonsense, to-the-point description of 5-axis machining presents information that was gathered during the author's 30 years of hands-on experience in the manufacturing industry, bridging countries and continents, multiple languages - both human and G-Code. As the only book of its kind, Secrets of 5-Axis Machining will demystify the subject and bring it within the reach of anyone who is interested in using this technology to its

full potential, and is not specific to one particular CAD/CAM system. It is sure to empower readers to confidently enter this field, and by doing so, become better equipped to compete in the global market. Principles of Asynchronous Circuit Design - A Systems Perspective addresses the need for an introductory text on asynchronous circuit design. Part I is an 8-chapter tutorial which addresses the most important issues for the beginner, including how to think about asynchronous systems. Part II is a 4-chapter introduction to Balsa, a freely-available synthesis system for asynchronous circuits which will enable the reader to get hands-on experience of designing high-level asynchronous systems. Part III offers a number of examples of state-of-the-art asynchronous systems to illustrate what can be built using asynchronous techniques. The examples range from a complete commercial smart card chip to complex microprocessors. The objective in writing this book has been to enable industrial designers with a background in conventional (clocked) design to be able to understand asynchronous design sufficiently to assess what it has to offer and whether it might be advantageous in their next design task. Production chemistry issues result from changes in well stream fluids, both liquid and gaseous, during processing. Since crude oil production is characterized by variable production rates and unpredictable changes to the nature of the produced fluids, it is essential for production chemists to have a range of chemical additives available for rectifying issues that would not otherwise be fully resolved. Modern production methods, the need to upgrade crude oils of variable quality, and environmental constraints demand chemical solutions. Thus, oilfield production chemicals are necessary to overcome or minimize the effects of the production chemistry problems. Production Chemicals for the Oil and Gas Industry, Second Edition discusses a wide variety of production chemicals used by the oil and gas industry for down-hole and topside applications both onshore and offshore. Incorporating the large amount of research and applications since the first edition, this new edition reviews all past and present classes of production chemicals, providing numerous difficult-to-obtain references, especially SPE papers and patents. Unlike other texts that focus on how products perform in the field, this book focuses on the specific structures of chemicals that are known to deliver the required or desired performance—information that is very useful for research and development. Each updated chapter begins by introducing a problem, such as scale or corrosion, for which there is a production chemical. The author then briefly discusses all chemical and nonchemical methods to treat the problem and provides in-depth descriptions of the structural classes of relevant production chemicals. He also mentions, when available, the environmental properties of chemicals and whether the chemical or technique has been successfully used in the field. This edition includes two new chapters and nearly 50 percent more references.

This report contains information regarding ignitron firing circuitry. It also discusses the theory of cathode spot formation and arc mechanism. Triggering methods are examined with regard to jitter and delay in arc formation and the interaction of the anode and ignitor circuits is illustrated by an equation which defines the capability of a firing system.

If you are a forensic analyst or an information security professional wanting to develop your knowledge of Android forensics, then this is the book for you. Some basic knowledge of the Android mobile platform is expected.

Benford's law states that the leading digits of many data sets are not uniformly distributed from one through nine, but rather exhibit a profound bias. This bias is evident in everything from electricity bills and street addresses to stock prices, population numbers, mortality rates, and the lengths of rivers. Here, Steven Miller brings together many of the world's leading experts on Benford's law to demonstrate the many useful techniques that arise from the law, show how truly multidisciplinary it is, and encourage collaboration. Beginning with the general theory, the contributors explain the prevalence of the bias, highlighting explanations for when systems should and should not follow Benford's law and how quickly such behavior sets in. They go on to discuss important applications in disciplines ranging from accounting and economics to psychology and the natural sciences. The contributors describe how Benford's law has been successfully used to expose fraud in elections, medical tests, tax filings, and financial reports. Additionally, numerous problems, background materials, and technical details are available online to help instructors create courses around the book. Emphasizing common challenges and techniques across the disciplines, this accessible book shows how Benford's law can serve as a productive meeting ground for researchers and practitioners in diverse fields.

Building the Most Complex Structure on Earth provides readers with a basic biological education an easy and understandable introduction into a new epigenetic theory of development and evolution. This is a novel theory that describes the epigenetic mechanisms of the development and evolution of animals and explains the colossal evolution and diversification of animals from a new post-genetic perspective. Modern biology has demonstrated the existence of a common genetic toolkit in the animal kingdom, but neither the number of genes nor the evolution of new genes is responsible for the development and evolution of animals. The failure to understand how the same genetic toolkit is used to produce millions of widely different animal forms remains a perplexing conundrum in modern biology. The novel theory shows that the development and evolution of the animal kingdom are functions of epigenetic mechanisms, which are the competent users of the genetic toolkit. Provides a comprehensive view of the epigenetic aspects of reproduction, development, and evolution. Highly rigorous, but simple enough for readers with only a basic knowledge of biology.

Diffusion MRI remains the most comprehensive reference for understanding this rapidly evolving and powerful technology and is an essential handbook for designing, analyzing, and interpreting diffusion MR experiments. Diffusion imaging provides a unique window on human brain anatomy. This non-invasive technique continues to grow in popularity as a way to study brain pathways that could never before be investigated in vivo. This book covers the fundamental theory of diffusion imaging, discusses its most promising applications to basic and clinical neuroscience, and introduces cutting-edge methodological developments that will shape the field in coming years. Written by leading experts in the field, it places the exciting new results emerging from diffusion imaging in the context of classical anatomical techniques to show where diffusion studies might offer unique insights and where potential limitations lie. Fully revised and updated edition of the first comprehensive reference on a powerful technique in brain imaging Covers all aspects of a diffusion MRI study from acquisition through analysis to interpretation, and from fundamental theory to cutting-edge developments New chapters covering connectomics, advanced diffusion acquisition, artifact removal, and applications to the neonatal brain Provides practical advice on running an experiment Includes discussion of applications in psychiatry, neurology, neurosurgery, and basic neuroscience Full color throughout This book discusses methods for the assessment of energetic compounds through heat of detonation, detonation pressure, velocity and temperature, Gurney energy and power. The authors focus on the detonation pressure and detonation velocity of non-ideal aluminized energetic compounds. This 2nd Edition includes an updated and improved presentation of simple, reliable methods for the design, synthesis and development of novel energetic compounds.

The definitive guide to the National Electric Code—thoroughly revised for 2020 rules and regulations Updated to fully align with the 2020 NEC, this trusted on-the-job reference contains plain-language explanations, advice, and analysis for every provision. You will get discussions of the rationale behind specific rules that enhances your understanding of both meaning and application. This handbook features thousands of detailed diagrams and photos as well as in-depth discussions regarding controversial wording and actual errors, together with possible approaches to discussions with inspectors regarding how to cope with these issues. This book is not published by NFPA, and is therefore free to confront such topics head on. Written by a senior member of the NEC Code Committee, McGraw Hill's National Electrical Code (NEC) 2020 Handbook, 30th Edition is logically arranged and serves as a companion to the Code

itself?the explanation for any topic lines up exactly with the applicable section in the Code. The book does not reproduce the Code, and therefore every column inch is devoted to explaining its provisions. You will get straightforward clarification of obtuse rules and vague language, enabling you to work efficiently and safely—and to achieve full compliance. Covers all significant changes to the 2020 NEC, including: Reconditioned equipment Massive expansion of GFCI requirements New receptacle coverage rules for kitchen islands and peninsulas Total revision of non-dwelling lighting load calculations Elimination of common enclosures for service disconnects Exterior emergency disconnects Rules for stair towers New EGC fill calculations for boxes Temperature limits for LFMC and LFNC Latest developments for PV systems

In this book you will discover how to release and control Cosmic Forces that stagger the imagination - Forces that will change your life in a twinkling, and bring you the things you want. So says Geof Gray-Cobb, and in these pages he gives you proof positive IT CAN BE DONE!

Get your first Android apps up and running with the help of plain English and practical examples. If you have a great idea for an Android app, but have never programmed before, then this book is for you. Android Apps for Absolute Beginners cuts through the fog of jargon and mystery that surrounds Android app development, and gives you simple, step-by-step instructions to get you started. This book teaches Android application development in language anyone can understand, giving you the best possible start in Android development. It provides clean, straightforward examples that make learning easy, allowing you to pick up the concepts without fuss. It offers clear code descriptions and layout so that you can get your apps running as soon as possible Although this book covers what's new in Android 7, it is also backwards compatible to cover some of the previous Android releases. What You'll Learn Download, install, and configure the latest software needed for Android app development Work efficiently using an integrated development environment (IDE) Build useful, attractive applications and get them working immediately Create apps with ease using XML markup and drag-and-drop graphical layout editors Use new media and graphics to skin your app so that it has maximum appeal Create advanced apps combining XML, Java and new media content Who This Book Is For If you have a great idea for an Android app, but have never programmed before, then this book is for you. You don't need to have any previous computer programming skills — as long as you have a desire to learn and you know which end of the mouse is which, the world of Android apps development awaits.

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Sliding Mode Control Using MATLAB provides many sliding mode controller design examples, along with simulation examples and MATLAB® programs. Following the review of sliding mode control, the book includes sliding mode control for continuous systems, robust adaptive sliding mode control, sliding mode control for underactuated systems, backstepping, and dynamic surface sliding mode control, sliding mode control based on filter and observer, sliding mode control for discrete systems, fuzzy sliding mode control, neural network sliding mode control, and sliding mode control for robot manipulators. The contents of each chapter are independent, providing readers with information they can use for their own needs. It is suitable for the readers who work on mechanical and electronic engineering, electrical automation engineering, etc., and can also be used as a teaching reference for universities. Provides many sliding mode controller design examples to help readers solve their research and design problems Includes various, implementable, robust sliding mode control design solutions from engineering applications Provides the simulation examples and MATLAB programs for each sliding mode control algorithm

Power quality problems have increasingly become a substantial concern over the last decade, but surprisingly few analytical techniques have been developed to overcome these disturbances in system-equipment interactions. Now in this comprehensive book, power engineers and students can find the theoretical background necessary for understanding how to analyze, predict, and mitigate the two most severe power disturbances: voltage sags and interruptions. This is the first book to offer in-depth analysis of voltage sags and interruptions and to show how to apply mathematical techniques for practical solutions to these disturbances. From UNDERSTANDING AND SOLVING POWER QUALITY PROBLEMS you will gain important insights into Various types of power quality phenomena and power quality standards Current methods for power system reliability evaluation Origins of voltage sags and interruptions Essential analysis of voltage sags for characterization and prediction of equipment behavior and stochastic prediction Mitigation methods against voltage sags and interruptions Sponsored by: IEEE Power Electronics Society, IEEE Industry Applications Society, IEEE Power Engineering Society.

Marketing: Theory, Evidence, Practice bridges academic theory and real-world marketing knowledge. It introduces students to the core topics necessary for their undergraduate studies and is designed with the future professional in mind. It clearly illustrates how marketing problems have been solved in business - connecting theory to practice. Written by a combination of marketing academics and marketing scientists who engage with industry it presents information that is practical and interesting in a style that is theoretical and accessible.

Discover how to achieve release-quality mixes even in the smallest studios by applying power-user techniques from the world's most successful producers. Mixing Secrets for the Small Studio is the best-selling primer for small-studio enthusiasts who want chart-ready sonics in a hurry. Drawing on the back-room strategies of more than 160 famous names, this entertaining and down-to-earth guide leads you step-by-step through the entire mixing process. On the way, you'll unravel the mysteries of every type of mix processing, from simple EQ and compression through to advanced spectral dynamics and "fairy dust" effects. User-friendly explanations introduce technical concepts on a strictly need-to-know basis, while chapter summaries and assignments are perfect for school and college use. ? Learn the subtle editing, arrangement, and monitoring tactics which give industry insiders their competitive edge, and master the psychological tricks which protect you from all the biggest rookie mistakes. ? Find out where you don't need to spend money, as well as how to make a limited budget really count. ? Pick up tricks and tips from leading-edge engineers working on today's multi-platinum hits, including Derek "MixedByAli" Ali, Michael Brauer, Dylan "3D" Dresdow, Tom Elmhirst, Serban Ghenea, Jacquire King, the Lord-Alge brothers, Tony Maserati, Manny Marroquin, Noah "50" Shebib, Mark "Spike" Stent, DJ Swivel, Phil Tan, Andy Wallace, Young Guru, and many, many more... Now extensively expanded and updated, including new sections on mix-buss processing, mastering, and the latest advances in plug-in technology.

The FreeBSD Handbook is a comprehensive FreeBSD tutorial and reference. It covers installation, day-to-day use of FreeBSD, and much more, such as the Ports collection, creating a custom kernel, security topics, the X Window System, how to use FreeBSD's Linux binary compatibility, and how to upgrade your system from source using the 'make world' command, to

name a few.

The second edition of the definitive guide to cybersecurity law, updated to reflect recent legal developments The revised and updated second edition of Cybersecurity Law offers an authoritative guide to the key statutes, regulations, and court rulings that pertain to cybersecurity. Written by an experienced cybersecurity lawyer and law professor, the second edition includes new and expanded information that reflects the latest changes in laws and regulations. The book includes material on recent FTC data security consent decrees and data breach litigation. Topics covered reflect new laws, regulations, and court decisions that address financial sector cybersecurity, the law of war as applied to cyberspace, and recently updated guidance for public companies' disclosure of cybersecurity risks. This important guide: Provides a new appendix, with 15 edited opinions covering a wide range of cybersecurity-related topics, for students learning via the caselaw method Includes new sections that cover topics such as: compelled access to encrypted devices, New York's financial services cybersecurity regulations, South Carolina's insurance sector cybersecurity law, the Internet of Things, bug bounty programs, the vulnerability equities process, international enforcement of computer hacking laws, the California Consumer Privacy Act, and the European Union's Network and Information Security Directive Contains a new chapter on the critical topic of law of cyberwar Presents a comprehensive guide written by a noted expert on the topic Offers a companion Instructor-only website that features discussion questions for each chapter and suggested exam questions for each chapter Written for students and professionals of cybersecurity, cyber operations, management-oriented information technology (IT), and computer science, Cybersecurity Law, Second Edition is the up-to-date guide that covers the basic principles and the most recent information on cybersecurity laws and regulations. JEFF KOSSEFF is Assistant Professor of Cybersecurity Law at the United States Naval Academy in Annapolis, Maryland. He was a finalist for the Pulitzer Prize, and a recipient of the George Polk Award for national reporting.

The slyly funny, sweetly moving memoir of an unconventional dad's relationship with his equally offbeat son—complete with fast cars, tall tales, homemade explosives, and a whole lot of fun and trouble John Robison was not your typical dad. Diagnosed with Asperger's syndrome at the age of forty, he approached fatherhood as a series of logic puzzles and practical jokes. Instead of a speech about the birds and the bees, he told his son, Cubby, that he'd bought him at the Kid Store—and that the salesman had cheated him by promising Cubby would “do all chores.” While other parents played catch with their kids, John taught Cubby to drive the family's antique Rolls-Royce. Still, Cubby seemed to be turning out pretty well, at least until school authorities decided that he was dumb and stubborn—the very same thing John had been told as a child. Did Cubby have Asperger's too? The answer was unclear. One thing was clear, though: By the time he turned seventeen, Cubby had become a brilliant and curious chemist—smart enough to make military-grade explosives and bring federal agents calling. With Cubby facing a felony trial—and up to sixty years in prison—both father and son were forced to take stock of their lives, finally accepting that being “on the spectrum” is both a challenge and a unique gift.

The first and most comprehensive step-by-step guide on the subject, Watchmaking has become a classic in its own right. This new edition is updated to include a new section which discusses and illustrates a variety of the author's own watches. The author's principal aim in writing this book has been to inspire and encourage the art of watchmaking, especially among a new generation of enthusiasts. The making of the precision timekeeper is described, step by step, and is illustrated at each stage with line drawings and brief explanatory captions. Great care has been taken to ensure the text is easy to follow and to avoid complicated technical descriptions.

Advances in photonics and nanotechnology have the potential to revolutionize humanity's ability to communicate and compute. To pursue these advances, it is mandatory to understand and properly model interactions of light with materials such as silicon and gold at the nanoscale, i.e., the span of a few tens of atoms laid side by side. These interactions are governed by the fundamental Maxwell's equations of classical electrodynamics, supplemented by quantum electrodynamics. This book presents the current state-of-the-art in formulating and implementing computational models of these interactions. Maxwell's equations are solved using the finite-difference time-domain (FDTD) technique, pioneered by the senior editor, whose prior Artech House books in this area are among the top ten most-cited in the history of engineering. This cutting-edge resource helps readers understand the latest developments in computational modeling of nanoscale optical microscopy and microchip lithography, as well as nanoscale plasmonics and biophotonics.

We are all familiar with the idea that machines are powered by electricity, but perhaps not so aware that this is also true for ourselves. The Spark of Life is a spectacular account of the body electric, showing how, from before conception to the last breath we draw, electrical signals in our cells are essential to everything we think and do. These signals are produced by some amazing proteins that sit at the forefront of current scientific research - the ion channels. They are found in every cell in Earth and they govern every aspect of our lives, from consciousness to sexual attraction, fighting infection, our ability to see and hear, and the beating of our hearts. Ion channels are truly the 'spark of life'. Award-winning physiologist Frances Ashcroft weaves real-life stories with the latest scientific findings to explain the fundamental role of ion channels in our bodies. What happens when you have a heart attack? Why does an electric eel not shock itself? Can someone really die of fright? Why does Viagra turn the world blue? How do cocaine, LSD and morphine work? Why do chilli peppers taste hot? How do vampire bats sense their prey? Was Mary Shelley right when she inferred that electricity is the 'Spark of Life? Frances Ashcroft explains all this and more with wit and clarity. She introduces a cast of extraordinary personalities whose work has charted the links between molecule and mind over the centuries. She recounts the scientific detective stories involved in the development of our ideas about animal electricity, and shows how these are intimately entwined with our understanding of electricity itself. And she describes how the latest advances have led to the identification, and in some cases the cure, of a new class of disease. Anyone who has ever wondered about what makes us human will find this book a revelation.

First you'll discover how to make your own U.S. secret military superfood at home. The Doomsday Ration might have cost millions to invent, but it's super cheap to make or replicate! And I bet you'll find most of the ingredients are already in your pantry. Once you've made your first batch, get ready to forget about it—because this superfood will never spoil, even in the harshest conditions and even without refrigeration. You'll always be able to keep your entire family well fed on it just by spending a few dollars each day. Plus, it's also lightweight enough that it belongs in your bug-out bag too.

A Comprehensive review of modern stratigraphic methods. The stratigraphic record is the major repository of information about the geological history of Earth, a record stretching back for nearly 4 billion years. Stratigraphic studies fill out our planet's plate-tectonic history with the details of paleogeography, past climates, and the record of evolution, and stratigraphy is at the heart of the effort to find and exploit fossil fuel resources. Modern stratigraphic methods are now able to provide insights into past geological events and processes on time scales with unprecedented accuracy and precision, and have

added much to our understanding of global tectonic and climatic processes. It has taken 200 years and a modern revolution to bring all the necessary developments together to create the modern, dynamic science that this book sets out to describe. Stratigraphy now consists of a suite of integrated concepts and methods, several of which have considerable predictive and interpretive power. The new, integrated, dynamic science that Stratigraphy has become is now inseparable from what were its component parts, including sedimentology, chronostratigraphy, and the broader aspects of basin analysis.

This book constitutes the refereed proceedings of the 22nd International Conference on Architecture of Computing Systems, ARCS 2009, held in Delft, The Netherlands, in March 2009. The 21 revised full papers presented together with 3 keynote papers were carefully reviewed and selected from 57 submissions. This year's special focus is set on energy awareness. The papers are organized in topical sections on compilation technologies, reconfigurable hardware and applications, massive parallel architectures, organic computing, memory architectures, energy awareness, Java processing, and chip-level multiprocessing.

DB2 9 for z/OS is an exciting new version, with many improvements in performance and little regression. DB2 V9 improves availability and security, as well as adds greatly to SQL and XML functions. Optimization improvements include more SQL functions to optimize, improved statistics for the optimizer, better optimization techniques, and a new approach to providing information for tuning. V8 SQL procedures were not eligible to run on the IBM System z9 Integrated Information Processor (zIIP), but changing to use the native SQL procedures on DB2 V9 makes the work eligible for zIIP processing. The performance of varying length data can improve substantially if there are large numbers of varying length columns. Several improvements in disk access can reduce the time for sequential disk access and improve data rates. The key DB2 9 for z/OS performance improvements include reduced CPU time in many utilities, deep synergy with IBM System z hardware and z/OS software, improved performance and scalability for inserts and LOBs, improved SQL optimization, zIIP processing for remote native SQL procedures, index compression, reduced CPU time for data with varying lengths, and better sequential access. Virtual storage use below the 2 GB bar is also improved. This IBM Redbooks publication provides an overview of the performance impact of DB2 9 for z/OS, especially performance scalability for transactions, CPU, and elapsed time for queries and utilities. We discuss the overall performance and possible impacts when moving from version to version. We include performance measurements that were made in the laboratory and provide some estimates. Keep in mind that your results are likely to vary, as the conditions and work will differ. In this book, we assume that you are familiar with DB2 V9. See DB2 9 for z/OS Technical Overview, SG24-7330, for an introduction to the new functions.

An accessible, one-stop guide to getting the most out of dental photography in clinical practice Dental photography is an increasingly important part of dental care in general practices, hospitals, and specialist clinics. The uses of dental photographs are numerous, such as monitoring treatment outcomes, educating patients, promoting services, and providing evidence for litigation or regulatory purposes. Essentials of Dental Photography is a user-friendly guide to incorporating dental photographs into daily practice. Containing real-world advice and proven techniques, this book helps clinicians understand and apply the fundamental principles of dental photography. Accessible chapters cover every major aspect of dental photography and answer the most common questions asked by clinicians. Step-by-step instructions show readers how to select the correct photographic and dental equipment, setup equipment for a variety of dental procedures, process images using photo-editing software, and more. The author, a recognised expert in the field, explain the basic concepts of dental photography and how to create high-quality, predictable and repeatable images. Providing an easy-to-follow roadmap to exceptional dental photographs, this practical guide: Covers all the basic concepts, equipment, and techniques of dental photography Illustrates the photographic setups for both intra- and extra-oral images Provides recommendations for appropriate types of cameras, lenses, flashes, reflectors, tripods, and software Discusses photographic archiving, electronic dissemination, printing, publishing, and presenting images Essentials of Dental Photography is a valuable guide for dental practitioners and new graduates looking to learn dental photography and apply it in practice.

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