

## Ac6 System Workbench A New Free Ide For Stm32

A beginner's guide to implementing Continuous Integration and Continuous Delivery using Jenkins About This Book Speed up and increase software productivity and software delivery using Jenkins Automate your build, integration, release, and deployment processes with Jenkins—and learn how continuous integration (CI) can save you time and money Explore the power of continuous delivery using Jenkins through powerful real-life examples Who This Book Is For This book is for anyone who wants to exploit the power of Jenkins. This book serves a great starting point for those who are in the field DevOps and would like to leverage the benefits of CI and continuous delivery in order to increase productivity and reduce delivery time. What You Will Learn Take advantage of a continuous delivery solution to achieve faster software delivery Speed up productivity using a continuous Integration solution through Jenkins Understand the concepts of CI and continuous delivery Orchestrate many DevOps tools using Jenkins to automate builds, releases, deployment, and testing Explore the various features of Jenkins that make DevOps activities a piece of cake Configure multiple build machines in Jenkins to maintain load balancing Manage users, projects, and permissions in Jenkins to ensure better security Leverage the power of plugins in Jenkins In Detail In past few years, Agile software development has seen tremendous growth across the world. There is huge demand for software delivery solutions that are fast yet flexible to frequent amendments. As a result, CI and continuous delivery methodologies are gaining popularity. Jenkins' core functionality and flexibility allows it to fit in a variety of environments and can help streamline the development process for all stakeholders. This book starts off by explaining the concepts of CI and its significance in the Agile world with a whole chapter dedicated to it. Next, you'll learn to configure and set up Jenkins. You'll gain a foothold in implementing CI and continuous delivery methods. We dive into the various features offered by Jenkins one by one exploiting them for CI. After that, you'll find out how to use the built-in pipeline feature of Jenkins. You'll see how to integrate Jenkins with code analysis tools and test automation tools in order to achieve continuous delivery. Next, you'll be introduced to continuous deployment and learn to achieve it using Jenkins. Through this book's wealth of best practices and real-world tips, you'll discover how easy it is to implement a CI service with Jenkins. Style and approach This is a step-by-step guide to setting up a CI and continuous delivery system loaded with hands-on examples

Every researcher in genomics and proteomics now has access to public domain databases containing literally billions of data entries. However, without the right analytical tools, and an understanding of the biological significance of the data, cataloging and interpreting the molecular evolutionary processes buried in those databases is difficult, if not impossible. The first edition of *Bioinformatics Basics: Applications in Biological Science and Medicine* answered the scientific community's need to learn about the bioinformatic tools available to them. That the book continues to be a best seller clearly demonstrates the authors' ability to provide scientists with the understanding to apply those tools to their research. Currently, it is being used as a reference text at MIT and other prestigious institutions. Recognizing the important advances in bioinformatics since their last edition, Buehler and Rashidi have produced a completely revised and updated version of their pioneering work. To allow scientists to utilize significant databases from around the world, the authors consider some fresh approaches to data analysis while identifying computing techniques that will help them manage the massive flow of information their science requires. New to the second edition: Provides a more detailed view of the field while continuing to focus on the global concept approach that popularized the first edition. Offers the latest approaches to data analysis Introduces recent developments in genomics, microarrays, proteomics, genome mapping, and more. Adds two new sections offering insights from other experts in bioinformatics. *Bioinformatics Basics* is not intended to

serve as a training manual for bioinformaticians. Instead, it's designed to help the general scientific community gain a thorough understanding of what bioinformatics tools are available to them and the best ways these tools can be utilized and adapted to meet the needs of their specific interests and projects.

Build a strong foundation in designing and implementing real-time systems with the help of practical examples  
Key Features  
Get up and running with the fundamentals of RTOS and apply them on STM32  
Enhance your programming skills to design and build real-world embedded systems  
Get to grips with advanced techniques for implementing embedded systems  
Book Description  
A real-time operating system (RTOS) is used to develop systems that respond to events within strict timelines. Real-time embedded systems have applications in various industries, from automotive and aerospace through to laboratory test equipment and consumer electronics. These systems provide consistent and reliable timing and are designed to run without intervention for years. This microcontrollers book starts by introducing you to the concept of RTOS and compares some other alternative methods for achieving real-time performance. Once you've understood the fundamentals, such as tasks, queues, mutexes, and semaphores, you'll learn what to look for when selecting a microcontroller and development environment. By working through examples that use an STM32F7 Nucleo board, the STM32CubeIDE, and SEGGER debug tools, including SEGGER J-Link, Ozone, and SystemView, you'll gain an understanding of preemptive scheduling policies and task communication. The book will then help you develop highly efficient low-level drivers and analyze their real-time performance and CPU utilization. Finally, you'll cover tips for troubleshooting and be able to take your new-found skills to the next level. By the end of this book, you'll have built on your embedded system skills and will be able to create real-time systems using microcontrollers and FreeRTOS. What you will learn  
Understand when to use an RTOS for a project  
Explore RTOS concepts such as tasks, mutexes, semaphores, and queues  
Discover different microcontroller units (MCUs) and choose the best one for your project  
Evaluate and select the best IDE and middleware stack for your project  
Use professional-grade tools for analyzing and debugging your application  
Get FreeRTOS-based applications up and running on an STM32 board  
Who this book is for  
This book is for embedded engineers, students, or anyone interested in learning the complete RTOS feature set with embedded devices. A basic understanding of the C programming language and embedded systems or microcontrollers will be helpful.

Book 4 of the Uxel Herum Saga  
Uxel Herum's plan to infiltrate the Imperium capital world quickly begins to go awry. While she initially hoped to act as a spy for the strozzi she is now little more than a glorified prisoner. Will she be able to complete her mission... alive? This young adult science fiction novelette is approximately 10,100 words.

When Fortune Magazine estimated that 70% of all strategies fail, it also noted that most of these strategies were basically sound, but could not be executed. The central premise of Strategic Project Management Made Simple is that most projects and strategies never get off the ground because of adhoc, haphazard, and obsolete methods used to turn their ideas into coherent and actionable plans. Strategic Project Management Made Simple is the first book to couple a step-by-step process with an interactive thinking tool that takes a strategic approach to designing projects and action initiatives. Strategic Project Management Made Simple builds a solid platform upon four critical questions that are vital for teams to intelligently answer in order to create their own strong, strategic foundation. These questions are: 1. What are we trying to accomplish and why? 2. How will we measure success? 3. What other conditions must exist? 4. How do we get there? This fresh approach begins with clearly understanding the what and why of a project - comprehending the bigger picture goals that are often given only lip service or cursory reviews. The second and third questions clarify success measures and identify the risky assumptions that can later cause pain if not spotted early. The how questions

- what are the activities, budgets, and schedules - comes last in our four-question system. By contrast, most project approaches prematurely concentrate on the how without first adequately addressing the three other questions. These four questions guide readers into fleshing out a simple, yet sophisticated, mental workbench called "the Logical Framework" - a Systems Thinking paradigm that lays out one's own project strategy in an easily accessible, interactive 4x4 matrix. The inclusion of memorable features and concepts (four critical questions, LogFrame matrix, If-then thinking, and Implementation Equation) make this book unique. Python is a powerful programming language that's easy to learn and fun to play with. But once you've gotten a handle on the basics, what do you do next? Python Playground is a collection of imaginative programming projects that will inspire you to use Python to make art and music, build simulations of real-world phenomena, and interact with hardware like the Arduino and Raspberry Pi. You'll learn to use common Python tools and libraries like numpy, matplotlib, and pygame to do things like: -Generate Spirograph-like patterns using parametric equations and the turtle module -Create music on your computer by simulating frequency overtones -Translate graphical images into ASCII art -Write an autostereogram program that produces 3D images hidden beneath random patterns -Make realistic animations with OpenGL shaders by exploring particle systems, transparency, and billboarding techniques -Construct 3D visualizations using data from CT and MRI scans -Build a laser show that responds to music by hooking up your computer to an Arduino Programming shouldn't be a chore. Have some solid, geeky fun with Python Playground. The projects in this book are compatible with both Python 2 and 3.

"Markov random field (MRF) theory provides a basis for modeling contextual constraints in visual processing and interpretation. When used with optimization principles, it also enables systematic development of optimal vision algorithms. This book presents a comprehensive study on the use of MRFs for solving computer vision problems, with an introduction to fundamental theories, formulations of MRF vision models, MRF parameter estimation, and optimization algorithms. Various vision models are presented in a unified framework, including image restoration and reconstruction, edge and region segmentation, texture, stereo and motion, object matching and recognition, and pose estimation. This updated edition includes the important progress made in Markov modeling in image analysis in recent years, such as Markov modeling of images with "macro" patterns (the FRAME model, for one), Markov chain Monte Carlo (MCMC) methods, and reversible jump MCMC."--BOOK JACKET.Title Summary field provided by Blackwell North America, Inc. All Rights Reserved

Readers will find here a book that constitutes the thoroughly refereed post-proceedings of the First International Conference on Test and Proofs, held in Zurich, Switzerland in February 2007. The 12 revised full papers presented were carefully reviewed and selected for inclusion in the book. The papers are devoted to the convergence of software proofing and testing and feature current research work that combines ideas from both sides to foster software quality.

This new edition has been fully revised and updated to include extensive information on the ARM Cortex-M4 processor, providing a complete up-to-date guide to both Cortex-M3 and Cortex-M4 processors, and which enables migration from various processor architectures to the exciting world of the Cortex-M3 and M4. This book presents the background of the ARM architecture and outlines the features of the processors such as the instruction set, interrupt-handling and also demonstrates how to program and utilize the advanced features available such as the Memory Protection Unit (MPU). Chapters on getting started with IAR, Keil,

gcc and CooCox ColIDE tools help beginners develop program codes. Coverage also includes the important areas of software development such as using the low power features, handling information input/output, mixed language projects with assembly and C, and other advanced topics. Two new chapters on DSP features and CMSIS-DSP software libraries, covering DSP fundamentals and how to write DSP software for the Cortex-M4 processor, including examples of using the CMSIS-DSP library, as well as useful information about the DSP capability of the Cortex-M4 processor A new chapter on the Cortex-M4 floating point unit and how to use it A new chapter on using embedded OS (based on CMSIS-RTOS), as well as details of processor features to support OS operations Various debugging techniques as well as a troubleshooting guide in the appendix topics on software porting from other architectures A full range of easy-to-understand examples, diagrams and quick reference appendices

"This book presents emerging research-based trends in the area of global quality lean six sigma networks and analysis through an interdisciplinary approach focusing on research, cases, and emerging technologies"--Provided by publisher. Bachelor Thesis from the year 2014 in the subject Engineering - Power Engineering, The Technical University of Kenya, course: bachelor of philosophy in technology electrical and electronic engineering, language: English, abstract: This project is based on moisture sensor used to measure humidity content in the soil. The design portion involves mainly a global system for mobile communication and a control circuitry with a microcontroller. This project used some of the softwares like basic language for programming the application software to the microcontroller and visual basic for interfacing the hardware and mobile phone. Protel or workbench schematic software is used for designing the circuit diagram for this project and express prefabricated circuit board (PCB) software is used for designing. Since PCB making is a big process and involves a number of machineries which are expensive and was therefore outsourced. Using DTMF 8870 IC will act as an interface between the user and the system as it is a receiver which links the GSM network, the microcontroller pic16f73 contains the software which states the conditions of the system which can be displayed in a liquid crystal display and transmitted via mobile phone to the dual tone multiple frequency receiver which is part of the control system in the farm. New technologies help in increasing productivity with use of less manpower as well as conservation of water in the process.

This book constitutes the refereed proceedings of the 23rd International Conference on Distributed and Computer and Communication Networks, DCCN 2020, held in Moscow, Russia, in September 2020. Due to the COVID-19 pandemic the conference was held online. The 43 papers were carefully reviewed and selected from 167 submissions. The papers are organized in the following topical sections: computer and communication networks and technologies; analytical modeling of distributed systems, and distributed systems applications. .

This book describes an extension of the user behaviour simulation (UBS) of an existing tool for automatic usability evaluation (AUE). This extension is based upon a user study with a smart home system. It uses technical-sociological methods for the execution of the study and the analysis of the collected data. A comparison of the resulting UBS with former UBSs, as well as the empirical data, shows that the new simulation approach outperforms the former simulation. The improvement affects the prediction of dialogue metrics that are related to dialogue efficiency and dialogue effectiveness. Furthermore, the book describes a parameter-based data model, as well as a related framework. Both are used to uniformly describe multimodal human-computer interactions and to provide such descriptions for usability evaluations. Finally, the book proposes a new two-stage method for the evaluation of UBSs. The method is based on the computation of a distance measures between two dialogue corpora and the pair-wise comparison of distances among several dialogue corpora.

Spoken dialog systems have the potential to offer highly intuitive user interfaces, as they allow systems to be controlled using natural language. However, the complexity inherent in natural language dialogs means that careful testing of the system must be carried out from the very beginning of the design process. This book examines how user models can be used to support such early evaluations in two ways: by running simulations of dialogs, and by estimating the quality judgments of users. First, a design environment supporting the creation of dialog flows, the simulation of dialogs, and the analysis of the simulated data is proposed. How the quality of user simulations may be quantified with respect to their suitability for both formative and summative evaluation is then discussed. The remainder of the book is dedicated to the problem of predicting quality judgments of users based on interaction data. New modeling approaches are presented, which process the dialogs as sequences, and which allow knowledge about the judgment behavior of users to be incorporated into predictions. All proposed methods are validated with example evaluation studies.

This user's guide does far more than simply outline the ARM Cortex-M3 CPU features; it explains step-by-step how to program and implement the processor in real-world designs. It teaches readers how to utilize the complete and thumb instruction sets in order to obtain the best functionality, efficiency, and reuseability. The author, an ARM engineer who helped develop the core, provides many examples and diagrams that aid understanding. Quick reference appendices make locating specific details a snap! Whole chapters are dedicated to: Debugging using the new CoreSight technology Migrating effectively from the ARM7 The Memory Protection Unit Interfaces, Exceptions, Interrupts ...and much more! The only available guide to programming and using the groundbreaking ARM Cortex-M3 processor Easy-to-understand examples, diagrams, quick reference appendices, full instruction and Thumb-2 instruction sets are included T teaches end users how to start from the ground up with the M3, and how to migrate from the ARM7

A compilation of expertise in Internet law and in ethical considerations concerning social computing in emergencies.

Written by the founder and executive director of the Quality Assurance Institute, which sponsors the most widely accepted certification program for software testing Software testing

is a weak spot for most developers, and many have no system in place to find and correct defects quickly and efficiently. This comprehensive resource provides step-by-step guidelines, checklists, and templates for each testing activity, as well as a self-assessment that helps readers identify the sections of the book that respond to their individual needs. Covers the latest regulatory developments affecting software testing, including Sarbanes-Oxley Section 404, and provides guidelines for agile testing and testing for security, internal controls, and data warehouses. CD-ROM with all checklists and templates saves testers countless hours of developing their own test documentation. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

Every organization has a core set of mission-critical data that must be protected. Security lapses and failures are not simply disruptions—they can be catastrophic events, and the consequences can be felt across the entire organization. As a result, security administrators face serious challenges in protecting the company's sensitive data. IT staff are challenged to provide detailed audit and controls documentation at a time when they are already facing increasing demands on their time, due to events such as mergers, reorganizations, and other changes. Many organizations do not have enough experienced mainframe security administrators to meet these objectives, and expanding employee skillsets with low-level mainframe security technologies can be time-consuming. The IBM® Security zSecure suite consists of multiple components designed to help you administer your mainframe security server, monitor for threats, audit usage and configurations, and enforce policy compliance. Administration, provisioning, and management components can significantly reduce administration, contributing to improved productivity, faster response time, and reduced training time needed for new administrators. This IBM Redbooks® publication is a valuable resource for security officers, administrators, and architects who wish to better understand their mainframe security solutions.

Using FreeRTOS and libopencm3 instead of the Arduino software environment, this book will help you develop multi-tasking applications that go beyond Arduino norms. In addition to the usual peripherals found in the typical Arduino device, the STM32 device includes a USB controller, RTC (Real Time Clock), DMA (Direct Memory Access controller), CAN bus and more. Each chapter contains clear explanations of the STM32 hardware capabilities to help get you started with the device, including GPIO and several other ST Microelectronics peripherals like USB and CAN bus controller. You'll learn how to download and set up the libopencm3 + FreeRTOS development environment, using GCC. With everything set up, you'll leverage FreeRTOS to create tasks, queues, and mutexes. You'll also learn to work with the I2C bus to add GPIO using the PCF8574 chip. And how to create PWM output for RC control using hardware timers. You'll be introduced to new concepts that are necessary to master the STM32, such as how to extend code with GCC overlays using an external Winbond W25Q32 flash chip. Your knowledge is tested at the end of each chapter with exercises. Upon completing this book, you'll be ready to work with any of the devices in the STM32 family. Beginning STM32 provides the professional, student, or hobbyist a way to learn about ARM without costing an arm! What You'll Learn Initialize and use the libopencm3 drivers and handle interrupts Use DMA to drive a SPI based OLED displaying an analog meter Read PWM from an RC control using hardware timers Who This Book Is For Experienced embedded engineers, students, hobbyists and makers wishing to explore the ARM architecture, going beyond Arduino limits.

This 1993 book offers a wealth of analysis and interpretation of data, from which the author has developed a computer version of a handyman's workbench.

This book proposes a combination of cognitive modeling with model-based user interface development to tackle the problem of maintaining the usability of applications that target several device types at once (e.g., desktop PC, smart phone, smart TV). Model-based

applications provide interesting meta-information about the elements of the user interface (UI) that are accessible through computational introspection. Cognitive user models can capitalize on this meta-information to provide improved predictions of the interaction behavior of future human users of applications under development. In order to achieve this, cognitive processes that link UI properties to usability aspects like effectiveness (user error) and efficiency (task completion time) are established empirically, are explained through cognitive modeling, and are validated in the course of this treatise. In the case of user error, the book develops an extended model of sequential action control based on the Memory for Goals theory and it is confirmed in different behavioral domains and experimental paradigms. This new model of user cognition and behavior is implemented using the MeMo workbench and integrated with the model-based application framework MASP in order to provide automated usability predictions from early software development stages on. Finally, the validity of the resulting integrated system is confirmed by empirical data from a new application, eliciting unexpected behavioral patterns.

Amp up your understanding of electricity and magnetism with DOZENS OF DO-IT-YOURSELF EXPERIMENTS Electricity Experiments You Can Do At Home is a hands-on guide that helps you master the principles of electrical currents and magnetism. Each of the book's three sections--direct current, alternating current, and magnetism--begins with step-by-step instructions for setting up your lab for the experiments that follow. Using inexpensive, easy-to-find parts, the experiments progress from basic to more complex and will spark ideas and encourage inventiveness. Expect unexpected results when you experiment with: Diode-based voltage reducer Compass-based galvanometer Photovoltaic illuminometer Utility bulb saver Ripple filter Xener-diode voltage regulator AC spectrum monitor Ampere's law with wire loop AC electromagnet Handheld wind turbine And dozens more projects ELECTRICITY EXPERIMENTS YOU CAN DO AT HOME helps you to: Solve circuit problems in electricity Build practical and interesting electrical and magnetic devices Get ideas for science-fair projects Prepare for advanced courses in electricity and electronics Learn the basics of laboratory practice

Get professional-level instruction on Windows 7 deployment tools Enterprise-level operating system deployment is challenging and requires knowledge of specific tools. It is expected that Windows 7 will be extensively deployed in businesses worldwide. This comprehensive Sybex guide provides thorough coverage of the Microsoft deployment tools that were specifically created for Windows 7, preparing system administrators, MIS professionals, and corporate programmers to tackle the task effectively. Companies worldwide are expected to deploy Windows 7 as their enterprise operating system; system administrators and IT professionals need comprehensive instruction on Microsoft's deployment tools This complete guide provides clear, step-by-step instruction on planning, installing, configuring, deploying, and troubleshooting deployment methods for each tool Covers the Microsoft Assessment and Planning (MAP) Toolkit, Application Compatibility Toolkit (ACT), Windows PE, Windows Automated Installation Kit (WAIK), Windows System Image Manager (WSIM), Easy Transfer, User State Migration Toolkit (USMT), Windows Deployment Services, Microsoft Deployment Toolkit 2010, System Center Configuration Manager, Key Management Service, and Volume Activation Management Tool (VAMT) Illustrated with plenty of real-world scenarios, Mastering Windows Deployment provides the hands-on instruction you need to fully understand and use each deployment technology.

The ASEAN+3 Bond Market Guide series provides country-specific information on the investment climate, rules, laws, opportunities, and characteristics of local bond markets in Asia and the Pacific. It aims to help bond market issuers, investors, and financial intermediaries understand the local context and encourage greater participation in the region's rapidly developing bond markets. This edition focuses on the Inter-Bank Bond Market in the People's Republic of China, which is one of the country's most important bond markets and one of only two that are accessible to foreign investment.

Clarifies the prototyping concept by discussing the major facets of this approach to requirements definition. Defines the concepts and terminology related to prototyping in order to arrive at a common conceptual framework. Includes guidelines for the application of prototyping, and discussion of CASE technology. For professionals and academics invo.

Agile software development approaches have had significant impact on industrial software development practices. Today, agile software development has penetrated to most IT companies across the globe, with an intention to increase quality, productivity, and profitability. Comprehensive knowledge is needed to understand the architectural challenges involved in adopting and using agile approaches and industrial practices to deal with the development of large, architecturally challenging systems in an agile way. Agile Software Architecture focuses on gaps in the requirements of applying architecture-centric approaches and principles of agile software development and demystifies the agile architecture paradox. Readers will learn how agile and architectural cultures can co-exist and support each other according to the context. Moreover, this book will also provide useful leads for future research in architecture and agile to bridge such gaps by developing appropriate approaches that incorporate architecturally sound practices in agile methods. Presents a consolidated view of the state-of-art and state-of-practice as well as the newest research findings Identifies gaps in the requirements of applying architecture-centric approaches and principles of agile software development and demystifies the agile architecture paradox Explains whether or not and how agile and architectural cultures can co-exist and support each other depending upon the context Provides useful leads for future research in both architecture and agile to bridge such gaps by developing appropriate approaches, which incorporate architecturally sound practices in agile methods

This book constitutes the refereed post-conference proceedings of the 23rd International Conference on Distributed and Computer and Communication Networks, DCCN 2020, held in Moscow, Russia, in September 2020. The 54 revised full papers and 1 revised short paper were carefully reviewed and selected from 167 submissions. The papers cover the following topics: computer and communication networks; analytical modeling of distributed systems; and distributed systems applications. Instead of just detailing the various types of electric circuits, Introduction to Electric Circuits, Fourth Edition actually gets students involved in the design process. It clearly demonstrates how the analysis and design of electric circuits has become an integral facet of an engineer's ability to design complex electronic systems as well as typical consumer products. Students are presented with a unique yet simple step-by-step design methodology in Chapter 1 that is used to solve The Design Challenge problems posed at the beginning of each chapter. By applying this methodology to realistic problems like a printer driver and cable, students will develop the critical skills required

to apply problem-solving skills throughout their career. The design methodology emphasized in Chapter 1: Problem State the problem. Situation Describe the situation and the assumptions. Goal State the goals and requirements. Verify Verify that the proposed solution is indeed correct. Act Act on the plan. Plan Generate a Plan to obtain a solution of the problem. Solution Communicate the solution. Students will find the presentation greatly enhanced by a number of computer applications that can be used at the readers discretion. Students will find several examples that illustrate the use of MATLAB to solve problems involving electric circuits. The text explains how this powerful program is used by engineers in the field. A new appendix is also included that provides an introduction to MicroSim Corporation's DesignLab(TM) and PSpice(r). Students can use the resources of the Interactive Circuits from Electronics Workbench CD-ROM to view, simulate, and change circuit parameters of the Design Challenges in each chapter. Further, the demo version of Electronics Workbench(r) allows the user to build and simulate all circuits in the text!

Penning by the chief architect and spokesperson for the AS/400, an update of the history and future development of the AS/400 includes new coverage on security, data warehousing, and e-commerce. Original. (Advanced).

The ability to learn is one of the most fundamental attributes of intelligent behavior.

Consequently, progress in the theory and computer modeling of learning processes is of great significance to fields concerned with understanding intelligence. Such fields include cognitive science, artificial intelligence, information science, pattern recognition, psychology, education, epistemology, philosophy, and related disciplines. The recent observance of the silver anniversary of artificial intelligence has been heralded by a surge of interest in machine learning—both in building models of human learning and in understanding how machines might be endowed with the ability to learn. This renewed interest has spawned many new research projects and resulted in an increase in related scientific activities. In the summer of 1980, the First Machine Learning Workshop was held at Carnegie-Mellon University in Pittsburgh. In the same year, three consecutive issues of the International Journal of Policy Analysis and Information Systems were specially devoted to machine learning (No. 2, 3 and 4, 1980). In the spring of 1981, a special issue of the SIGART Newsletter No. 76 reviewed current research projects in the field. This book contains tutorial overviews and research papers representative of contemporary trends in the area of machine learning as viewed from an artificial intelligence perspective. As the first available text on this subject, it is intended to fulfill several needs.

Most microcontroller-based applications nowadays are large, complex, and may require several tasks to share the MCU in multitasking applications. Most modern high-speed microcontrollers support multitasking kernels with sophisticated scheduling algorithms so that many complex tasks can be executed on a priority basis. ARM-based Microcontroller Multitasking Projects: Using the FreeRTOS Multitasking Kernel explains how to multitask ARM Cortex microcontrollers using the FreeRTOS multitasking kernel. The book describes in detail the features of multitasking operating systems such as scheduling, priorities, mailboxes, event flags, semaphores etc. before going on to present the highly popular FreeRTOS multitasking kernel. Practical working real-time projects using the highly popular Clicker 2 for STM32 development board (which can easily be transferred to other boards) together with FreeRTOS are an essential feature of this book. Projects include: LEDs flashing at different rates; Refreshing of 7-segment LEDs; Mobile robot where different sensors are controlled by different tasks; Multiple servo motors being controlled independently; Multitasking IoT project; Temperature controller with independent keyboard entry; Random number generator with 3 tasks: live, generator, display; home alarm system; car park management system, and many more. Explains the basic concepts of multitasking Demonstrates how to create small

multitasking programs Explains how to install and use the FreeRTOS on an ARM Cortex processor Presents structured real-world projects that enables the reader to create their own Looking at discretion broadly as the exercise of controlled freedom, this edited volume introduces insights from a range of social sciences perspectives. Traditionally, discussions of discretion have drawn on legal notions of the appropriate exercise of legitimate authority specified by legislators. However, empirical and theoretical studies in the social sciences have extended our understanding of discretion, moving us beyond a narrow legal view. Contributors from a range of disciplines explore the idea of discretion and related notions of freedom and control across social and political practices and in different contexts. As this complex and important topic is discussed and examined, both total control and unconstrained freedom appear to be illusions.

Business Intelligence (BI) is a broad term that relates to applications that analyze data to understand and act on the key metrics that drive profitability in an enterprise. Key to analyzing that data is providing fast, easy access to it while delivering it in formats or tools that best fit the needs of the user. At the core of any BI solution are user query and reporting tools that provide intuitive access to data supporting a spectrum of users from executives to "power users," from spreadsheet aficionados to the external Internet consumer. IBM® DB2® Web Query for i offers a set of modernized tools for a more robust, extensible, and productive reporting solution than the popular IBM Query for System i® tool (also known as IBM Query/400). IBM DB2 Web Query for i preserves investments in the reports that are developed with Query/400 by offering a choice of importing definitions into the new technology or continuing to run existing Query/400 reports as is. But, it also offers significant productivity and performance enhancements by leveraging the latest in DB2 for i query optimization technology. The DB2 Web Query for i product is a web-based query and report writing product that offers enhanced capabilities over the IBM Query for iSeries product (also commonly known as Query/400). IBM DB2 Web Query for i includes Query for iSeries technology to assist customers in their transition to DB2 Web Query. It offers a more modernized, Java based solution for a more robust, extensible, and productive reporting solution. DB2 Web Query provides the ability to query or build reports against data that is stored in DB2 for i (or Microsoft SQL Server) databases through browser-based user interface technologies: Build reports with ease through the web-based, ribbon-like InfoAssist tool that leverages a common look and feel that can extend the number of personnel that can generate their own reports. Simplify the management of reports by significantly reducing the number of report definitions that are required through the use of parameter driven reports. Deliver data to users in many different formats, including directly into spreadsheets, or in boardroom-quality PDF format, or viewed from the browser in HTML. Leverage advanced reporting functions, such as matrix reporting, ranking, color coding, drill-down, and font customization to enhance the visualization of DB2 data. DB2 Web Query offers features to import Query/400 definitions and enhance their look and functions. By using it, you can add OLAP-like slicing and dicing to the reports or view reports in disconnected mode for users on the go. This IBM Redbooks® publication provides a broad understanding of what can be done with the DB2 Web Query product. This publication is a companion of DB2 Web Query Tutorials, SG24-8378, which has a group of self-explanatory tutorials to help you get up to speed quickly.

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