Serial Port Using Visual Basic And Windows

A demonstration of Python's basic technologies showcases the programming language's possiblities as a Windows development and administration tool. Provides advice for Visual Basic programmers attempting to interface hardware through standard ports.

The classic Nutshell guide to Microsoft's Visual Basic programming language is completely revised and reorganized to cover the forthcoming VB 3005 version, as well as VB .NET 1.1.

Learn the behind-the-scenes tricks and techniques that will take your Visual Basic skills to the next level of programming excellence. Davis provides all the secrets readers need to create sophisticated, robust, full-featured, commercial quality Visual Basic applications.

Covering many features of Visual Basic, Professional Edition, this guide offers serious programmers the hard-to-find information needed to develop and enhance their skills with this popular program. This book describes how to access the multimedia features of PCs and includes many screen shots and usable example programs for illustration. CD-ROM includes third-party software.

When PCs and peripherals began showing up with USB ports in the late 1990s, many predicted that

legacy serial (COM) ports would soon be obsolete. The predictions were wrong. While most standard peripherals now use USB, serial ports are the interface of choice for devices that require simple programming, long cables, operation in harsh environments, or basic networking capabilities. Serial ports are more versatile then ever due to developments such as USB virtual COM ports, the .NET SerialPort class, enhanced microcontroller USARTs, and new wireless interfaces. Serial Port Complete Second Edition is a completely revised and updated guide to programming and interfacing to COM ports, USB virtual COM ports, and serial ports in embedded systems. Author Jan Axelson shows how to: § Access COM ports using the SerialPort class in Microsoft's .NET Framework. § Program embedded systems for serial-port communications. § Design and program USB devices accessed as virtual COM ports. § Upgrade RS-232 designs to USB with no changes to host software or device firmware. § Design circuits for electrically harsh environments. § Create serial networks of embedded systems and PCs. § Use serial ports in wireless links. Example code is provided for PCs and embedded systems in both Basic and C/C#. The author maintains a website with articles, program code, and other links of interest to developers of serial-port applications (janaxelson.com).

Taking a completely hands-on approach, using cheap and easily available robotics kits, Practical and Experimental Robotics provides a detailed exploration of the construction, theory, and experiments for different types of robots. With topics ranging from basic stamp microcontrollers to biped and propeller based robots, the text contains laboratory experiments, examples with solutions, and case studies. The authors begin with a review of the essential elements of electronics and mechanics. They describe the basic mechanical construction and electrical control of the robot, then give at least one example of how to operate the robot using microcontrollers or software. The book includes a reference chapter on Basic Stamp Microcontollers with example code pieces and a chapter completely devoted to PC interfacing. Each chapter begins with the fundamentals, then moves on to advanced topics, thus building a foundation for learning from the ground up. Building a bridge between technicians who have hands-on experience and engineers with a deeper insight into the workings, the book covers a range of machines, from arm, wheel, and leg robots to flying robots and robotic submarines and boats. Unlike most books in this field, this one offers a complete set of topics from electronics, mechanics, and computer interface and programming, making it an independent source for knowledge and understanding of robotics.

This book includes the volume 3 of the proceedings of the 2012 International Conference on Mechanical and Electronic Engineering(ICMEE2012), held at June 23-24,2012 in Hefei, China. The conference provided a rare opportunity to bring together worldwide researchers who are working in the fields. This volume 3 is focusing on Electronic Engineering and Electronic Communication; Electronic Engineering and Electronic Image Processing.

Visual Basic 2008 Recipes is a book of ready-made coding solutions for programmers who don't want spend a lot of time reading. Each chapter addresses a specific problem-domain such as multimedia, database access, XML manipulation, etc. Each chapter then presents a number of common problems, with a solution following each problem. Readers appreciate the recipe format, because they can look up a problem, read one to three pages, implement the solution, and then get on with their work. Recipe books are ideal for those who want to spend their days doing, not reading.

Visual Basic Programmer's Guide to Serial CommunicationsMabry Software IncorporatedThe Windows Serial Port Programming HandbookCRC Press

This book addresses the market demand of novice .NET programmers to learn about, and build, networked applications – a subject very often omitted from traditional computer programming books. The

book brings cutting-edge technologies such as GPS communication, Bluetooth and Radio Frequency ID (RFID) within reach of the mass-market. The .NET 2.0 Framework and .NET 2.0 Compact Framework provide a number of APIs for communicating through these technologies and this book demonstrates these in the form of a number of practical projects that readers can undertake to build their own network additions.

What is this book about? Access 2002 is the core database application within the OfficeXP suite. Using VBA (Visual Basic for Applications), the user cancreate his or her own programs in what is essentially a subset ofthe Visual Basic programming language. Using VBA with Access is a tremendously powerful technique, asit allows you to create great user interfaces (like forms orreports) as a front end to actual data storage and manipulationwithin the database itself. What does this book cover? This book is a revision of the best-selling Beginning Access2000 VBA, reworked to provide a rich tutorial to programmingAccess 2002 with VBA. New material covers the enhanced options inAccess 2002 for publishing data to the Web, handling XML,integrating with SQL Server Desktop Engine, and so on. Who is this book for? This book is for the Access user who already has a knowledge ofdatabases and the basic objects of an Access database, and who nowwants to learn how to program with VBA. No prior

knowledge ofprogramming is required.
This well-organized book is intended for the undergraduate students of Electrical, Electronics and Communications, Computer, Instrumentation and Instrumentation and Control Engineering; and postgraduate students of science in Electronics, Physics and Instrumentation. Data acquisition being the core of all PC-based measurements and control instrumentation systems engineering, this book presents detailed discussions on PC bus based data acquisition, remote data acquisition, GPIB data acquisition and networked data acquisition configurations. This book also describes sensors, signal-conditioning and principles of PC-based data acquisition. It provides several latest and advanced techniques. This book stresses the need for understanding the use of Personal Computers in measurement and control instrumentation applications. KEY FEATURES : • Provides several laboratory experiments to help the readers to gain hands-on experience in PC-based measurement and control. • Provides a number of review questions/problems (with solutions to the odd numbered problems) and objective type questions with solutions. • Presents a number of working circuits, design and programming examples. • Presents comparison of properties, features and characteristics of different bus systems, interface standards, and network protocols. • Includes the

advanced techniques such as sigma–delta converter, RS-485, I2C bus, SPI bus, FireWire, IEEE-488.2, SCPI and Fieldbus standards.
The four volume set assembled following The 2005 International Conference on Computational Science and its Applications, ICCSA 2005, held in Suntec International Convention and Exhibition Centre, Singapore, from 9 May 2005 till 12 May 2005, represents the ?ne collection of 540 refereed papers selected from nearly 2,700 submissions. Computational Science has ?rmly established itself as a vital part of many scienti?c investigations, a?ecting researchers and practitioners in areas ranging from applications such as aerospace and automotive, to emerging technologies such as bioinformatics and nanotechnologies, to core disciplines such as ma- ematics, physics, and chemistry. Due to the shear size of many challenges in computational science, the use of supercomputing, parallel processing, and - phisticated algorithms is inevitable and becomes a part of fundamental t- oretical research as well as endeavors in emerging ?elds. Together, these far reaching scienti?c areas contribute to shape this Conference in the realms of state-of-the-art computational science research and applications, encompassing the facilitating theoretical foundations and the innovative applications of such results in other areas.

This is a practical tutorial to writing Visual Basic (VB6 and VB.NET) programs using some of the most common design patterns. This book also provides a convenient way for VB6 programmers to migrate to VB.NET and use its more powerful object-oriented features. Organized as a series of short chapters that each describe a design pattern, Visual Basic Design Patterns provides one or more complete working visual examples of programs using that pattern, along with UML diagrams illustrating how the classes interact. Each example is a visual program that students can run and study on the companion CD making the pattern as concrete as possible.

Visual Basic 2005 Programmer's Reference Visual Basic 2005 adds new features to Visual Basic (VB) that make it a more powerful programming language than ever before. This combined tutorial and reference describes VB 2005 from scratch, while also offering in-depth content for more advanced developers. Whether you're looking to learn the latest features of VB 2005 or you want a refresher of easily forgotten details, this book is an ideal resource. Well-known VB expert Rod Stephens features the basics of Visual Basic 2005 programming in the first half of the book. The second half serves as a reference that allows you to quickly locate information for specific language features. It's a comprehensive look at programming using the

increased set of language options offered with the VB 2005 release, confirming that there has never been a better time to learn Visual Basic than now. What you will learn from this book: The fundamental concepts of object-oriented programming with Visual Basic, including classes and structures, inheritance and interfaces, and generics How an application can interact with its environment, save and load data in external sources, and use standard dialog controls The syntax for declaring subroutines, functions, generics, classes, and other important language concepts Who this book is for: This book is for programmers at all levels who are either looking to learn Visual Basic 2005 or have already mastered it and want some useful tips, tricks, and language details. Wrox Programmer's References are designed to give the experienced developer straight facts on a new technology, without hype or unnecessary explanations. They deliver hard information with plenty of practical examples to help you apply new tools to your development projects today.

The PC has longtime outgrown its function as a pure computer and has become an all-purpose machine. This book is targeted towards those people that want to control existing or self-built hardware from their computer. Using Visual Basic as Rapid Application Development tool we will take you on a journey to unlock the world beyond the connectors of the PC.

After familiarizing yourself with Visual Basic, its development environment and the toolset it offers, items such as serial communications, printer ports, bitbanging, protocol emulation, ISA, USB and Ethernet interfacing and the remote control of test-equipment over the GPIB bus are covered in extent. Each topic is accompanied by clear, ready to run code, and where necessary, schematics are provided that will get your project up to speed in no time. This book will show you advanced things like: using tools like Debug to find hardware addresses, setting up remote communication using TCP/IP and UDP sockets and even writing your own internet servers. Or how about connecting your own block of hardware over USB or Ethernet and controlling it from Visual Basic. Other things like inter-program communication, DDE and the new graphics interface of Windows XP are covered as well. All examples are ready to compile using Visual Basic 5.0, 6.0, NET or 2005. Extensive coverage is given on the differences between what could be called Visual Basic Classic and Visual Basic NET / 2005. This is a cookbook for communicating between a PC and a Microcontroller using the FTDI FT232R USB UART IC, and has lots of software and hardware examples. The code is in C# and Visual Basic Express allowing you to build Graphical User Interfaces and add Serial Port functions to create communications programs. Part 1 - Serial Port via

USB Made Almost Easy -- In the first section you will learn the basics of serial communications using a USB UART bridge. You will further learn to write a simple terminal program in C# and Visual Basic Express .NET. Part 2 - PC to Microcontroller Conversations -- In the second section you will build on what you have learned and get into more details about GUI programming, using the SerialPort class, and some useful software tools such as XML. You will bring it all together by building a Developer Terminal, which will have most of the bells and whistles that you would want for communicating between a PC and a microcontroller. You will end this section with some neat hardware experiments. Part 3 - The FTDI FT232R -- In the final section you will chuck the serial port paradigm and communicate directly with the FT232R. You will learn how to use the Smiley Micros port of the FTDI D2XX driver, you will do some more hardware experiments bit-banging the BBUSB pins, and finally you will build a software programmer for the FT232R.
Provides examples and solutions to a variety of Visual Basic 2005 tasks and problems.
Designed for a one-semester course in Finite Element Method, this compact and well-organized text presents FEM as a tool to find approximate solutions to differential equations. This provides the student a better perspective on the technique and its wide range of applications. This approach reflects

the current trend as the present-day applications range from structures to biomechanics to electromagnetics, unlike in conventional texts that view FEM primarily as an extension of matrix methods of structural analysis. After an introduction and a review of mathematical preliminaries, the book gives a detailed discussion on FEM as a technique for solving differential equations and variational formulation of FEM. This is followed by a lucid presentation of one-dimensional and two-dimensional finite elements and finite element formulation for dynamics. The book concludes with some case studies that focus on industrial problems and Appendices that include mini-project topics based on near-real-life problems. Postgraduate/Senior undergraduate students of civil, mechanical and aeronautical engineering will find this text extremely useful; it will also appeal to the practising engineers and the teaching community. Annotation This book provides a detailed description about the practical considerations in multiple languages programming as well as the interfaces among different languages in the Window environment. Authentic examples and detailed explanations are combined together in this book to provide the readers a clear picture as how to handle the multiple languages programming in Windows. CD-ROM contains code samples in text, bonus material on .NET Framework class hierarchy and

tools, searchable eBook of this text and "Programming Microsoft Visual Basic 6.0." Laboratory automation is an increasingly important part of the job description of many laboratory scientists. Although many laboratory scientists understand the methods and principles involved in automation, most lack the necessary engineering and programming skills needed to successfully automate or interface equipment in the lab. A step-by-step, how-to reference and guide, Practical Pharmaceutical Laboratory Automation explores the processes needed to automate the majority of tasks required in research today. The author discusses topics ranging from automated mathematical analysis to robotic automation of chemical processes, to combinations of these and other processes. He presents a detailed discussion of high throughput screening and assay development and takes an in-depth look at Visual Basic as the primary programming language used in laboratories. The text has a dedicated web site (http://www.pharmalabauto.com) that contains all the sample code and examples contained within the text as well as other information related to laboratory automation. Providing a starting point for tackling automation problems, Practical Pharmaceutical Laboratory Automation helps you develop a strategy for automation that gets consistent results. The spreadsheet has become a ubiquitous

engineering tool, and Microsoft Excel is the standard spreadsheet software package. Over the years, Excel has become such a complex program that most engineers understand and use only a tiny part of its power and features. This book is aimed at electronics engineers and technicians in particular, showing them how to best use Excel's features for computations, circuit modeling, graphing, and data analysis as applied to electronics design. Separate chapters cover lookup tables and file I/O, using macros, graphing, controls, using Analysis Toolpak for statistical analysis, databases, and linking into Excel from other sources, such as data from a serial port. The book is basically an engineering cookbook, with each chapter providing tutorial information along with several Excel "recipes" of interest to electronics engineers. The accompanying CD-ROM features ready-to-run, customizable Excel worksheets derived from the book examples, which will be useful tools to add to any electronics engineer's spreadsheet toolbox. Engineers are looking for any and all means to increase their efficiency and add to their "bag of design tricks." Just about every electronics engineer uses Excel but most feel that the program has many more features to offer, if they only knew what they were! The Excel documentation is voluminous and electronics engineers don't have the time to read it all and sift through looking for those features that are directly applicable to their jobs and figure out how to

use them. This book does that task for them-pulls out those features that they need to know about and shows them how to make use of them in specific design examples that they can then tailor to their own design needs. *This is the ONLY book to deal with Excel specifically in the electronics field *Distills voluminous and time-consuming Excel documentation down to nitty-gritty explanations of those features that are directly applicable to the electronics engineer's daily job duties *The accompanying CD-ROM provides ready-to-use, fully-customizable worksheets from the book's examples If you?ve begun programming using Microsoft?s .NET Framework, you?ve discovered a lot of new and improved functionality. But, more than likely, you?ve also discovered a lot of missing functionality. Indeed, a third of the functions supported by the old Win32 API are not yet supported by .NET. Although you may not at first notice the loss of Win32 API functionality in .NET, the more you program, the more you?ll realize how essential it is. As a programmer, you will not want to do without these solutions. .NET Framework Solutions: In Search of the Lost Win32 API is one more thing you can?t do without: a complete guide to your options for dealing with the functionality missing from .NET. As you?ll learn, some functions are handily situated within Visual Basic or C#. In most cases, however, you?ll need to access the old Win32 API from the .NET Framework. This is demanding work, but this book makes it easy, walking you through every step and paying special attention to the work of managing memory manually—the most error–prone part of the process. The topics covered inside are as varied as the missing functionality: direct hardware access, low–level security

control, certain aspects of OS access, support for multimedia and utilities, and DirectX. You also get hard–to–find information on COM access, plus a collection of examples––dealing with DirectX and the MMC Snap–ins––that unite COM and Win32 access in especially illuminating ways. Over time, you can expect to see the .NET Framework expanded to include much of what it now lacks. But your programming tasks can?t wait, and .NET Framework Solutions makes you productive––today.

Second in the series, Practical Aspects of Embedded System Design using Microcontrollers emphasizes the same philosophy of "Learning by Doing" and "Hands on Approach" with the application oriented case studies developed around the PIC16F877 and AT 89S52, today's most popular microcontrollers. Readers with an academic and theoretical understanding of embedded microcontroller systems are introduced to the practical and industry oriented Embedded System design. When kick starting a project in the laboratory a reader will be able to benefit experimenting with the ready made designs and 'C' programs. One can also go about carving a big dream project by treating the designs and programs presented in this book as building blocks. Practical Aspects of Embedded System Design using Microcontrollers is yet another valuable addition and guides the developers to achieve shorter product development times with the use of microcontrollers in the days of increased software complexity. Going through the text and experimenting with the programs in a laboratory will definitely empower the potential reader, having more or less programming or electronics experience, to build embedded systems using microcontrollers around the home, office, store, etc. Practical Aspects of Embedded System Design using Microcontrollers will serve as a good reference for the academic community as well as industry professionals and overcome the fear of the newbies in this

field of immense global importance.

The Conference on Computer, Informatics, Cybernetics and Applications 2011 aims to facilitate an exchange of information on best practices for the latest research advances in the area of computer, informatics, cybernetics and applications, which mainly includes computer science and engineering, informatics, cybernetics, control systems, communication and network systems, technologies and applications, others and emerging new topics.

One of the most thorough introductions available to the world's most popular microcontroller!

The most up-to-date Visual Basic.NET programming textbook—covering both fundamentals and advanced-level programming techniques—complete with examples and solutions Visual Basic.NET (VB.NET) is an object-oriented computer programming language that can be viewed as an evolution of the classic Visual Basic (VB), which is implemented on the .NET Framework. Microsoft currently supplies two major implementations of Visual Basic: Microsoft Visual Studio (which is commercial software) and Microsoft Visual Studio Express (which is free of charge). Forgoing the large amounts of programming codes found in most database programming books, Practical Database Programming with Visual Basic.NET shows students and professionals both how to develop professional and practical database programs in a Visual Basic.NET environment by using Visual Studio.NET Data Tools and Wizards related to ADO.NET 4.0, and how to apply codes that are auto-generated by solely using Wizards. The fully updated Second Edition: Covers both fundamentals and advanced database programming techniques Introduces three popular database systems with practical examples including MS Access, SQL Server 2008, and Oracle Features more than fifty sample projects with detailed illustrations and explanations to help students understand key techniques and

programming technologies Includes downloadable programming codes and exercise questions This book provides undergraduate and graduate students as well as database programmers and software engineers with the necessary tools to handle the database programming issues in the Visual Studio.NET environment.

To understand Jini, imagine that you could move to a new office across the world, or check into any hoteland could simply plug your notebook or Palm directly into the local network. Your device would immediately be recognized, and you would have access to the services at that location—transparently. Jini is Sun's Java-based technology, with potential to make transparant, "universal plug and play" a reality. This book is an expanded, updated version of the most popular online tutorial for Jini. Author Jan Newmarch includes comprehensive Jini advancements announced at Java One in June 2000. And he includes other important topics, like how Enterprise Java Beans blend in with the Jini framework and how CORBA fits in as well.

Explains how to use Visual Basic to design and code applications for Palm-compatible devices, covering data migration, SQL, wireless Web programs, and security.

The popularity of serial communications demands that additional serial port interfaces be developed to meet the expanding requirements of users. The Windows Serial Port Programming Handbook illustrates the principles and methods of developing various serial port interfaces using multiple languages. This comprehensive, hands-on, and practical guide to serial interface programming enables you to develop sophisticated interfaces and apply them in real-world applications. Each chapter addresses a language and how it can be applied in the development of serial port interfaces. The seven languages discussed are: ANSI C Visual C++ Visual Basic LabVIEW MATLAB Smalltalk Java Step by step

and line by line, the Handbook clearly explains the interfacing techniques used for each different language in the serial port communication. Examples from actual systems have been compiled and debugged, with detailed source code for each included on an accompanying CD-ROM.

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The international conference on Automation and Robotics-ICAR2011 is held during December 12-13, 2011 in Dubai, UAE. The proceedings of ICAR2011 have been published by Springer Lecture Notes in Electrical Engineering, which include 163 excellent papers selected from more than 400 submitted papers. The conference is intended to bring together the researchers and engineers/technologists working in different aspects of intelligent control systems and optimization, robotics and automation, signal processing, sensors, systems modeling and control, industrial engineering, production and management. This part of proceedings includes 82 papers contributed by many researchers in relevant topic areas covered at ICAR2011 from various countries such as France, Japan, USA, Korea and China etc. The session topic of this proceeding is signal processing and industrial engineering, production and management, which includes papers about signal reconstruction, mechanical sensors, real-time systems control system

identification, change detection problems, business process modeling, production planning, scheduling and control, computer-based manufacturing technologies, systems modeling and simulation, facilities planning and management, quality control and management, precision engineering, intelligent design and manufacturing. The papers in this proceedings focus on industry engineering to promote efficiency and affect for the world, which typically showed their advanced research work recently in their various field. I am sure that discussing with many colleagues will give much more creative idea for each other on ICAR2011. All of papers with powerful evidence and detail demonstration involved the authors' numerous time and energy will be proved valuable by their unexhausted exploring sprit. Sincere thanks to the committee and all the authors, in additionally, including anonymous reviewers from many fields and organizations. They pointed out us direction to go on research work for the world.

Volume is indexed by Thomson Reuters CPCI-S (WoS). In this special collection of over 470 peer-reviewed papers are to be found many original ideas and new angles on aspects of industry, information systems and materials engineering. It offers a good basis upon which researchers can exchange their innovative ideas from a new perspective. In addition, the proceedings provide guidance for scientists, physicists, chemists, teachers, etc. all over the world.

Google Brings Data Mining to the People! Virtually everyone sees Google as, hands down, the best online search tool. Now you can use and improve on Google

technology in your own applications. Mining Google Web Services teaches you dozens of techniques for tapping the power of the Google API. Google already gives you fine-grained control over your search criteria, and this book shows you how to exert the same control in your own focused search and analysis applications. With just a little knowledge of JavaScript, VBA, Visual Studio 6, Visual Studio .NET, PHP, or Java, you will get better (and more relevant) search results--faster and more easily. Here's a little of what you'll find covered inside: Improving the speed and accuracy of searches Performing data mining across the Internet Using Google Web Services to search a single website Building search applications for mobile devices Using caching techniques to improve application performance and reliability Analyzing Google data Creating searches for users with special needs Discovering new uses for Google Obtaining historical data using cached pages Performing spelling checks on any text Reducing the number of false search hits Whether your goal is to improve your own searches or share specialized search capabilities with others, this is the one resource that will see you through the job from start to finish.
This book approaches its subject matter by promoting concepts, methods and solutions for the digital transformation of manufacturing through service orientation in holonic and agent-based control with distributed intelligence. The scientific theme of the book concerns "Manufacturing as a Service", developed by virtualizing and encapsulating manufacturing resources, activities and controls into cloud networked services in

an open perspective that spans models from shop floor resource allocation to enterprise infrastructure sharing. The papers included in the application space have a profound human dedication and aim at solving societal needs serving the partnership of the future--people and industry in the era of Society 5.0. The book's readership includes researchers and engineers working in manufacturing, supply chains and logistics areas who innovate, develop and use digital control solutions and students enrolled in Engineering and Service Science programs.

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