Serial Communications In C And C

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Clues from Killers "O'Reilly Media, Inc."
The world's most portable communications software, C-Kermit runs on computers ranging from desktop PCs to colossal supercomputers as a serial and modem communications package as well as a TCP/IP network client and server. It offers automatic dialing, terminal sessions, fast and reliable file transfer, a powerful script programming language, and international character-set translation-all in a consistent, cross-platform manner. Using C-Kermit: Communication Software, Second Edition is the new and definitve reference for C-Kermit 6.0, expanded and updated to describe fully all of its new features with brand-new tutorials on today's high-speed modems and how to get the most out of them. Some noteworthy features of this reference are: - The most sophisticated discussion of modems, telephones numbers, dialing directories, and dialing available anywhere - New techniques for achieving faster and faster file transfer - A new chapter on external protocols such as XMODEM, YMODEM, and ZMODEM - Expanded coverage of TCP/IP, X.25, DECnet, NETBIOS, and other networks - Automatic client/server features - Support for many new platforms - most notably Windows 95, Windows NT, and Stratus VOS - Support for many new character sets - Massive improvements in the power and usability of the script language Like the first edition, the second edition of Using C-Kermit includes complete reference material: character tables, tables of escape sequences, an "acronym decoder," an excellent index, and an extensive bibliography. Frank da Cruz is manager of Communications Software Development at Columbia University. He was the leader of the group that invented the Kermit file transfer protocol and wrote the first Kermit programs. He is the author of Kermit, A File Transfer Protocol, published by Digital Press. Christine M. Gianone is manager of the Kermit Project at Columbia University. She was a major contributor to the design of the Kermit file transfer protocol and to the design of MS-DOS Kermit and C-Kermit. She is the author of Using MS-DOS Kermit, published by Digital Press. Frank and Christine "are" Kermit: they manage all of the functions of the Kermit group at Columbia, from helping users to putting out new products. Describes the most sophisticated and flexible handling of modems, telephone numbers, dialing directories, and dialing available anywhere Covers new techniques for achieving faster file transfers Explains support for many new platforms, most notably Windows 95, Windows NT and Stratus VOS
Serial Communications Programming in C and C++ CRC Press
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
Programming Embedded Systems "O'Reilly Media, Inc."
Written as a practical Packt book brimming with engaging examples, C Programming for Arduino will help those new to the amazing open source electronic platform so that they can start developing some great projects from the very start.This book is great for people who want to learn how to design & build their own electronic devices. From interaction design art school students to the do-it-yourself hobbyist, or even simply people who want to learn electronics, this book will help by adding a new way to design autonomous but connected devices.
Connecting Networks Companion Guide Springer Science & Business Media
Communications will play a central role in the computer applications of the next decade. The core of these applications is asynchronous serial communication. This book includes both theoretical and practical discussions of this topic, allowing programmers and technically advanced users to build their own C programming library of functions for serial communications.
Designing Embedded Hardware Mis Press
Learn how to use microcontrollers without all the frills and math. This book uses a practical approach to show you how to develop embedded systems with 8 bit PIC microcontrollers using the XC8 compiler. It's your complete guide to understanding modern PIC microcontrollers. Are you tired of copying and pasting code into your embedded projects? Do you want to write your own code from scratch for microcontrollers and understand what your code is doing? Do you want to move beyond the Arduino? Then Programming PIC Microcontrollers with XC8 is for you! Written for those who want more than an Arduino, but less than the more complex microcontrollers on the market, PIC microcontrollers are the next logical step in your journey. You'll also see the advantage that MPLAB X offers by running on Windows, MAC and Linux environments. You don't need to be a command line expert to work with PIC microcontrollers, so you can focus less on setting up your environment and more on your application. What You'll Learn Set up the MPLAB X and XC8 compilers for microcontroller development Use GPIO and PPS Review EUSART and Software UART communications Use the eXtreme Low Power (XLP) options of PIC microcontrollers Explore wireless communications with WiFi and Bluetooth Who This Book Is For Those with some basic electronic device and some electronic equipment and knowledge. This book assumes knowledge of the C programming language and basic knowledge of digital electronics though a basic overview is given for both. A complete newcomer can follow along, but this book is heavy on code, schematics and images and focuses less on the theoretical aspects of using microcontrollers. This book is also targeted to students wanting a practical overview of microcontrollers outside of the classroom.
Embedded Systems Design with 8051 Microcontrollers Elsevier
Turn your iPhone or iPad into the hub of a distributed sensor network with the help of an Arduino microcontroller. With this concise guide, you'll learn how to connect an external sensor to an iOS device and have them talk to each other through Arduino. You'll also build an iOS application that will parse the sensor values it receives and plot the resulting measurements, all in real-time. iOS processes data from its own onboard sensors, and now you can extend its reach with this simple, low-cost project. If you're an Objective-C programmer who likes to experiment, this book explains the basics of Arduino and other hardware components you need—and lets you have fun in the process. Learn how to connect the Arduino platform to any iOS device Build a simple application to control your Arduino directly from an iPad Gather measurements from an ultrasonic range finder and display them on your iPhone Connect an iPhone, iPad, or iPod Touch to an XBee radio network Explore other methods for connecting external sensors to iOS, including Ethernet and the MIDI protocol
Shape the World Newnes
Get started with Arduino and computer coding. This book is intended for those new to the Arduino and computer coding. and looking to gain the skills to write microcontroller programs that can act on given inputs and operate electromechanical output devices. Coding the Arduino contains four sections: background information, game development, electronic games and projects, and expanded programs. The final chapters expand on the functionality of some of the programs presented in previous chapters, and challenges you with capstone projects. The projects will be described where the program code that is presented can be modified, or in which two or more of the sample programs may be used to synthesize a new program as the solution to the problem that is presented. Additionally, review questions are presented at the end of each chapter to test your comprehension of the material. What You'll Learn Understand basic principles of technology, and about analog and digital electronics. Create games from scratch, where you interactively play against the program. Gain an introduction to Artificial Intelligence (AI) Who This Book Is For Electronic hobbyists, makers of all levels, and teens with an interest in technology and coding who are looking to get started with Arduinos.
Mabry Software Incorporated
Intelligent readers who want to build their own embedded computer systems-- installed in everything from cell phones to cars to handheld organizers to refrigerators-- will find this book to be

the most in-depth, practical, and up-to-date guide on the market. Designing Embedded Hardware carefully steers between the practical and philosophical aspects, so developers can both create their own devices and gadgets and customize and extend off-the-shelf systems. There are hundreds of books to choose from if you need to learn programming, but only a few are available if you want to learn to create hardware. Designing Embedded Hardware provides software and hardware engineers with no prior experience in embedded systems with the necessary conceptual and design building blocks to understand the architectures of embedded systems. Written to provide the depth of coverage and real-world examples developers need, Designing Embedded Hardware also provides a road-map to the pitfalls and traps to avoid in designing embedded systems. Designing Embedded Hardware covers such essential topics as: The principles of developing computer hardware Core hardware designs Assembly language concepts Parallel I/O Analog-digital conversion Timers (internal and external) UART Serial Peripheral Interface Inter-Integrated Circuit Bus Controller Area Network (CAN) Data Converter Interface (DCI) Low-power operation This invaluable and eminently useful book gives you the practical tools and skills to develop, build, and program your own application-specific computers.

C Programming for Arduino Packt Publishing Ltd

C Programmer's Guide to Serial CommunicationsPrentice Hall

The Windows Serial Port Programming Handbook Addison-Wesley Professional

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

Learning C for Arduino "O'Reilly Media, Inc."

This book has three parts. The first part discusses the basics of serial communications. Part two discusses asynchronous C programming, helping the reader develop the tools necessary for serial programming tasks. Part three is the appendices, which list assembly language routines, listings for several non-serial functions used but not explained in the text, and other pertinent information.

Programming Microcontrollers in C Apress

Primary focus is on communications systems.

Embedded Software Development with C John Wiley & Sons

Welcome to Real-Time Bluetooth Networks - Shape the World. This book, now in its second printing December 2017, offers a format geared towards hands-on self-paced learning. The overarching goal is to give you the student an experience with real-time operating systems that is based on the design and development of a simplified RTOS that exercises all the fundamental concepts. To keep the discourse grounded in practice we have refrained from going too deep into any one topic. We believe this will equip the student with the knowledge necessary to explore more advanced topics on their own. In essence, we will teach you the skills of the trade, but mastery is the journey you will have to undertake on your own. An operating system (OS) is layer of software that sits on top of the hardware. It manages the hardware resources so that the applications have the illusion that they own the hardware all to themselves. A real-time system is one that not only gets the correct answer but gets the correct answer at the correct time. Design and development of an OS therefore requires both, understanding the underlying architecture in terms of the interface (instruction set architecture, ISA) it provides to the software, and organizing the software to exploit this interface and present it to user applications. The decisions made in effectively managing the underlying architecture becomes more crucial in real-time systems as the performance (specifically timing) demands go beyond simple logical correctness. The architecture we will focus on is the ARM ISA, which is a very popular architecture in the embedded device ecosystem where real-time systems proliferate. A quick introduction to the ISA will be followed by specifics of TI's offering of this ISA as the Tiva and MSP432 Launchpad microcontroller. To make the development truly compelling we need a target application that has real-time constraints and multi-threading needs. To that end you will incrementally build a personal fitness device with Bluetooth connectivity. The Bluetooth connectivity will expose you to the evolving domain of Internet-of-things (IoT) where our personal fitness device running a custom RTOS will interact with a smartphone.

Microcontroller Projects in C for the 8051 Greenwood Publishing Group

This book catalogs the most popular and commonly used serial-port interfaces and provides details on the specifications and the latest standards, enabling you to select an interface for a new design or verify that an interface is working correctly. Each chapter is based on a different interface and is written in an easy to follow, standard format. With this book you will learn: The most widely used serial interfaces How to select the best serial interface for a specific application or design The trade-offs between data rate and distance (length or range) The operation and benefits of serial data transmission The most common media used for serial data transmission Covers the most popular and commonly used interfaces and provides details on their specifications and standards Explains the key concepts to enable an engineer to select an interface for a new design or verify that an interface is working correctly Each chapter is based on a different interface and is written in an easy to follow, standard format

The Windows Serial Port Programming Handbook CRC Press

Authored by two of the leading authorities in the field, this guide offers readers the knowledge and skills needed to achieve proficiency with embedded software.

A Comprehensive Compendium of Serial Digital Input/Output (I/O) Standards Digital Press

Ted Van Sickle spent over fifteen years at Motorola as a microcontroller specialist. He now consults and teaches classes on software design and programming for microcontroller systems. He holds a MSEE from the University of Michigan. Introduces microcontrollers and describes their programming environment, offering tips on coding for microcontrollers Describes techniques to get maximum performance from your code Discusses the differences between 8-bit and larger microcontrollers, giving application examples and providing details on using different compilers

Handbook of Serial Communications Interfaces Springer Science & Business Media

This textbook for courses in Embedded Systems introduces students to necessary concepts, through a hands-on approach. LEARN BY EXAMPLE – This book is designed to teach the material the way it is learned, through example. Every concept is supported by numerous programming examples that provide the reader with a step-by-step explanation for how and why the computer is doing what it is doing. LEARN BY DOING – This book targets the Texas Instruments MSP430 microcontroller. This platform is a widely popular, low-cost embedded system that is used to illustrate each concept in the book. The book is designed for a reader that is at their computer with an MSP430FR2355 LaunchPadTM Development Kit plugged in so that each example can be coded and run as they learn. LEARN BOTH ASSEMBLY AND C – The book teaches the basic operation of an embedded computer using assembly language so that the computer operation can be explored at a low-level. Once more complicated systems are introduced (i.e., timers, analog-to-digital converters, and serial interfaces), the book moves into the C programming language. Moving to C allows the learner to abstract the operation of the lower-level hardware and focus on understanding how to “make things work”. BASED ON SOUND PEDAGOGY - This book is designed with learning outcomes and assessment at its core. Each section addresses a specific learning outcome that the student should be able to “do” after its completion. The concept checks and exercise problems provide a rich set of assessment tools to measure student performance on each outcome.

USB Explained CRC Press

Many computer applications require microprocessors to reliably interconnect and communicate with other peripherals in order to perform their intended functions. Interface design, which includes the development of the methods and processes by which two or more components communicate, is a crucial step in the deployment of microprocessors in an embedded computing environment. ARM-based microprocessors are a leading technology in this field, offering a wide range of performance for different applications. This book provides a comprehensive treatment of interface design from basic logical and theoretical principles to practical implementation on an ARM-based microprocessor, addressing both hardware and software considerations. The microprocessor’s high level of complexity is carefully analysed in the text to provide clear guidance for the reader in the design of new applications, resulting in an invaluable reference resource for graduates and engineers involved in the design of electronic products and systems. Key Features: Brings together aspects of digital hardware, interface design and software integration in a single text to make clear the link between low and high level languages for interface control Categorises interface techniques into easily distinguished chapters, progressively involving greater complexity, enabling the reader to quickly find relevant material for a particular application Provides many practical C-coded examples showing both the preparation and use of complex programmable subsystems implemented in a typical commercial product Presents in each chapter an introduction to the essential theoretical aspects and the development of simple interface designs using basic logical building blocks

Embedded Linux Morgan & Claypool Publishers

Provides information on writing a driver in Linux, covering such topics as character devices, network interfaces, driver debugging, concurrency, and interrupts.

Proceedings of the International Conference on Mechatronics and Intelligent Robotics (ICMIR2017) - Volume 1 Apress

"This course discusses the WAN technologies and network services required by converged applications in a complex network. The course allows you to understand the selection criteria of network devices and WAN technologies to meet network requirements. You will learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. You will also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network."--Back cover.