

Learning The Unix Operating System

O'Reilly's bestselling book on Linux's bash shell is at it again. Now that Linux is an established player both as a server and on the desktop Learning the bash Shell has been updated and refreshed to account for all the latest changes. Indeed, this third edition serves as the most valuable guide yet to the bash shell. As any good programmer knows, the first thing users of the Linux operating system come face to face with is the shell the UNIX term for a user interface to the system. In other words, it's what lets you communicate with the computer via the keyboard and display. Mastering the bash shell might sound fairly simple but it isn't. In truth, there are many complexities that need careful explanation, which is just what Learning the bash Shell provides. If you are new to shell programming, the book provides an excellent introduction, covering everything from the most basic to the most advanced features. And if you've been writing shell scripts for years, it offers a great way to find out what the new shell offers. Learning the bash Shell is also full of practical examples of shell commands and programs that will make everyday use of Linux that much easier. With this book, programmers will learn: How to install bash as your login shell The basics of interactive shell use, including UNIX file and directory structures, standard I/O, and background jobs Command line editing, history substitution, and key bindings How to customize your shell environment without programming The nuts and bolts of basic shell programming, flow control structures, command-line options and typed variables Process handling, from job control to processes, coroutines and subshells Debugging techniques, such as trace and verbose modes Techniques for implementing system-wide shell customization and features related to system security

By its very nature, Unix is a " power tools " environment. Even beginning Unix users quickly grasp that immense power exists in shell programming, aliases and history mechanisms, and various editing tools. Nonetheless, few users ever really master the power available to them with Unix. There is just too much to learn! Unix Power Tools, Third Edition, literally contains thousands of tips, scripts, and techniques that make using Unix easier, more effective, and even more fun. This book is organized into hundreds of short articles with plenty of references to other sections that keep you flipping from new article to new article. You'll find the book hard to put down as you uncover one interesting tip after another. With the growing popularity of Linux and the advent of Mac OS X, Unix has metamorphosed into something new and exciting. With Unix no longer perceived as a difficult operating system, more and more users are discovering its advantages for the first time. The latest edition of this best-selling favorite is loaded with advice about almost every aspect of Unix, covering all the new technologies that users need to know. In addition to vital information on Linux, Mac OS X, and BSD, Unix Power Tools, Third Edition, now offers more coverage of bcash, zsh, and new shells, along with discussions about modern utilities and

applications. Several sections focus on security and Internet access, and there is a new chapter on access to Unix from Windows, addressing the heterogeneous nature of systems today. You'll also find expanded coverage of software installation and packaging, as well as basic information on Perl and Python. The book's accompanying web site provides some of the best software available to Unix users, which you can download and add to your own set of power tools. Whether you are a newcomer or a Unix power user, you'll find yourself thumbing through the gold mine of information in this new edition of Unix Power Tools to add to your store of knowledge. Want to try something new? Check this book first, and you're sure to find a tip or trick that will prevent you from learning things the hard way.

Think your Mac is powerful now? This practical guide shows you how to get much more from your system by tapping into Unix, the robust operating system concealed beneath OS X's beautiful user interface. OS X puts more than a thousand Unix commands at your fingertips—for finding and managing files, remotely accessing your Mac from other computers, and using freely downloadable open source applications. If you're an experienced Mac user, this updated edition teaches you all the basic commands you need to get started with Unix. You'll soon learn how to gain real control over your system. Get your Mac to do exactly what you want, when you want Make changes to your Mac's filesystem and directories Use Unix's find, locate, and grep commands to locate files containing specific information Create unique "super commands" to perform tasks that you specify Run multiple Unix programs and processes at the same time Access remote servers and interact with remote filesystems Install the X Window system and learn the best X11 applications Take advantage of command-line features that let you shorten repetitive tasks

Learning the Unix Operating System A Concise Guide for the New User"O'Reilly Media, Inc."

Software -- Operating Systems.

Written with a clear, straightforward writing style and packed with step-by-step projects for direct, hands-on learning, Guide to UNIX Using Linux, 4E is the perfect resource for learning UNIX and Linux from the ground up. Through the use of practical examples, end-of-chapter reviews, and interactive exercises, novice users are transformed into confident UNIX/Linux users who can employ utilities, master files, manage and query data, create scripts, access a network or the Internet, and navigate popular user interfaces and software. The updated 4th edition incorporates coverage of the latest versions of UNIX and Linux, including new versions of Red Hat, Fedora, SUSE, and Ubuntu Linux. A new chapter has also been added to cover basic networking utilities, and several other chapters have been expanded to include additional information on the KDE and GNOME desktops, as well as coverage of the popular OpenOffice.org office suite. With a strong focus on universal UNIX and Linux commands that are transferable to all versions of Linux, this book is a must-have for anyone seeking to develop their

knowledge of these systems. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Enables DOS users to master UNIX with systematic comparisons of DOS and UNIX functions, as well as providing examples and hands-on practice exercises, complete command and functions coverage, and comprehensive tables. Original. (Intermediate).

If you are new to Unix, this concise book will tell you just what you need to get started and no more. Unix was one of the first operating systems written in C, a high-level programming language, and its natural portability and low price made it a popular choice among universities. Initially, two main dialects of Unix existed: one produced by AT & T known as System V, and one developed at UC Berkeley and known as BSD. In recent years, many other dialects have been created, including the highly popular Linux operating system and the new Mac OS X (a derivative of BSD). Learning the Unix Operating System is a handy book for someone just starting with Unix or Linux, and it's an ideal primer for Mac and PC users of the Internet who need to know a little about Unix on the systems they visit. The fifth edition is the most effective introduction to Unix in print, covering Internet usage for email, file transfers, web browsing, and many major and minor updates to help the reader navigate the ever-expanding capabilities of the operating system: In response to the popularity of Linux, the book now focuses on the popular bash shell preferred by most Linux users. Since the release of the fourth edition, the Internet and its many functions has become part of most computer user's lives. A new chapter explains how to use ftp, pine for mail, and offers useful knowledge on how to surf the web. Today everyone is concerned about security. With this in mind, the author has included tips throughout the text on security basics, especially in the Internet and networking sections. The book includes a completely updated quick reference card to make it easier for the reader to access the key functions of the command line.

Operating System, an integral part of any computer, is the interface between the computer users and the hardware. This comprehensive book provides the readers with the basic understanding of the theoretical and practical aspects of operating systems. The text explains the operating systems and components of operating systems including attributes of Linux and Unix operating systems. It also discusses Android operating system and Tablet computer. The book explicates in-depth the concepts of process, threads/multithreading and scheduling and describes process synchronization, deadlocks and memory management including file access methods and directory structure. In addition, it also describes security and protection along with distributed file systems. The book is designed as a textbook for undergraduate students of Electronics and Communication Engineering, Computer Science and Engineering, and Information Technology as well as post-graduate students of computer applications and computer science.

Covering all aspects of the Unix operating system and assuming no prior knowledge of Unix, this book begins with the fundamentals and works from the ground up to some of the more advanced programming techniques. The authors provide a wealth of real-world experience with the Unix operating system, delivering actual examples while showing some of the common misconceptions and errors that new users make. Special emphasis is placed on the Apple Mac OS X environment as well as Linux, Solaris, and migrating from Windows to Unix. A unique conversion section of the book details specific advice and instructions for transitioning Mac OS X, Windows, and Linux users.

Introduces the UNIX environment for the Mac OS X and explains how to set up and configure the Terminal application; how to manage, create, and edit files; and how to navigate the Internet.

Think your Mac is powerful now? Author Dave Taylor shows you how to get much more from your system by tapping into Unix, the robust operating system concealed beneath OS X's beautiful user interface. Mountain Lion puts more than a thousand Unix commands at your fingertips - for finding and managing files, remotely accessing your Mac from other computers, and using a variety of freely downloadable open source applications. Take a friendly tour of the Unix command line and 50 of the most useful utilities, and quickly learn how to gain real control over your Mac. Get your Mac to do exactly what you want, when you want. Make changes to your Mac's filesystem and directories. Use Unix's find, locate, and grep commands to locate files containing specific information. Create unique "super-commands" to perform tasks that you specify. Run multiple Unix programs and processes at the same time. Install the X Window system and get a quick tour of the best X11 applications. Learn how to take even greater advantage of Unix on your Mac.

"This book is organized around three concepts fundamental to OS construction: virtualization (of CPU and memory), concurrency (locks and condition variables), and persistence (disks, RAIDS, and file systems"--Back cover.

The Third Edition Incorporates Major Revisions, Moderate Additions, And Minor Deletions. It Focuses On The Two Major Versions Of Unix - Solaris And Linux. The Two-Part Structure Of The Previous Edition Has Been Maintained. The Fundamental Aspects Of The System Are Covered In Part I, Whereas The Intermediate And Advanced Concepts Are Explained In Part II. Salient Features : Two New Chapters On Unix Systems Programming - The File And Process Control. Complete Chapter Devoted To Tcp/Ip Network Administration. Enhanced Coverage On Linux. Updated Coverage On The Internet And The Http Protocol. End-Of-Chapter Questions Grouped Under Test Your Understanding With Answers In Appendix C And Flex Your Brain. Also Conforms To The Latest Revised Doeacca Level Syllabus Effective July 2003.

For the past 20 years, UNIX insiders have cherished and zealously guarded pirated photocopies of this manuscript, a "hacker trophy" of sorts. Now legal (and legible) copies are available. An international "who's who" of UNIX wizards,

including Dennis Ritchie, have contributed essays extolling the merits and importance of this underground classic.

UNIX: Operating System Success in a Day - Beginners Guide to Fast, Easy and Efficient Learning of UNIX Operating Systems! What is an Operating System? What Is UNIX? Why are these operating system books so difficult to understand? So much jargon and difficult technical understanding? Need it made it easy to understand? What is spawns of UNIX? What is the difference between UNIX versus Linux? Need UNIX for Developers? Need UNIX made easy for anyone? Need to learn quick! Now its time! Just hit the PURCHASE NOW!

As a PC user, are you in search of a beginner's guide that will teach you everything there is to know about the Linux operating system, or are you simply looking to try out the Linux system for your PC? Then you should opt for this guide. Indisputably, Linux is by far one of the most powerful and well performing operating system you can find anywhere in the world. Although macOS and Windows are the major leaders in the world because they are very popular in the technology market, but it still doesn't take the fact away that Linux is a powerful OS. First, Linux is an open source OS, that manages and control's a system's resources and hardware, such as memory, CPU and others. If you are not sure about what Linux is and what it represents, you have no worry since you stumbled upon this guide. Luckily, in this guide, Linux for beginners, readers will learn everything about Linux, Operating System, UNIX, difference between Linux and UNIX, how to install Linux OS and so much more. In addition, users will discover how to choose the best Linux distributions among all other kinds of distribution depending on your preference and requirements. Furthermore, this book, Linux for beginners, will also broaden your horizon to learning the basic Linux commands, how to shut down, restart, reboot, compress, archive files and so many other things. At the end of this guide, users will have the confidence to obtain a Linux operating system, install it, and begin using it. Here are some of the things you stand to learn in this guide:

Meaning of Linux How is Linux working OS utilized? What is an Operating system? Definition of UNIX Difference between Linux and UNIX Benefits of Linux How to choose Linux distribution Ubuntu and Linux Mint SuSE Linux Red Hat/CentOS/Fedora Slackware and Arch Linux Basic Linux Commands Installing Linux What type of PC is needed? Video Card How to install a Linux distribution How to copy an ISO image to CD or DVD About Sort Command How to sort files Open and edit files How to create a collection of files How to create a file using touch command How to create a file using the redirection operator How to create a large file How to compress files to save space Alternatives to Microsoft Office Alternatives to Internet Explorer Alternatives to Photoshop Alternatives to Adobe Acrobat Reader What is shell scripting? Types/Kinds of Shell How to write a shell script Shell Variables Why you should use Linux How to partition disk Features of Ubuntu 20.04 LTS Linux security tips Linux network administration How to know a file's type How to know the file type of several files How to delete, copy, move, and rename files Environmental variables Common Environment Variables Files and Directory Permissions File and Directory - Real Ownership Adding a User Group Requirements to add a User Group Adding a User to Several Groups Simultaneously Adding a User and Add to Group How to Delete a Created Group List of Well-Known Groups in Linux System Shutdown, Restart, and Logout Commands

Archives and Compressed File Commands And many more.... This is just a few of what is contained in this book and you can Download FREE with Kindle Unlimited So what are you waiting for? Scroll up and Click the Orange - BUY NOW WITH 1-CLICK BUTTON- on the top right corner and Download Now!!! You won't regret you did See you inside!!!

"The fascinating story of how Unix began and how it took over the world. Brian Kernighan was a member of the original group of Unix developers, the creator of several fundamental Unix programs, and the co-author of classic books like "The C Programming Language" and "The Unix Programming Environment."--

In the wake of the highly successful Sams Teach Yourself Unix in 24 Hours, this book focuses on the additional Unix commands that an advanced user or beginning system administrator needs to know in order to administer and maintain a Unix system. The book includes coverage of the key Unix variations: Red Hat Linux, Solaris, HP-UX, and Apple's Mac OS X environment. The book will not be a comprehensive solution to all problems facing new system administrators, but instead is a tutorial introduction to the process of learning about and maintaining a running Unix server.

UNIX: The Textbook, Third Edition provides a comprehensive introduction to the modern, twenty-first-century UNIX operating system. The book deploys PC-BSD and Solaris, representative systems of the major branches of the UNIX family, to illustrate the key concepts. It covers many topics not covered in older, more traditional textbook approaches, such as Python, UNIX System Programming from basics to socket-based network programming using the client-server paradigm, the Zettabyte File System (ZFS), and the highly developed X Windows-based KDE and Gnome GUI desktop environments. The third edition has been fully updated and expanded, with extensive revisions throughout. It features a new tutorial chapter on the Python programming language and its use in UNIX, as well as a complete tutorial on the git command with Github. It includes four new chapters on UNIX system programming and the UNIX API, which describe the use of the UNIX system call interface for file processing, process management, signal handling, interprocess communication (using pipes, FIFOs, and sockets), extensive coverage of internetworking with UNIX TCP/IP using the client-server software, and considerations for the design and implementation of production-quality client-server software using iterative and concurrent servers. It also includes new chapters on UNIX system administration, ZFS, and container virtualization methodologies using iocage, Solaris Jails, and VirtualBox. Utilizing the authors' almost 65 years of practical teaching experience at the college level, this textbook presents well-thought-out sequencing of old and new topics, well-developed and timely lessons, a Github site containing all of the code in the book plus exercise solutions, and homework exercises/problems synchronized with the didactic sequencing of chapters in the book. With the exception of four chapters on system programming, the book can be used very successfully by a complete novice, as well as by an experienced UNIX system user, in both an informal and formal learning environment. The book may be used in several computer science and information technology courses, including UNIX for beginners and advanced users, shell and Python scripting, UNIX system programming, UNIX network programming, and UNIX system administration. It may also be used as a companion to the undergraduate and graduate level courses on operating system concepts and principles.

Covers such topics as logging in and out, using Windows systems, pipes and filters, managing files and directories, and basic network commands

As an open operating system, Unix can be improved on by anyone and everyone: individuals, companies, universities, and more. As a result, the very nature of Unix has been altered over the years by numerous extensions formulated in an assortment of versions. Today, Unix encompasses everything from Sun's Solaris to Apple's Mac OS X and more varieties of Linux than you can easily name. The latest edition of this bestselling reference brings Unix into the 21st century. It's been reworked to keep current with the broader state of Unix in today's world and highlight the strengths of this operating system in all its various flavors. Detailing all Unix commands and options, the informative guide provides generous descriptions and examples that put those commands in context. Here are some of the new features you'll find in Unix in a Nutshell, Fourth Edition: Solaris 10, the latest version of the SVR4-based operating system, GNU/Linux, and Mac OS X Bash shell (along with the 1988 and 1993 versions of ksh) tsch shell (instead of the original Berkeley csh) Package management programs, used for program installation on popular GNU/Linux systems, Solaris and Mac OS X GNU Emacs Version 21 Introduction to source code management systems Concurrent versions system Subversion version control system GDB debugger As Unix has progressed, certain commands that were once critical have fallen into disuse. To that end, the book has also dropped material that is no longer relevant, keeping it taut and current. If you're a Unix user or programmer, you'll recognize the value of this complete, up-to-date Unix reference. With chapter overviews, specific examples, and detailed command.

A True Textbook for an Introductory Course, System Administration Course, or a Combination Course Linux with Operating System Concepts, Second Edition merges conceptual operating system (OS) and Unix/Linux topics into one cohesive textbook for undergraduate students. The book can be used for a one- or two-semester course on Linux or Unix. It is complete with review sections, problems, definitions, concepts and relevant introductory material, such as binary and Boolean logic, OS kernels and the role of the CPU and memory hierarchy. Details for Introductory and Advanced Users The book covers Linux from both the user and system administrator positions. From a user perspective, it emphasizes command-line interaction. From a system administrator perspective, the text reinforces shell scripting with examples of administration scripts that support the automation of administrator tasks. Thorough Coverage of Concepts and Linux Commands The author incorporates OS concepts not found in most Linux/Unix textbooks, including kernels, file systems, storage devices, virtual memory and process management. He also introduces computer science topics, such as computer networks and TCP/IP, interpreters versus compilers, file compression, file system integrity through backups, RAID and encryption technologies, booting and the GNUs C compiler. New in this Edition The book has been updated to systemd Linux and the newer services like Cockpit, NetworkManager, firewalld and journald. This edition explores Linux beyond CentOS/Red Hat by adding detail on Debian distributions. Content across most topics has been updated and improved. Shell Programming in Unix, Linux and OS X is a thoroughly updated revision of Kochan and Wood's classic Unix Shell Programming tutorial. Following the methodology of the original text, the book focuses on the POSIX standard shell, and teaches you how to

develop programs in this useful programming environment, taking full advantage of the underlying power of Unix and Unix-like operating systems. After a quick review of Unix utilities, the book's authors take you step-by-step through the process of building shell scripts, debugging them, and understanding how they work within the shell's environment. All major features of the shell are covered, and the large number of practical examples make it easy for you to build shell scripts for your particular applications. The book also describes the major features of the Korn and Bash shells.

Learn how to... Take advantage of the many utilities provided in the Unix system Write powerful shell scripts Use the shell's built-in decision-making and looping constructs Use the shell's powerful quoting mechanisms Make the most of the shell's built-in history and command editing capabilities Use regular expressions with Unix commands Take advantage of the special features of the Korn and Bash shells Identify the major differences between versions of the shell language Customize the way your Unix system responds to you Set up your shell environment Make use of functions Debug scripts

Contents at a Glance

- 1 A Quick Review of the Basics
- 2 What Is the Shell?
- 3 Tools of the Trade
- 4 And Away We Go
- 5 Can I Quote You on That?
- 6 Passing Arguments
- 7 Decisions, Decisions
- 8 'Round and 'Round She Goes
- 9 Reading and Printing Data
- 10 Your Environment
- 11 More on Parameters
- 12 Loose Ends
- 13 Rolo Revisited
- 14 Interactive and Nonstandard Shell Features

A Shell Summary B For More Information

Learn to use Unix, OS X, or Linux quickly and easily! In just 24 lessons of one hour or less, Sams Teach Yourself Unix in 24 Hours helps you get up and running with Unix and Unix-based operating systems such as Mac OS X and Linux. Designed for beginners with no previous experience using Unix, this book's straightforward, step-by-step approach makes it easy to learn. Each lesson clearly explains essential Unix tools and techniques from the ground up, helping you to become productive as quickly and efficiently as possible. Step-by-step instructions carefully walk you through the most common Unix tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and tips point out shortcuts and solutions

Learn how to... Pick the command shell that's best for you Organize the Unix file system (and why) Manage file and directory ownership and permissions Maximize your productivity with power filters and pipes Use the vi and emacs editors Create your own commands and shell scripts Connect to remote systems using SSH and SFTP Troubleshoot common problems List files and manage disk usage Get started with Unix shell programming Set up printing in a Unix environment Archive and back up files Search for information and files Use Perl as an alternative Unix programming language Set up, tweak, and make use of the GNOME graphical environment

Contents at a Glance

- HOUR 1: What Is This Unix Stuff?
- HOUR 2: Getting onto the System and Using the Command Line
- HOUR 3: Moving About the File System
- HOUR 4: Listing Files and Managing Disk Usage
- HOUR 5: Ownership and Permissions
- HOUR 6: Creating, Moving, Renaming, and Deleting Files and Directories
- HOUR 7: Looking into Files
- HOUR 8: Filters, Pipes, and Wildcards!
- HOUR 9: Slicing and Dicing Command-Pipe Data
- HOUR 10: An Introduction to the vi Editor
- HOUR 11: Advanced vi Tricks, Tools, and Techniques
- HOUR 12: An Overview of the emacs Editor
- HOUR 13: Introduction to Command Shells
- HOUR 14: Advanced Shell Interaction
- HOUR 15: Job Control
- HOUR 16: Shell Programming Overview
- HOUR 17: Advanced Shell Programming
- HOUR 18: Printing in the Unix Environment
- HOUR 19: Archives and Backups
- HOUR 20: Using Email to Communicate
- HOUR 21: Connecting to Remote Systems Using SSH and SFTP
- HOUR 22: Searching for Information and Files
- HOUR 23: Perl Programming in Unix
- HOUR 24: GNOME and the GUI

Environment Appendix A: Common Unix Questions and Answers

bull; Learn UNIX essentials with a concentration on communication, concurrency, and multithreading techniques bull; Full of ideas on how to design and implement good software along with unique projects throughout bull; Excellent companion to Stevens' Advanced UNIX System Programming

A handy book for someone just starting with Unix or Linux, and an ideal primer for Mac and PC users of the Internet who need to know a little about Unix on the systems they visit. The most effective introduction to Unix in print, covering Internet usage for email, file transfers, web browsing, and many major and minor updates to help the reader navigate the ever-expanding capabilities of the operating system.

A concise introduction to key computing skills for biologists While biological data continues to grow exponentially in size and quality, many of today's biologists are not trained adequately in the computing skills necessary for leveraging this information deluge. In *Computing Skills for Biologists*, Stefano Allesina and Madlen Wilmes present a valuable toolbox for the effective analysis of biological data. Based on the authors' experiences teaching scientific computing at the University of Chicago, this textbook emphasizes the automation of repetitive tasks and the construction of pipelines for data organization, analysis, visualization, and publication.

Stressing practice rather than theory, the book's examples and exercises are drawn from actual biological data and solve cogent problems spanning the entire breadth of biological disciplines, including ecology, genetics, microbiology, and molecular biology. Beginners will benefit from the many examples explained step-by-step, while more seasoned researchers will learn how to combine tools to make biological data analysis robust and reproducible. The book uses free software and code that can be run on any platform. *Computing Skills for Biologists* is ideal for scientists wanting to improve their technical skills and instructors looking to teach the main computing tools essential for biology research in the twenty-first century. Excellent resource for acquiring comprehensive computing skills Both novice and experienced scientists will increase efficiency by building automated and reproducible pipelines for biological data analysis Code examples based on published data spanning the breadth of biological disciplines Detailed solutions provided for exercises in each chapter Extensive companion website

Learn to install and administer Linux on an individual workstation or an entire network with this comprehensive in depth reference. You'll find everything you need to get up and running with any Linux distribution, including the latest version of Red Hat. Updated to cover the new 2.4 kernel and complete with an expanded section on advanced networking, this book shows you how to install and configure Linux, set up Internet services, handle single-host administration, and much more. Plus, you'll get eight pages of blueprints illustrating the differences between Linux and Windows NT/2000. If you are a professional administrator wanting to bring Linux into your network topology, a home user with multiple machines wanting to build a simple home network, or are migrating from Windows, then you need this book.

The revision of the definitive guide to Unix system programming is now available in a more portable format.

If you are new to UNIX, this concise introduction will tell you just what you need to get started and no more. Why wade through a 600-page book when you can begin working productively in a matter of minutes? It's an ideal primer for Mac and PC users of the Internet who need to know a little bit about UNIX on the systems they visit. This book is the most effective introduction to UNIX in printing The fourth edition covers the highlights of the Linux operating system. It's a handy book for someone just starting with UNIX or Linux, as well as someone who encounters a UNIX system on the Internet. And it now includes a quick-reference card. Topics covered include: Linux operating system highlights Logging in and logging out Window systems (especially X/Motif) Managing UNIX files and directories Sending and receiving mail

Redirecting input/output Pipes and filters Background processing Basic network commands. Written in a personal style that guides the reader through the learning process, this stand alone tool for the learning of UNIX presents topics in the order users need to understand them logically and develop a cohesive picture of covered concepts. Professionals will enjoy a large number of illustrations showing HOW the commands work, and testing their knowledge by trying the command series to see if they get the same results. Chapter topics cover getting started; file handling in UNIX; file matching metacharacters, commands, and history; Editing 101—meet ed; Editing 102—ed's big brother ex; visual editing with vi; interesting commands; tools and concepts; process control; regular expressions and the grep sisters; types of text processing; awk; and shell scripting. For anyone who uses UNIX, and anyone who needs to become a proficient UNIX user.

Intended to anyone interested in numerical computing and data science: students, researchers, teachers, engineers, analysts, hobbyists... Basic knowledge of Python/NumPy is recommended. Some skills in mathematics will help you understand the theory behind the computational methods.

The Art of UNIX Programming poses the belief that understanding the unwritten UNIX engineering tradition and mastering its design patterns will help programmers of all stripes to become better programmers. This book attempts to capture the engineering wisdom and design philosophy of the UNIX, Linux, and Open Source software development community as it has evolved over the past three decades, and as it is applied today by the most experienced programmers. Eric Raymond offers the next generation of "hackers" the unique opportunity to learn the connection between UNIX philosophy and practice through careful case studies of the very best UNIX/Linux programs.

Unlike some operating systems, Linux doesn't try to hide the important bits from you—it gives you full control of your computer. But to truly master Linux, you need to understand its internals, like how the system boots, how networking works, and what the kernel actually does. In this completely revised second edition of the perennial best seller How Linux Works, author Brian Ward makes the concepts behind Linux internals accessible to anyone curious about the inner workings of the operating system. Inside, you'll find the kind of knowledge that normally comes from years of experience doing things the hard way. You'll learn: –How Linux boots, from boot loaders to init implementations (systemd, Upstart, and System V) –How the kernel manages devices, device drivers, and processes –How networking, interfaces, firewalls, and servers work –How development tools work and relate to shared libraries –How to write effective shell scripts You'll also explore the kernel and examine key system tasks inside user space, including system calls, input and output, and filesystems. With its combination of background, theory, real-world examples, and patient explanations, How Linux Works will teach you what you need to know to solve pesky problems and take control of your operating system.

To thoroughly understand what makes Linux tick and why it's so efficient, you need to delve deep into the heart of the operating system--into the Linux kernel itself. The kernel is Linux--in the case of the Linux operating system, it's the only bit of software to which the term "Linux" applies. The kernel handles all the requests or completed I/O operations and determines which programs will share its processing time, and in what order. Responsible for the sophisticated memory management of the whole system, the Linux kernel is the force behind the legendary Linux efficiency. The new edition of Understanding the Linux Kernel takes you on a guided tour through the most significant data structures, many algorithms, and programming tricks used in the kernel. Probing beyond the superficial features, the authors offer valuable insights to people who want to know how things really work inside their machine. Relevant segments of code are dissected and discussed line by line. The book covers more than just the functioning of the code, it explains the theoretical underpinnings for why Linux does things the way it does.

The new edition of the book has been updated to cover version 2.4 of the kernel, which is quite different from version 2.2: the virtual memory system is entirely new, support for multiprocessor systems is improved, and whole new classes of hardware devices have been added. The authors explore each new feature in detail. Other topics in the book include: Memory management including file buffering, process swapping, and Direct memory Access (DMA) The Virtual Filesystem and the Second Extended Filesystem Process creation and scheduling Signals, interrupts, and the essential interfaces to device drivers Timing Synchronization in the kernel Interprocess Communication (IPC) Program execution Understanding the Linux Kernel, Second Edition will acquaint you with all the inner workings of Linux, but is more than just an academic exercise. You'll learn what conditions bring out Linux's best performance, and you'll see how it meets the challenge of providing good system response during process scheduling, file access, and memory management in a wide variety of environments. If knowledge is power, then this book will help you make the most of your Linux system.

This book describes the internal algorithms and the structures that form the basis of the UNIX operating system and their relationship to the programmer interface. The system description is based on UNIX System V Release 2 supported by AT&T, with some features from Release 3.

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