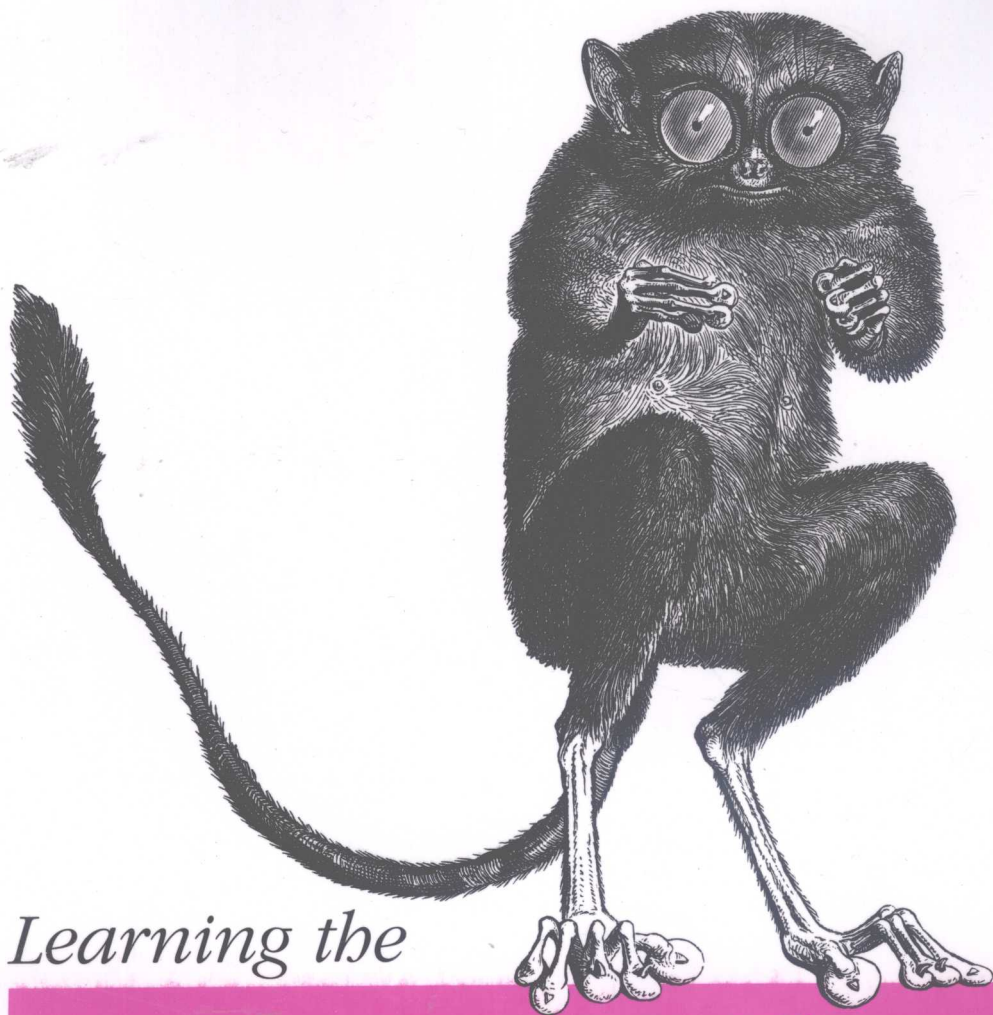


学习vi和Vim编辑器 (影印版)

第七版
7 New Chapters on Vim



Learning the

Vi and Vim

Editors

O'REILLY®

开明出版社

*Arnold Robbins,
Elbert Hannah & Linda Lamb 著*

第七版

学习 vi 和 Vim 编辑器 (影印版)

Learning the vi and Vim Editors

Arnold Robbins, Elbert Hannah & Linda Lamb

O'REILLY®

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*To my wife, Miriam, for your love, patience, and
support.*

—Arnold Robbins, Sixth and Seventh Editions

Preface

Text editing is one of the most common tasks on any computer system, and **vi** is one of the most useful standard text editors on a system. With **vi** you can create new files or edit any existing text-only file.

vi, like many of the classic utilities developed during the early years of Unix, has a reputation for being hard to navigate. Bram Moolenaar's enhanced clone, Vim ("**vi** Improved"), has gone a long way toward removing reasons for such impressions. Vim includes countless conveniences, visual guides, and help screens. It has become probably the most popular version of **vi**, so this seventh edition of this book devotes seven new chapters to it in Part II, *Vim*. However, many other worthy clones of **vi** also exist; we cover three of them in Part III, *Other vi Clones*.

Scope of This Book

This book consists of 18 chapters and 4 appendixes, divided into 4 parts. Part I, *Basic and Advanced vi*, is designed to get you started using **vi** quickly, and to follow up with advanced skills that will let you use it effectively.

The first two chapters, Chapter 1, *The vi Text Editor*, and Chapter 2, *Simple Editing*, present some simple **vi** commands with which you can get started. You should practice these until they are second nature. You could stop reading at the end of Chapter 2, having learned some elementary editing tools.

But **vi** is meant to do a lot more than rudimentary word processing; the variety of commands and options enables you to shortcut a lot of editing drudgery. Chapter 3, *Moving Around in a Hurry*, and Chapter 4, *Beyond the Basics*, concentrate on easier ways to do tasks. During your first reading, you'll get at least an idea of what **vi** can do and what commands you might harness for your specific needs. Later, you can come back to these chapters for further study.

Chapter 5, *Introducing the ex Editor*, Chapter 6, *Global Replacement*, and Chapter 7, *Advanced Editing*, provide tools that help you shift more of the editing burden to the computer. They introduce you to the **ex** line editor underlying **vi**, and they show you how to issue **ex** commands from within **vi**.

Chapter 8, *Introduction to the vi Clones*, provides an introduction to the extensions available in the four *vi* clones covered in this book. It centralizes in one place the descriptions of multiwindow editing, GUI interfaces, extended regular expressions, facilities that make editing easier, and several other features, providing a roadmap to what follows in the rest of this book. It also provides a pointer to source code for the original *vi*, which can be compiled easily on modern Unix systems (including GNU/Linux).

Part II, *Vim*, describes Vim, the most popular *vi* clone in the early part of the 21st century.

Chapter 9, *Vim (vi Improved): An Introduction*, provides a general introduction to Vim, including where to get binary versions for popular operating systems and some of the different ways to use Vim.

Chapter 10, *Major Vim Improvements over vi*, describes the major improvements in Vim over *vi*, such as built-in help, control over initialization, additional motion commands, and extended regular expressions.

Chapter 11, *Multiple Windows in Vim*, focuses on multiwindow editing, which is perhaps the most significant additional feature over standard *vi*. This chapter provides all the details on creating and using multiple windows.

Chapter 12, *Vim Scripts*, looks into the Vim command language, which lets you write scripts to customize and tailor Vim to suit your needs. Much of Vim's ease of use "out of the box" comes from the large number of scripts that other users have already written and contributed to the Vim distribution.

Chapter 13, *Graphical Vim (gvim)*, looks at Vim in modern GUI environments, such as those that are now standard on commercial Unix systems, GNU/Linux and other Unix work-alikes, and MS Windows.

Chapter 14, *Vim Enhancements for Programmers*, focuses on Vim's use as a programmer's editor, above and beyond its facilities for general text editing. Of particular value are the folding and outlining facilities, smart indenting, syntax highlighting, and edit-compile-debug cycle speedups.

Chapter 15, *Other Cool Stuff in Vim*, is a bit of a catch-all chapter, covering a number of interesting points that don't fit into the earlier chapters.

Part III, *Other vi Clones*, describes three other popular *vi* clones: *nvi*, *elvis*, and *vile*.

Chapter 16, *nvi: New vi*, Chapter 17, *Elvis*, and Chapter 18, *vile: vi Like Emacs*, cover the various *vi* clones—*nvi*, *elvis*, and *vile*—showing you how to use their extensions to *vi* and discussing the features that are specific to each one.

Part IV, *Appendixes*, provides useful reference material.

Appendix A, *The vi, ex, and Vim Editors*, lists all *vi* and *ex* commands, sorted by function. It also provides an alphabetical list of *ex* commands. Selected *vi* and *ex* commands from *Vim* are also included.

Appendix B, *Setting Options*, lists *set* command options for *vi* and for all four clones.

Appendix C, *Problem Checklists*, consolidates checklists found earlier in the book.

Appendix D, *vi and the Internet*, describes *vi*'s place in the larger Unix and Internet culture.

How the Material Is Presented

Our philosophy is to give you a good overview of what we feel are *vi* survival materials for the new user. Learning a new editor, especially an editor with all the options of *vi*, can seem like an overwhelming task. We have made an effort to present basic concepts and commands in an easy-to-read and logical manner.

After providing the basics for *vi*, which are usable everywhere, we move on to cover *Vim* in depth. We then round out our coverage of the *vi* landscape by looking at *nvi*, *elvis*, and *vile*. The following sections describe the conventions used in this book.

Discussion of vi Commands



A picture of a keyboard button, like the one on the left, marks the main discussion of that particular keyboard command or of related commands. You will find a brief introduction to the main concept before it is broken down into task-oriented sections. We then present the appropriate command to use in each case, along with a description of the command and the proper syntax for using it.

Conventions

In syntax descriptions and examples, what you would actually type is shown in the *Courier* font, as are all command names. Filenames are also shown in *Courier*, as are program options. Variables (which you would not type literally, but would replace with an actual value when you type the command) are shown in *Courier italic*. Brackets indicate that a variable is optional. For example, in the syntax line:

```
vi [filename]
```

filename would be replaced by an actual filename. The brackets indicate that the *vi* command can be invoked without specifying a filename at all. The brackets themselves are not typed.

Certain examples show the effect of commands typed at the Unix shell prompt. In such examples, what you actually type is shown in **Courier Bold**, to distinguish it from the system response. For example:

```
$ ls
ch01.xml ch02.xml ch03.xml ch04.xml
```

In code examples, *italic* indicates a comment that is not to be typed. Otherwise, *italic* introduces special terms and emphasizes anything that needs emphasis.

Following traditional Unix documentation convention, references of the form `printf(3)` refer to the online manual (accessed via the `man` command). This example refers to the entry for the `printf( )` function in section 3 of the manual (you would type `man 3 printf` on most systems to see it).

Keystrokes

Special keystrokes are shown in a box. For example:

iWith a ESC

Throughout the book, you will also find columns of `vi` commands and their results:

Keystrokes	Results
ZZ	"practice" [New file] 6 lines, 320 characters Give the write and save command, ZZ. Your file is saved as a regular Unix file.

In the preceding example, the command `ZZ` is shown in the left column. In the window to the right is a line (or several lines) of the screen that show the result of the command. Cursor position is shown in reverse video. In this instance, since `ZZ` saves and writes the file, you see the status line shown when a file is written; the cursor position is not shown. Below the window is an explanation of the command and its result.

Sometimes `vi` commands are issued by pressing the CTRL key and another key simultaneously. In the text, this combination keystroke is usually written within a box (for example, CTRL-G). In code examples, it is written by preceding the name of the key with a caret (^). For example, `^G` means to hold down CTRL while pressing the G key.

Problem Checklist

A problem checklist is included in those sections where you may run into some trouble. You can skim these checklists and go back to them when you actually encounter a problem. All of the problem checklists are also collected in Appendix C, for ease of reference.

What You Need to Know Before Starting

This book assumes you have already read *Learning the Unix Operating System* (O'Reilly), or some other introduction to Unix. You should already know how to:

- Log in and log out
- Enter Unix commands
- Change directories
- List files in a directory
- Create, copy, and remove files

Familiarity with `grep` (a global search program) and wildcard characters is also helpful.

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About the Previous Editions

In the fifth edition of this book (then called *Learning the vi Editor*), the `ex` editor commands were first discussed more fully. In Chapters 5, 6, and 7, the complex features of `ex` and `vi` were clarified by adding more examples, in topics such as regular expression syntax, global replacement, `.exrc` files, word abbreviations, keyboard maps, and editing scripts. A few of the examples were drawn from articles in *Unix World* magazine. Walter Zintz wrote a two-part tutorial* on `vi` that taught us a few things we didn't know, and that also had a lot of clever examples illustrating features we did already cover in the book. Ray Swartz also had a helpful tip in one of his columns.† We are grateful for the ideas in these articles.

The sixth edition of *Learning the vi Editor* introduced coverage of four freely available “clones,” or work-alike editors. Many of them have improvements over the original `vi`. One could thus say that there is a “family” of `vi` editors, and the book's goal was to teach you what you need to know to use them. That edition treated `nvi`, `Vim`, `elvis`, and `vile` equally.

The sixth edition also added the following features:

- Many minor corrections and additions were made to the basic text.
- For each chapter where appropriate, a command summary was added at the end.
- New chapters covered each `vi` clone, the features and/or extensions common to two or more of the clones, and multiwindow editing.
- The chapters for each `vi` clone described a bit of that program's history and goals, its unique features, and where to get it.
- A new appendix described `vi`'s place in the larger Unix and Internet culture.

Preface to the Seventh Edition

This seventh edition of *Learning the vi and Vim Editors* retains all the good features of the sixth edition. Time has proven `Vim` to be the most popular `vi` clone, so this edition adds considerably expanded coverage of that editor (and gives it a place in the title). However, to be relevant for as many users as possible, we have retained and updated the material on `nvi`, `elvis`, and `vile`.

* “vi Tips for Power Users,” *Unix World*, April 1990; and “Using vi to Automate Complex Edits,” *Unix World*, May 1990. Both articles by Walter Zintz. (See Appendix D for the web location of these articles.)

† “Answers to Unix,” *Unix World*, August 1990.

What's New

The following features are new for this edition:

- Once again, we have corrected errors in the basic text.
- Seven new chapters provide exhaustive coverage of Vim.
- The material on `nvi`, `elvis`, and `vile` has been brought up-to-date.
- The previous edition's two reference appendixes on `ex` and `vi` have been condensed into one and now contain selected additional material on Vim.
- The other appendixes have been updated as well.

Versions

The following programs were used for testing out various `vi` features:

- The Solaris version of `vi` for a “reference” version of Unix `vi`
- Version 1.79 of Keith Bostic's `nvi`
- Version 2.2 of Steve Kirkendall's `elvis`
- Version 7.1 of Bram Moolenaar's Vim
- Version 9.6 of `vile`, by Kevin Buettner, Tom Dickey, and Paul Fox

Acknowledgments from the Sixth Edition

First and foremost, thanks to my wife, Miriam, for taking care of the kids while I was working on this book, particularly during the “witching hours” right before meal times. I owe her large amounts of quiet time and ice cream.

Paul Manno, of the Georgia Tech College of Computing, provided invaluable help in pacifying my printing software. Len Muellner and Erik Ray of O'Reilly & Associates helped with the SGML software. Jerry Peek's `vi` macros for SGML were invaluable.

Although all of the programs were used during the preparation of the new and revised material, most of the editing was done with Vim versions 4.5 and 5.0 under GNU/Linux (Red Hat 4.2).

Thanks to Keith Bostic, Steve Kirkendall, Bram Moolenaar, Paul Fox, Tom Dickey, and Kevin Buettner, who reviewed the book. Steve Kirkendall, Bram Moolenaar, Paul Fox, Tom Dickey, and Kevin Buettner also provided important parts of Chapters 8 through 12. (These chapter numbers refer to the sixth edition.)

Without the electricity being generated by the power company, doing anything with a computer is impossible. But when the electricity is there, you don't stop to think about it. So too when writing a book—without an editor, nothing happens, but when the editor is there doing her job, it's easy to forget about her. Gigi Estabrook at O'Reilly is

a true gem. It's been a pleasure working with her, and I appreciate everything she's done and continues to do for me.

Finally, many thanks to the production team at O'Reilly & Associates.

—Arnold Robbins
Ra'anana, ISRAEL
June 1998

Acknowledgments for the Seventh Edition

Once again, Arnold thanks his wife, Miriam, for her love and support. The size of his quiet time and ice cream debt continues to grow. In addition, thanks to J.D. “Illiad” Frazer for the great *User Friendly* cartoons.[‡]

Elbert would like to thank Anna, Cally, Bobby, and his parents for staying excited about his work through the tough times. Their enthusiasm was contagious and appreciated.

Thanks to Keith Bostic and Steve Kirkendall for providing input on revising their editors' chapters. Tom Dickey provided significant input for revising the chapter on vile and the table of set options in Appendix B. Bram Moolenaar (the author of Vim) reviewed the book this time around as well. Robert P.J. Day, Matt Frye, Judith Myerson, and Stephen Figgins provided important review comments throughout the text.

Arnold and Elbert would both like to thank Andy Oram and Isabel Kunkle for their work as editors, and all of the tools and production staff at O'Reilly Media.

—Arnold Robbins
Nof Ayalon, ISRAEL
2008

—Elbert Hannah
Kildeer, Illinois USA
2008

[‡] See <http://www.userfriendly.org> if you've never heard of *User Friendly*.

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