Learning to play Vim

Master the best text editor, from Beginner to Composer

All rights reserved.

While every precaution has been taken in the preparation of this book, the author assume no responsibility for errors or omissions, or for damages resulting from the use of the information contained herein.

Contents

Welcome, Vim Enthusiasts	11
What this book is not?	11
Who Should Read This Book?	11
What Do You Need to Follow Along?	
How To Read This Book?	12
Structure of the book	12
Notation Conventions	
Vim's Help	
How to Get The Most Out of This Book?	
Tips to Learn Efficiently	13
Writing Your Own Cheatsheet	13
Tweaking Endlessly Vim's Configuration	
Playing Vim?	_
What to play: Vim or Neovim?	14
Beyond the Book	14
Going Further	15
The Beginning of the Journey	16
Vim Is An Instrument	16
The Power Is In Your Fingers	
Efficient Typing: The Two Rules	17
The First Week	
The Second Week	
Speed and Accuracy	
Keyboard Layout	19
In A Nutshell	
Going Deeper	19
Develor Wine for Develor	21
Rank I - Vim for Rookies	21
The Modes of Vim	
The NORMAL Mode	
The INSERT Mode	
The COMMAND-LINE Mode	
Moving Around with Motions (NORMAL mode)	
Ditching the Arrow Keys	
Horizontal Motions	25
Beginning and End of Line	26
Vertical Motions	
The Language of Vim (NORMAL Mode)	28
The Operators	28
The Text-Objects	29
Undo and Redo (NORMAL mode)	30
Bending Vim to Your Will (Customization)	31
Creating Your Configuration	31
The Configuration Addiction	33
Exercises	34
1/00/10/10/10/10	4ر

Basics										34
Beyond the Basics										35
Beyond the Basics		•	• •	• •	• •	•	• •	•	•	36
Playtime Solutions	• •	•	• •	• •		•	• •	• •	•	36
Exercises Solutions		•	• •	• •		•			•	37
Exercises Solutions		•	• •	• •		•	• •		•)
Rank II - Vim for Beginners										40
The Modes of Vim, the Return										40
Counting Motions or Text-Objects in NORMAL mode		•		• •		•	• •		•	40
More Veretralize to Cruitely to INCERT Mede		•		• •		•			•	
More Keystrokes to Switch to INSERT Mode		•	• •	• •		•	• •		•	41
The VISUAL Mode		•				•			•	42
The REPLACE Mode		•				•			•	42
Deleting In Vim (NORMAL mode)		•								44
Cross What You Don't Want										44
Deleted Content To										44
Searching (COMMAND-LINE Mode)										45
Navigating Vim's Help (COMMAND-LINE Mode)										47
Basics		•				·				47
Follow The Definition	• •	•	• •	• •		•	• •	• •	•	48
Finding What Your Heart Desire		•	• •	• •		•			•	49
Vimagint or Luce (Customization)		•	• •	• •		•	• •		•	50
Vimscript or Lua? (Customization)		•	• •	• •		•	• •		•	
Vim's Options (Customization)		•				•			•	50
Defining Options		•				•			•	50
Setting Options The Interactive Way		•							•	52
Useful Options										52
Exercises										53
Basics										53
Beyond the Basics										54
Playtime Solutions										55
Exercises Solutions										56
Beyond The Basics Solutions										56
beyond the basics solutions		•		• •		•	• •	• •	•	70
Rank III - Vim for Aspirant										58
Introduction										58
Vim Spatial Organization										58
										58
The Buffers										62
The Windows										
The Tab Pages										
Creating and Deleting Tabs		•							•	65
Moving From Tab to Tab										65
Moving Tabs										65
Searching (NORMAL mode)										66
Ranges (COMMAND-LINE Mode)										67
Line Specifiers										67
Selection Range for VISUAL Mode										68
Creating Your Own Mappings (Customization)	• •	•	• •	• •		•	• •	• •	•	69
Basics										69
										70
Nested and Recursive Mapping										
Deleting a Mapping										70
Custom Characters										71
The Leader Key										72
Some First Mapping										73
Finding Customized Mapping										73
Exercises										74
Basics										74
Beyond the Basics										75
	•	•	•	•	•	-	. •	•	•	
Rank IV - Vim for Intermediates										77
Introduction						_				77
		•		•		•	•		•	

	rs		
Basics .			. 77
The Type	es of Register		. 78
Reading F	From the Registers in NORMAL and INSERT modes		. 80
Using The	e Registers		. 80
The Expre	ression Register		. 81
Jumping Arous	ınd (NORMAL mode)		. 82
The Iump	p List		. 82
The Chan	nge List	• •	. 83
Iumning t	to Match Elements		
Daragraph	h Jumping		. 84
Mothod I	h Jumping		. 84
The Command	d Line History (COMMAND-LINE mode)		. 85
Freton din a Vina	u Line filstory (Convinand-Line mode)		. 00
Extending vin	m with Plugins (Customization)		. 86
A Plugin t	to Manage Plugin		. 86
	he Basics		
	he Basics		
Solutions	5		. 100
	_ 40.4		
Rank VI - Vim fo			101
Navigating A P	Project		. 101
The Curre	ent Working Directory		. 101
Changing	g the Working Directory		. 102
Scopes of	the Working Directory		. 102
Searching	g a File		. 103
Formatting Te	ext (NORMAL mode)		. 106
Vim's For	rmatting		. 106
Formattin	ng with External Programs		. 109
Line or Blockw	wise? (VISUAL Mode)		. 110
Visual Mo	ode and Visual Mode Linewise		. 110
Visual Mo	ode and Visual mode Linewise		. 111
Useful Keystro	okes (COMMAND-LINE mode)		. 112
Through	The Fx command History		. 112
Conving F	The Ex command History	• •	. 113
Multiple (Commands on One Line		. 113
Manning Speci	vial Arguments (Customization)		. 114
	cial Arguments (Customization)		
	lande.		
	he Basics		
Solutions	3		. 117
Rank VII - Vim fo	or Concorned		118
Searching in iv	Multiple Files	• •	. 118
vim inter	rnal Search: Vimgrep		. 118
Using an I	External Program		. 119
Indenting (NO	DRMAL mode)		. 120
Indenting	g Keystrokes		. 120
	ng the Indentations		
	ng Tabs, Spaces, and Others		
The Equa	al Operator		. 122
Indenting	g With External Program		. 123
Advanced Sear	rch In Buffer (COMMAND-LINE mode)		. 123
	sitivity		
	lags		
	nd Operators		
Search Of			125

Find and Replace One Occurrence at a Time								. 12	25
Search Highlight								. 12	25
Searching Without Moving the Cursor								. 12	26
Using Search as Range								. 12	26
Writing Custom Functions (Customization)								. 12	28
Checking Existing Functions	•	·		·	•	•	•	13	28
Creating Or Copying Functions	•	•	• •	•	•	•	•	12	28
Exercises	•	•		•	•	•	•	12	20 29
									29 29
Basics									
Beyond the Basics									29
Solutions	•	•		•	•	•	•	. 13	30
Rank VIII - Vim for Adepts								1.	31
Introduction	•	•		•	•	•	•	. 1.	31
The Quickfix Lists and Location Lists									31
Quickfix Lists									31
Location Lists									34
Filtering the Quickfix List									35
Acceding the Quickfix Lists								. 13	35
Changing Case (NORMAL mode)								. 13	36
Using Your Shell Commands in Vim (COMMAND-LINE mode)								. 13	38
Executing External Command								. 13	38
Inserting the Output of a Shell Command in the Current Buffer.								. 13	39
Using Part of the Buffer as Input								. 14	40
Replacing a Range of Lines with a Shell Command Output	•	•	•	•	•	•	•	1/	40
Replacing Lines with a Shell Command Output in Normal Mode									41
The Command Execute (Customization)	•	•		•	•	•	•	. 14	+1 42
									+2 44
Exercises									
Basics									44
Beyond the Basics									44
Solutions	٠	•		•	٠	•	•	. 14	44
Interlude II Heaful Vim Dluging the Deturn								14	. =
Interlude II - Useful Vim Plugins, the Return Bringing Git in Vim									+5 45
									_
Linters for Vim	•	•		•	•	•	•	. 14	45
Manipulating Buffers, Windows, and Tabs	•	•		•	•	•	•	. 14	46
Closing Buffers Without Closing Windows	•	•		•	•	•	•	. 14	46
Managing Windows Easily	•	•		•	•	•	•	. 14	46
Different Navigation				•	•		•	. 14	46
Outliners									46
Debugging Any Language								. 14	47
									_
Rank IX - Vim for Believers								14	
Introduction	•			•	•			. 14	48
Vim Regular Expressions									48
A Brief Return to Basics								. 14	49
The Concept of Atom								. 15	50
Vim's "Magical" Patterns									51
Word Boundaries									52
Character classes and Vim Options									52
Greedy and Non-Greedy Identifiers									52
Vim Lookaround Assertions									54
Regexes Matching On Multiple Lines	•	•		•	•	•	•	11	55
Only Matching the Viewal Calcution	•	•		•	•	•	•	. 13	
Only Matching the Visual Selection									56
Manipulating Numbers (NORMAL mode)									57
The Global Command (COMMAND-LINE mode)									59
Basics									59
Useful Examples									
Global Command and Substitution		_					_	. 16	52

Autocommands (Customization)	
Basics	163
Multiple Events and Patterns	16
Autocommand Groups	
Ignoring Events	16'
Exercises	
Basics	
Beyond the Basics	
Solutions	10
Rank X - Vim for Veterans	170
Marks	170
Basics	170
Read Only Marks	17
Special Marks	
Regexes and Marks	
Absolute and Relative Line Numbers (NORMAL mode)	
Switching Between Absolute and Relative Line Number	
From INSERT to NORMAL Mode for One Command (INSERT mode)	
The Normal Ex Command (COMMAND-LINE mode)	170
The Normal and Global Ex Command	
The Normal Ex Command and Special Keys	
TO SORT	178
User Commands (Customization)	
Basics	180
Attributes for User Commands	18
Basics	
Beyond the Basics	
Solutions	
bolutions	10.
Interlude III - Vim Runtime	184
Vim's Startup	184
Startup's Order	
Profiling Vim's Startup	18
Special Environment Variables	
The Runtime Path	
Important Runtime Paths	
Subdirectories of the Runtime Paths	
Autoloading Functions	
The Directory after	
The Runtime Command	19
Disabling Runtime Files	19
The Startup Has Been Revealed	19
Rank XI - Vim for Experts	19
Undo In Depth	
Persisting Undo	
The Undo Tree	
Creating Undo Nodes	
Abbreviations (INSERT mode)	19
Basics Ex Commands	19
Replacing and Moving the Cursor	19'
Abbreviations and Mapping	19'
Verbose	198
The Message History (COMMAND-LINE mode)	
The Operator Pending Map (Customization)	
Exercises	
Rasics	20

Beyond the Basics	
Rank XII - Vim for Champions	202
Folding	202
Fold Options	202
Choosing Your Fold Method	202
NORMAL Mode Keystrokes	203
Opening and Closing Folds with Ex Commands	204
Folding Tips	
Digraphs (INSERT mode)	205
Special Strings for Vim Commands (COMMAND-LINE mode)	206
The viminfo and shada Files (Customization)	208
Exercises	211
Basics	
Beyond the Basics	
Solutions	
Interlude IV - Vimscript and Lua	212
When Using Lua?	
Lua in Vimscript Files	
Lua scripts	
Lua API	
Interoperability: Vimscript From Lua	
Testing and debugging	
Global Functions	
Vim Loop	
Often Used Lua Functions	215
Rank XIII - Vim for Masters	216
Syntax Highlighting	
Enabling and Disabling Syntax Highlighting	216
Color Schemes	
Highlight Groups	
Linking Highlight Groups	
Creating Syntax Groups	
The Verbose Command	222
Troubleshooting for Syntax Highlighting and Big Files	222
Displaying Useful Information About File and Cursor Position (NORMAL mode)	223
Diff Demystified (NORMAL mode)	
Beginning a Diff	
Configuring Diffs with An Option	
Debugging Vimscript & Lua (Customization)	227
Verbosity	
The Debug Mode	
Exercises	
Basics	
Beyond the Basics	
Solutions	231
Rank XIV - Vim for Grand Masters	232
Compiling and Linting	232
Running a Binary Against Your Code	232
Running the Executable	
Parsing Error Messages	
Creating a Compiler for Lua	
Completion and Completion Submode (INSERT mode)	237
The Completion Submode	
Scrolling in INSERT MODE	

The Complete Option		 	 	238
The Omni-completion		 	 	239
The Arglist (COMMAND-LINE mode)		 	 	240
Practical Use: Find and Replace in Multi	iple Files	 	 	242
Managing Plugins in Vanilla Vim (Customiza	ation)			243
The Vim Native Package Manager	acioii,	 	 	243
Installing New Plugins		 	 	243 244
Loading Dluging on Domand		 	 	244
Loading Plugins on Demand		 	 	24) 216
Exercises				
Basics				
Beyond the Basics				
Solutions		 	 	247
ml - F:1 - M				240
The File Manager netrw				248
Opening netrw				
Browsing				
Basics		 	 	
Display		 	 	251
Filtering Display		 	 	252
Listing the Browsing History				
Marking Files And Directories		 	 	253
Managing Files and Directories		 	 	
Creating and Deleting		 	 	254
Renaming Files or Directory		 	 	254
Conving Files of Directory		 	 	254 255
Copying Files				
Moving Files				
File Permissions		 	 	255
Opening Files with External Applications .		 	 	255
Bookmarking		 	 	256
Remote Operations and Protocols		 	 	256
Using scp via SSH		 	 	257
Using HTTP (read only)				
Listing Directories		 	 	258
Obtaining a file		 	 	258
FTP				
The NETRC file				
Customizing Mapping				
Overwriting Variables and Functions		 	 	
Command Line Editing				
TODO		 	 	260
Rank XV - Vim for Champions				261
Vim's Spelling				
Basics				
Adding Words to Spell Files				
Fixing Spelling with Word Suggestions		 	 	264
Navigating Through Your Wrong Words	3	 	 	265
Advanced Macro (NORMAL & VISUAL mode)				
Visual Mode Macro		 	 	266
Creating Mapping from Macros				
Recursive Macro				
Redirections (COMMAND-LINE mode)				
Improving Vim Performances				
General Profiling		 	 	270 270
Startup Profiling				
Profiling Syntax Files				
Exercises		 	 	272

Beyond the Basics	
Exercice xxxx - Advanced Macro	272 272
Solutions	212
Rank XVI - Vim for Heroes	273
Jumping to Definition	273
Vim and ctags	273 275
Completion with tags	275
Saving Settings and Vim Sessions (COMMAND-LINE mode)	281
Saving Vim's Options and Mapping in a File	281
Creating and Loading a Session	281
Fine Tuning Vim's Sessions	282
Setting Your Status Line (Customization)	283
Status Line Options	283 285
Status Line Separator	286
Setting your Tab Line	286
Exercises	290
Basics	290
Beyond the Basics	290
Solutions	290
Rank XVII - Vim for Composers	291
Restoring the Cursor Position	291
Opening a Window Fullscreen	292
Output Redirection into a Scratch Buffer	295 300
Git Information From the Current Line	300
Creating a Popup	301
CONCLUSION	302
Annexes	303
	205
	305
Default word characters	306
Options	307
Text Objects	308
Mapping Special Keys	310
Operators	311
Ranges	312
Special Keycodes	313
Mapping Special Arguments	314
The "g" Commands	315
The "do" Ex commands	316
The "do" Ex commands Vimscript and Lua Functions Seen in the Book	316 317

Highlights Highlight Attributes	319 319 320 320
Autcommands	322
Useful Vimscript Functions	323
Internal word list for spellchecker	324
Commands Managing Windows	325
Statusline	326
External programs	327
Search Ex Commands on Lists (COMMAND-LINE mode	328 328