


Contents

| | |
|--|------|
| Preface | xi |
| Acknowledgements | xiii |
| | |
| PART ONE THE BIG PICTURE | 1 |
| | |
| 1 Introduction to scripts and scripting | 3 |
| 1.1 Scripts and programs | 3 |
| 1.2 Origins of scripting | 4 |
| 1.3 Scripting today | 5 |
| 1.4 Characteristics of scripting languages | 5 |
| 1.5 Uses for scripting languages | 7 |
| 1.6 Web scripting | 12 |
| 1.7 Java | 13 |
| 1.8 The universe of scripting languages | 13 |
| | |
| PART TWO LANGUAGES | 15 |
| | |
| 2 Getting the job done in Perl | 17 |
| 2.1 The Perl phenomenon | 17 |
| 2.2 Introducing Perl | 18 |
| 2.3 Names and values in Perl | 24 |
| 2.4 Variables and assignment | 28 |
| 2.5 Scalar expressions | 29 |
| 2.6 Control structures | 32 |
| 2.7 Built-in functions | 36 |
| 2.8 Collections of data | 37 |
| 2.9 Working with arrays and lists | 41 |
| 2.10 Working with hashes | 45 |
| 2.11 Simple input and output | 47 |
| 2.12 Strings, patterns and regular expressions | 48 |
| 2.13 Subroutines | 58 |
| 2.14 Scripts with arguments | 61 |
| 2.15 Conclusion | 62 |
| 2.16 Reference: operators and precedence | 63 |

| | | |
|------|---|-----|
| 3 | Advanced Perl | 64 |
| 3.1 | Finer points of looping | 64 |
| 3.2 | Finer points of subroutines | 65 |
| 3.3 | Using pack and unpack | 68 |
| 3.4 | Working with files. | 69 |
| 3.5 | Navigating the file system | 74 |
| 3.6 | Typeglobs | 76 |
| 3.7 | eval | 78 |
| 3.8 | References. | 79 |
| 3.9 | Data structures | 86 |
| 3.10 | Packages | 88 |
| 3.11 | Libraries and modules | 89 |
| 3.12 | Objects | 92 |
| 3.13 | Objects and modules in action. | 97 |
| 3.14 | Tied variables. | 100 |
| 3.15 | Interfacing to the operating system | 103 |
| 3.16 | Creating 'Internet-aware' applications | 109 |
| 3.17 | 'Dirty hands' Internet programming. | 112 |
| 3.18 | Security issues | 116 |
| 4 | Tcl | 118 |
| 4.1 | The Tcl phenomenon. | 118 |
| 4.2 | The Tcl philosophy | 118 |
| 4.3 | Tcl structure. | 119 |
| 4.4 | Tcl syntax | 120 |
| 4.5 | Understanding Tcl: the parser | 120 |
| 4.6 | Variables and data in Tcl | 124 |
| 4.7 | Control flow | 126 |
| 4.8 | Data structures | 127 |
| 4.9 | Simple input/output. | 130 |
| 4.10 | Procedures | 132 |
| 4.11 | Working with strings | 135 |
| 4.12 | Working with patterns | 136 |
| 4.13 | Working with files and pipes. | 140 |
| 4.14 | Putting it all together: some example code | 142 |
| 4.15 | Reference material. | 144 |
| 5 | Advanced Tcl | 148 |
| 5.1 | The eval, source, exec and uplevel commands | 148 |
| 5.2 | Libraries and packages | 149 |
| 5.3 | Namespaces. | 152 |
| 5.4 | Trapping errors. | 155 |
| 5.5 | Event-driven programs | 156 |
| 5.6 | Making applications 'Internet-aware' | 159 |
| 5.7 | 'Nuts-and-bolts' Internet programming | 161 |

| | | |
|--|--|-----|
| 5.8 | Security issues: running untrusted code | 166 |
| 5.9 | The C interface | 169 |
| 5.10 | The Java interface | 173 |
| 6 | Tk | 176 |
| 6.1 | Visual toolkits | 176 |
| 6.2 | Fundamental concepts of Tk | 177 |
| 6.3 | Tk by example | 182 |
| 6.4 | Events and bindings | 198 |
| 6.5 | Geometry managers | 202 |
| 6.6 | Perl-Tk | 207 |
| 7 | Visual Basic and VBA | 210 |
| 7.1 | The Visual Basic family | 210 |
| 7.2 | Visual Basic: the core language | 213 |
| 7.3 | The Visual Basic way of objects | 230 |
| 7.4 | Object models and type libraries | 231 |
| 7.5 | Working with objects | 232 |
| 7.6 | System objects | 241 |
| 7.7 | Event-driven programming | 245 |
| 7.8 | Working with Visual Basic (the application) | 247 |
| 7.9 | Reference: operators and operator precedence | 255 |
| 8 | Advanced Visual Basic | 257 |
| 8.1 | Developing Internet-aware applications | 257 |
| 8.2 | COM objects | 262 |
| 8.3 | The Visual Basic event model | 264 |
| 8.4 | Class modules | 267 |
| 8.5 | Drag-and-drop | 276 |
| 8.6 | Creating ActiveX controls | 285 |
| 8.7 | Interfacing to the Windows API | 286 |
| 8.8 | Accessing external databases | 288 |
| PART THREE SCRIPTING WEB CLIENTS AND SERVERS | | 293 |
| 9 | JavaScript | 295 |
| 9.1 | What is JavaScript? | 295 |
| 9.2 | Object models | 296 |
| 9.3 | Design philosophy | 297 |
| 9.4 | Versions of JavaScript | 297 |
| 9.5 | The JavaScript core language | 298 |
| 9.6 | System objects | 313 |
| 9.7 | Advanced facilities | 322 |
| 9.8 | JavaScript and Java | 324 |
| 9.9 | JavaScript operators and precedence | 325 |

| | | |
|---|---|-----|
| 10 | VBScript | 326 |
| 10.1 | What is VBScript? | 326 |
| 10.2 | The VBScript core language | 327 |
| 10.3 | Objects in VBScript | 335 |
| 10.4 | New features in VBScript 5 | 338 |
| 11 | Scripting Web clients and servers | 344 |
| 11.1 | Client-side Web scripting | 344 |
| 11.2 | Active Server Pages | 362 |
| 12 | Dynamic HTML and the DOM | 368 |
| 12.1 | From HTML to Dynamic HTML | 368 |
| 12.2 | Dynamic HTML | 369 |
| 12.3 | Document object models | 369 |
| 12.4 | The Netscape document object model | 370 |
| 12.5 | The Microsoft document object model | 375 |
| 12.6 | The W3C document object model (DOM) | 380 |
| 12.7 | The event model | 381 |
| 12.8 | DHTML scriptlets | 391 |
| PART FOUR THE MICROSOFT SCRIPTING MODEL | | 395 |
| 13 | Scripting Microsoft Office | 397 |
| 13.1 | VBA | 397 |
| 13.2 | Macros and macro languages | 398 |
| 13.3 | WordBasic | 399 |
| 13.4 | The Office object models | 401 |
| 13.5 | Programming the Word object model | 404 |
| 13.6 | Modifying Word's built-in dialogs | 415 |
| 13.7 | Events | 415 |
| 13.8 | Automation: programming the Office suite | 418 |
| 13.9 | Using the Windows API | 422 |
| 13.10 | Macro viruses | 423 |
| 14 | The Microsoft Scripting Runtime Library | 425 |
| 14.1 | Scripting hosts, scripting engines and object libraries | 425 |
| 14.2 | The Scripting Runtime Library | 426 |
| 14.3 | The Dictionary object | 426 |
| 14.4 | The File System Object Model | 428 |
| 14.5 | Working with the FileSystemObject object | 430 |
| 14.6 | The Drive object | 432 |
| 14.7 | The File and Folder objects | 433 |
| 14.8 | Text I/O with the TextStream object | 435 |

| | | |
|----------------------------------|--|-----|
| 15 | The Windows Script Host and the Script Control | 440 |
| 15.1 | What is the Windows Script Host? | 440 |
| 15.2 | The Windows Script Host object model. | 441 |
| 15.3 | Examples | 444 |
| 15.4 | The future of the Windows Script Host. | 446 |
| 15.5 | The Script Control | 446 |
| PART FIVE AND FINALLY. | | 449 |
| 16 | Loose ends | 451 |
| 16.1 | Pre-history of scripting | 451 |
| 16.2 | Precursors of scripting. | 452 |
| 16.3 | AWK | 459 |
| 16.4 | REXX. | 464 |
| 17 | Epilogue. | 474 |
| Appendix | | 477 |
| Index | | 485 |
| Scripting Program Index. | | 490 |