

Index

A

&. *See* concatenation
About Screen, 450, 466
 Abs, 114, 138
 Access, 601
 accumulator, 108, 137
Activated, 436, 465, 467
 Add, 308
 Add Connection, 574, 582
 Add New Item dialog box, 284
 Add Query, 591
 Add Tab, 281
 Add Windows Form, 284
 addition, 44
algorithm, 5, 28, 29, 48, 62
AllowDrop, 441, 467
alpha, 518, 565, 566
 American Standard Code for Information Interchange, 62. *See* ASCII
 ampersand, 82
 &. *See* shortcut key
 And, 153, 178, 179
 AppendText, 117, 137, 138, 324, 358, 360
 Application screen, 466
Application settings, 449, 466
 Application Title, 449
 ApplicationTitle Label, 449
 argument, 99, 137, 228, 235, 253, 254
 passing, 235
array, 367, 422, 423
 binary search, 392
 Copy, 403
 declaring, 368
 element, 369
 GetLongLength, 409
 GetLowerBound, 375
 GetUpperBound, 375
 index, 367
 Length, 375
 linear search, 389

 loading, 375
 loops, 374
 multi-dimensional array, 411
 Preserve, 376
 ReDim, 376
 Reverse, 402
 searching, 389
 sort order, 402
 sorting, 395
 subscript, 369
 two-dimensional, 406
 zero-based, 407
 array of objects, 492, 510
 Asc, 203, 217, 218
ASCII, 62, 631. *See* American Standard Code for Information Interchange
AssemblyInfo.vb, 450, 466
assignment, 39, 62
 assignment statement, 43, 61
audit, 100. *See* deskcheck
autoindent, 160
 Available Fields, 615
 Available Tables and Fields, 608
 Avery labels, 620, 625

B

BackColor, 443, 467, 519
 bar charts, 546
 base class, 497, 510
batch processing, 316, 357, 358
Beep, 542, 565, 566
 binary, 36, 61
binary search, 392, 423
 Binary Table, 37
BindingNavigator, 583, 588, 595
 BindingSource, 588
 Image, 584
 Insert Standard Items, 584
BindingSource, 578, 581, 587, 588, 595
 Position, 585

- bit, 37, 61, 62
- block, 144, 177, 178
- blue line of death, 73, 466
- Boolean, 112, 137, 139
- bottom-driven loop, 198, 217
- breakpoint, 650
- Brush, 565
- Brushes, 519, 566
- bubble sort, 395, 423
- bug, 8, 29
- built-in object, 475
 - creating, 475
- business logic, 334, 358
- ByRef, 228, 229, 253, 254
- byte, 37, 61, 62
- ByVal, 228, 253, 254
- C**
- Call, 226, 254
- canister, 573, 595
- Case, 168, 178, 179
- Case Else, 168, 178, 179
- Catch, 331, 358, 360
- CheckBox, 263, 307
- Checked, 259, 263, 305, 308
- CheckedChanged, 259, 264, 306, 308
- CheckedListBox, 279, 306, 307
 - Count, 280
- Chr, 202, 217, 218
- class, 31, 477
 - adding existing class, 496
 - creating, 477, 480
 - documentation, 492
 - Drawing2D, 525
 - encapsulation, 486
 - Friend, 509
 - Get, 479
 - instantiate, 484
 - library, 496, 510
 - method, 480, 510
 - Private, 509
 - properties, 479
 - Protected, 509
 - Public, 509
 - ReadOnly, 482
 - Set, 479
 - WriteOnly, 482
- Clear, 81, 137, 139, 271, 308
- Close, 318, 357
- code, 70
- Code window, 21, 29. *See* form window
- Collection, 269, 275, 307
- Collection Editor, 269, 281, 306, 307
- Color, 443, 467, 516, 517, 566
 - alpha, 518
 - FromArgb, 517
- ColorDialog, 443, 465, 466
- COM Components, 545
- ComboBox, 275, 306, 307
 - DropDown, 275
 - DropDownList, 275
 - Simple, 275
- CommandText, 592
- comment, 71, 99
- compile, 25, 29
- component tray, 119, 137, 241, 254
- concatenation, 124, 137
- condition, 145, 178
- connector, 145, 178
- Const, 64. *See* constant
- constant, 61, 62. *See* variable
- constructor, 478, 509, 510
- control, 16, 29, 69, 99
 - BindingNavigator, 583
 - BindingSource, 578
 - Button, 18
 - CheckBox, 263
 - CheckedListBox, 279
 - ColorDialog, 443
 - ComboBox, 275
 - DataGridView, 573
 - DateTimePicker, 447
 - dialog box, 326
 - FontDialog, 444
 - form, 284
 - GroupBox, 258
 - HorizontalScrollBar, 282
 - InputBox, 121
 - Label, 18
 - LinkLabel, 446
 - ListBox, 268
 - MaskedTextBox, 291
 - menu, 241
 - MessageBox, 119
 - MonthCalendar, 447
 - naming, 18
 - naming conventions, 679
 - NumericUpDown, 117
 - prefixes, 19
 - ProgressBar, 447
 - RadioButton, 258
 - RichTextBox, 117
 - SaveFileDialog, 329
 - ScrollBar, 282
 - Tab, 281

- TableAdapter, 578
 - TextBox, 18
 - Timer, 243
 - ToolStrip, 528
 - ToolTip, 119
 - TrackBar, 282
 - VerticalScrollBar, 282
 - control break, 334, 358, 359
 - key, 336
 - key field, 334
 - logic, 336
 - priming the pump, 335
 - pseudocode, 338
 - ControlChars, 118, 137
 - ControlChars.Quote, 118
 - ControlChars.Tab, 119
 - Controls.Add, 475, 509
 - Convert, 100
 - coordinates, 518
 - Copy, 403, 423, 434, 441, 468
 - Count, 270, 306, 309
 - counter, 108, 137
 - counting loop, 186, 189, 193
 - Courier New font*, 287
 - CreateGraphics, 516, 565, 566
 - CreateText, 324, 357, 360
 - Crystal Reports, 601, 625
 - Available Fields, 615
 - Available Tables and Fields, 608
 - Create New Connection, 603
 - creating, 602
 - creating a report, 613, 619
 - CrystalReportViewer, 602, 612, 619
 - Customers.mdb, 619
 - Details, 605
 - Field Explorer, 608
 - Fields to Display, 614
 - Format Multiple Objects, 607
 - Group Name Fields, 608
 - Grouping, 615
 - Groups, 608
 - Insert Group, 608
 - Mailing Labels, 619, 622
 - Main Report Preview, 605
 - Modifying a Report, 605
 - MySummerVacation, 611
 - Page Footer, 607
 - Page Header, 605
 - Preview Report, 607
 - Queries, 610
 - Record Selection, 615
 - Report Footer, 607, 609
 - Report Wizard, 611
 - Running Total Field, 609
 - Running Total Fields, 608
 - Running Totals, 608
 - SELECT, 611
 - Select Expert, 611
 - Selected Tables, 614
 - SouthwestTour, 612
 - SouthwestTour.pdf, 619
 - Table.Field, 610
 - Text Object, 607
 - Totals, 608
 - CrystalReportViewer, 602, 612, 619, 625, 626
 - Customers.mdb*, 587, 619
- D**
- data, 62, 156
 - data file, 315, 357, 359
 - data processing, 315, 357, 359
 - Data Source Configuration Wizard, 573
 - data stream, 317, 359
 - data type
 - table, 41
 - data type, 39, 63
 - data type conversion, 83, 100
 - Data Type Conversion Table, 84
 - data validation, 156, 178, 179
 - Database Explorer, 578, 595
 - database management system, 571, 594, 595
 - database manager, 571, 596
 - DataBindings, 582
 - DataGridView, 573, 587, 594, 596
 - DataMember, 582, 595, 596
 - DataSet, 574, 578, 582, 594, 596
 - DataSource, 573, 587, 594, 596
 - date, 137
 - Date, 110, 138, 139
 - formatting, 111
 - DateChanged, 447, 468
 - DateDiff, 111, 137–139
 - DateInterval, 111
 - DateTimeDemo*, 110
 - DateTimePicker, 447, 466
 - DBMS. *See* database management system
 - debugging, 8, 29
 - Decimal, 31
 - decision structures, 177
 - declaration, 39, 63
 - Declarations, 3, 29, 107
 - decrement, 188, 217
 - delimiter, 320, 357, 359
 - derived class, 497, 510
 - design time, 29. *See* runtime

- deskcheck, 62. *See* audit
- destructor, 476, 509, 510
- detail line, 117, 138
- Details, 605, 625
- developer, 29. *See* user
- dialog box, 119, 326, 359
- DialogResult, 329
- diamond, 145, 178
- Dim, 31, 40, 63, 64
- Dispose, 285, 307, 309
- division, 44
- Do, 189, 218
- Do Loop Until, 194, 217
- Do Loop While, 189, 217
- Do Until loop, 192, 217
- Do While loop, 188, 217
- Dock, 281, 306, 309
- DoDragDrop, 440, 468
- DoubleClick, 437, 465, 468
- Drag and Drop, 439, 465, 466
 - Copy, 441
 - DoDragDrop, 440
 - DragDropEffects, 440
 - Move, 440
 - source, 439
 - target, 439
- DragDrop, 439, 468
- DragDropEffects, 440, 468
- DragEnter, 439, 465, 468
- DragLeave, 439, 465, 468
- DragOver, 439, 465, 468
- Draw, 565
- DrawEllipse, 565
- DrawImage, 565
- Drawing, 519
- Drawing 2D class, 565
- Drawing2D, 525, 566
- DrawLine, 522, 565, 566
- DrawRectangle, 565
- DrawString, 525, 565, 566
- DropDown ComboBox, 306, 307
- DropDownList ComboBox, 306, 307
- duration, 565

- E**
- e.Alt, 431, 465, 468
- e.Control, 430, 465, 468
- e.Data.GetData, 441, 468
- e.KeyChar, 430, 468
- e.Shift, 431, 465, 468
- e.X, 437, 468
- e.Y, 437, 468
- Edit Columns, 579
- element, 369, 423
- Else, 145, 179
- Elseif, 161, 178, 179
- Enabled, 78
- encapsulation, 486, 510
- End, 31
- End If, 145, 179
- End Select, 168, 179. *See* Select Case
- End Sub, 225
- End Try, 332, 360
- End With, 476
- EndsWith, 307, 309
- EndValue, 186
- event, 9, 29, 70, 99, 100
 - Activated, 436
 - CheckedChanged, 259, 264
 - click, 9
 - DateChanged, 447
 - DoubleClick, 437
 - DragDrop, 439
 - DragEnter, 439
 - DragLeave, 439
 - DragOver, 439
 - GotFocus, 435
 - KeyDown, 430, 432
 - KeyPress, 429
 - KeyUp, 432
 - LinkClicked, 446
 - modifier keys, 429
 - MouseDown, 436
 - MouseEnter, 436
 - MouseHover, 436
 - MouseLeave, 436
 - MouseMove, 437
 - MouseUp, 437
 - Scroll, 282
 - TextChanged, 432
 - ValueChanged, 117
- event handler, 115, 138, 457, 466
- exception handling, 331, 358, 359
- exe, 26
- executable file, 9
- Exit, 218
- Exit Do, 202, 217
- Exit For, 202, 217
- exponentiation, 45
- exposed, 478
- Extensible Markup Language, 592, 595

- F**
- field, 315, 357, 359, 575, 603
- Field Explorer, 608, 625, 626
- file I/O, 315
- FileName, 327, 360

- Fill, 522, 565
 - FillEllipse, 522, 566
 - FillPie, 524, 565, 566
 - FillPolygon, 525, 566
 - FillRectangle, 522, 566
 - filter, 358
 - Filter, 328, 360, 595
 - Finally, 332, 360
 - flowchart, 53, 62, 63
 - Case symbol, 639
 - Connector symbol, 640
 - Decision symbol, 639
 - Flowline symbol, 640
 - Input symbol, 638
 - Output symbol, 638
 - Procedure symbol, 639
 - Processing symbol, 638
 - Start/Stop symbol, 638
 - Flowchart Table, 638
 - Focus, 435, 465, 468
 - Font, 444, 468
 - FontStyle, 445
 - Name, 444
 - Size, 445
 - FontDialog, 444, 465, 467
 - FontStyle, 445, 468
 - For, 185, 218
 - For . . . Next, 185
 - For . . . Next loop, 217
 - ForeColor, 443, 468
 - form, 31, 284, 309
 - declaring, 285
 - Dispose, 285
 - Hide, 285
 - Me, 285
 - Show, 285
 - startup form, 284
 - Form window, 29, 31. *See* Code window
 - Format menu, 259, 263, 305, 307
 - Format Multiple Objects, 607
 - format specifier, 72
 - formatting
 - IndexOf, 289
 - Insert, 290
 - Length, 288
 - Like, 291
 - PadLeft, 287
 - PadRight, 286
 - Remove, 290
 - Replace, 289
 - StartsWith, 288
 - strings, 286
 - Substring, 288
 - Trim, 290
 - TrimEnd, 290
 - TrimStart, 290
 - FormClosing, 285, 309
 - frequency, 542, 565, 566
 - Friend, 477, 510
 - FROM, 611
 - FromArgb, 517
 - FromArgb, 566
 - function, 233, 253, 254, 454
 - calling, 234
 - creating, 233
 - flowcharting, 239
 - Private, 454
 - Public, 454
 - FV, 115, 139
- G**
- garbage collection, 476, 509, 510
 - Garbage In, Garbage Out*, 323
 - GDI+, 516, 565, 566
 - Get, 479, 509, 510
 - GetItemChecked, 280, 306, 309
 - GetLongLength, 409, 423, 424
 - GetLowerBound, 375, 423, 424
 - GetUpperBound, 375, 423, 424
 - global, 453, 467
 - GotFocus, 435, 465, 468
 - graphics, 566
 - Graphics, 515, 565, 566
 - Graphics Device Interface, 516, 565, 566
 - graphs
 - bar charts, 546
 - line charts, 549
 - pie charts, 555
 - Group Name Fields, 608
 - GroupBox, 258, 305, 308
 - Groups, 608
- H**
- handle, 31
 - Handles, 116, 138, 139, 457, 468
 - HatchStyle, 525
 - HeaderText, 579, 595, 596
 - Height, 527
 - Help Favorites, 648
 - Help Index, 648
 - Hide, 285, 309
 - hit, 391, 423
 - HorizontalScrollBar, 282, 306, 308
- I**
- i, 187
 - I/O, 359

- If, 144, 178, 179
 - using strings, 149
 - If . . . Then . . . Else, 144
 - Image, 526, 566
 - index, 367, 422, 423
 - Index, 269
 - IndexOf, 289, 307, 309
 - infinite loop, 199, 217
 - inheritance, 497, 510
 - base class, 497
 - derived class, 497
 - Inherits, 510
 - InitialDirectory, 327, 360
 - initialize, 40, 63
 - input, 2, 31, 47, 63
 - InputBox, 121, 137–139
 - Insert, 290, 309
 - Insert Group, 608
 - instantiate, 484, 510
 - instantiation, 510
 - Int, 113, 139
 - integer division, 44
 - IntelliSense, 22, 31
 - interface, 31. *See* Code window
 - Interval, 244, 254
 - IPO, 68
 - Is, 168, 179
 - IsNullOrEmpty, 152, 179
 - IsNumeric, 151, 178, 179
 - item, 269
 - Items, 306, 308
 - iteration, 187, 217
- K**
- key, 336, 359
 - key field, 334, 358, 359, 571, 594, 596
 - KeyCode, 468
 - KeyData, 468
 - KeyDown, 430, 432, 465, 468
 - e.Alt, 430
 - e.Control, 430
 - e.Shift, 430
 - KeyPress, 429, 468
 - KeyPressed, 465
 - keystroke, 430, 467
 - KeyUp, 432, 465, 468
 - keyword, 22
 - Klingon*, 281
- L**
- Language-Integrated Query, 572, 594, 596
 - LargeChange, 282, 309
 - Left, 217, 218
 - Length, 124, 138, 139, 288, 307, 309, 375, 423, 424
 - library, 496
 - Like, 291, 307, 309
 - Line, 522
 - line charts, 549
 - linear search, 389, 424
 - LinkClicked, 446, 469
 - LinkLabel, 446, 465, 467
 - LINQ. *See* Language-Integrated Query
 - LINQ to SQL, 594, 596
 - ListBox, 268, 306, 308
 - Add, 269
 - Clear, 271
 - Collection, 269
 - Collection Editor, 269
 - Count, 270
 - Index, 269
 - Insert, 270
 - item, 269
 - Items, 269
 - Remove, 270
 - SelectedIndex, 270
 - SelectedItem, 269
 - Sorted, 271
 - Load, 137–139
 - Load event, 115
 - local, 106
 - local variable, 136, 138
 - logical error, 73, 100
 - logical operators, 153, 179
 - And, 153
 - Not, 153
 - Or, 153
 - table, 154
 - XOR, 153
 - loop, 184, 189, 217, 218
 - loop control variable, 188
 - loop flowchart, 187
 - loop questions, 196
 - LostFocus, 436, 465, 469
- M**
- Mailing Labels, 619
 - MailingLabels*, 622
 - Main Report Preview, 605, 625, 626
 - mask, 291, 308
 - MaskedTextBox, 291, 307, 308
 - mathematical operations, 44
 - mathematical operators, 45
 - Max, 114, 139
 - Maximum, 282, 306, 309, 447
 - Me, 285, 306, 308, 309
 - Me.CreateGraphics, 519

- member, 416, 423, 424
- memory management, 36
- menu, 241, 254
 - naming guidelines, 241
- MenuStrip, 241, 254
- merge, 350, 359
- merging files, 358
- MessageBox, 119, 137–139
- method, 112, 137, 138, 480
 - Insert, 270
- methods
 - Abs, 114
 - Add, 269, 277
 - AppendText, 117, 324
 - Clear, 81, 271
 - Close, 318
 - Copy, 403, 434
 - Count, 270
 - CreateText, 324
 - DateDiff, 111
 - DateInterval, 111
 - Dispose, 285
 - DoDragDrop, 440
 - DrawLine, 522
 - DrawString, 525
 - FillEllipse, 522
 - FillPolygon, 525
 - FillRectangle, 522
 - Focus, 435
 - FormClosing, 285
 - FV, 115
 - Hide, 285
 - IndexOf, 289
 - Insert, 290
 - Int, 113
 - Length, 124, 288
 - Like, 291
 - LostFocus, 436
 - Max, 114
 - Min, 115
 - Now, 110
 - overloading, 454
 - PadLeft, 287
 - PadRight, 286
 - Paste, 434
 - Peek, 319
 - Pmt, 115
 - Pow, 114
 - Proper, 124
 - ReadLine, 318
 - Remove, 270, 278, 290
 - Replace, 289
 - ResetText, 82
 - Reverse, 402
 - Rnd, 113
 - SelectAll, 434
 - SelectionLength, 434
 - SelectionStart, 434, 447
 - Show, 120, 285
 - Sort, 278
 - Sorted, 271
 - Split, 320
 - SqRt, 113
 - StartsWith, 288
 - Substring, 288
 - ToInt16, 84
 - ToLower, 123
 - ToUpper, 123
 - Trim, 290
 - TrimEnd, 290
 - TrimStart, 290
 - vbNewLine, 118
 - VbStrConv.ProperCase, 124
 - Write, 324
- Min, 115, 139
- Minimum, 282, 306, 309, 447
- minor control break, 340, 358, 359. *See control break*
 - logic, 341
 - pseudocode, 344
- Mod, 64
- modifier key, 465, 467
- modifier keys, 429
- modularization, 224, 254
- module, 106, 453, 466, 467
- module variable, 136, 138
- modulus, 45, 63
- MonthCalendar, 447, 466, 467
- mouse events, 436
 - DragDrop, 439
 - DragEnter, 439
 - DragLeave, 439
 - DragOver, 439
 - e.X, 437
 - e.Y, 437
 - MouseDown, 436
 - MouseEnter, 436
 - MouseHover, 436
 - MouseLeave, 436
 - MouseMove, 437
 - MouseUp, 437
- MouseDown, 436, 465, 469
- MouseEnter, 436, 465, 469
- MouseHover, 436, 469
- MouseLeave, 436, 469
- MouseMove, 437, 465, 469

MouseUp, 437, 465, 469

Move, 440

multi-dimensional array, 411, 424

multiplication, 44

My Objects, 641

My.Application, 641

My.Computer, 641

My.Forms, 642

My.Resources, 642

My.Settings, 642

My.User, 641

My.WebServices, 642

MySummerVacation, 611

N

Name, 444, 469

Namespace, 332, 358, 360

IO, 333

Math, 333

System, 333

naming

 variable, 40

NEC.ldb, 573

NEC.mdb, 572

Nested If, 158, 178, 179

nested loop, 217

nested loops, 200, 217

nested statements, 158, 179

New Connection, 582

New Project, 14

Next, 185, 218

Not, 153, 178, 179

Now, 110

null, 63

NumericUpDown, 117, 137, 138

O

object, 8, 29, 31, 332, 359, 475, 509, 510

StreamReader, 317

StreamWriter, 324

Object Browser, 333, 358, 359, 486, 510

object-oriented, event-driven programming, 9, 31

opacity, 518, 566

OpenFileDialog, 327, 358, 359

Optional, 456, 466, 469

optional parameters, 455, 467

Or, 153, 178, 179

ORDER, 608, 611, 626

Orientation, 282, 309

output, 2, 31, 48, 63

 formatting, 71

Output window, 643

overloading, 454, 466, 467

 Optional, 456

 optional parameters, 455

 overtime, 148

P

PadLeft, 287, 307, 309

PadRight, 286, 307, 309

Page Footer, 607

Page Header, 605, 625

parentheses, 46

parse, 320, 359

passing arguments, 228

Paste, 434, 469

Peek, 319, 357, 360

Pen, 519, 565, 566

pie charts, 555

pitch, 542, 565

pixel, 218

pixels, 204

Pmt, 115, 139

Point, 522, 565, 567

PointF, 525, 567

Polygon, 524, 565

populate, 424

Position, 585, 595, 597

postprocessing, 317, 357, 359

posttest, 198, 218

Pow, 114, 139

predefined forms, 449, 467

 About Screen, 450

 Splash Screen, 449

preprocessing, 317, 357, 359

Preserve, 376, 423, 424

pretest, 198, 218

Preview Data, 580

Preview Report, 607

priming the pump, 335, 358, 359

Private, 31, 254, 452, 466, 469, 479, 510

Private procedure, 225

procedure, 22, 31, 253, 254

 calling, 226

 creating, 225

 flowchart, 232

 naming, 226

Procedure, 224

procedures

 Private, 453

 Public, 453

processing, 2, 31, 48, 63, 317, 357, 359

program, 2, 28, 31

 running, 25

 save, 24

 stopping, 25

programmer, 2, 31

programming, 2, 28, 31

- programming errors, 72, 99
 - logical, 73
 - logical error, 73
 - syntax, 73
- Programs
 - 2DArray, 406
 - 99Bottles, 230
 - Account Balance, 76
 - AccountBalance, 480
 - ADayAtTheBeach, 276
 - AlphaTest, 518
 - BarChart, 546
 - Binary Search, 392
 - BugSpray, 57
 - BuiltInObjects, 475
 - BusinessGrowth, 210
 - CarPayments, 126
 - CaseGrades, 168
 - CBDemo, 336
 - CDSort program, 395
 - Changing Properties, 27
 - Chap04NewControls, 116
 - Chap11SampleControls, 448
 - ChrAscDemo, 203
 - ChristmasLights, 244
 - ClassGrade, 483
 - ClassGradeArray, 493
 - College Tuition, 10
 - ColorChanger, 516
 - ComputerizedGuesses, 211
 - Controlling Your Controls, 79
 - ControllingStrings, 123
 - ControllingStringsDemo, 286
 - Conversions, 282
 - Cookies, 377
 - CopyStore, 175
 - Countdown, 245
 - CountersAndAccumulators, 107
 - CustomerClassFixed, 505
 - CustomerQueries, 587
 - Data Type Conversion, 85
 - DatabaseTutorial, 572
 - DateDiffDemo, 111
 - DateTimeDemo, 110
 - Depreciation, 208
 - DiceCaseStudy, 171
 - DivideAndConquer, 226
 - DragAndDropDemo, 439
 - DragAndDropGraphics, 443
 - DrawStuffFixed, 561
 - DustyLenzkapp, 131
 - EmployeeInheritance, 500
 - EmployeePay, 488
 - Factorial, 193
 - FICAFFunction, 251
 - FICAFFunctionFixed, 252
 - FileIODemo, 324
 - FinanceCharges, 320
 - First Eats, 650
 - Flying, 204
 - Formatting Outout, 72
 - ForNextDemos, 188
 - Globals, 454
 - GPA Program, 162
 - Guessing Game, 163
 - Hands-on Counters and Accumulators, 109
 - HoracePharmAdmissionRates, 163
 - IDGenerator, 297
 - IfGrades, 161
 - JacketSize, 156
 - Jim Soxx Sports Sales Program, 85
 - KarenForyuGiftWrapping, 266
 - KeyPressDemo, 429
 - Largest, 146
 - Last, First, 237
 - LifetimeEarnings, 215
 - LifetimeGoals, 280
 - LineChart, 549
 - LoanCalculators, 457
 - Login, 196
 - Markup, 248
 - MenuExample, 243
 - MergeExample, 350
 - MethodDemo, 113
 - MinimumPaymentFunction, 237
 - MinorCBDemo, 340
 - MortgagePayments, 295
 - MouseEvents, 436
 - MousingAround, 527
 - MultipleChoice, 209
 - MultipleFormsDemo, 285
 - MyTest, 641
 - NestedLoops, 201
 - NewEnglandTourFinal, 602
 - OverloadedAverages, 454
 - Overtime, 148
 - OwtPizza, 260
 - OwtPizzaFinished, 292
 - OwtPizzaMore, 271
 - OwtPizzaUpdate, 265
 - PaintTutorial, 528
 - PassingArgumentsToProcedures, 230
 - Perimeter, 48
 - PersonalDates, 131
 - PieChart, 555

- Programs (*cont.*)
 - Population Estimates, 418
 - QuizScores, 374
 - RandomNumbers, 116
 - RetirementSavings, 191
 - RockyRoadIceCreamStand, 301
 - Sales Tax, 236
 - SalesCommission, 158
 - SaveBowlingScores, 324
 - SavingsUpdate, 347
 - SearchStatesAndCapitals, 389
 - Selection, 403
 - SentenceBuilder, 131
 - ShiftDifferentialFixed, 462
 - SimpleGraphics, 213
 - Structures, 415
 - StudentGPA, 317
 - StudentInheritance, 498
 - StudScoresCS, 411
 - Syntax Errors, 74
 - TestScores, 378
 - TextEvents, 432
 - ToDoList, 271
 - Tom's T-Shirts, 93
 - TryCatchExamples, 331
 - UpdateRealEstateValuesFixed, 353
 - Van Nilla's Ice Cream Stand, 97
 - VBMasters, 260
 - VBMasterTShirtsAlternative, 263
 - WagesTutorial, 581
 - Weighted Averages, 93
 - WheelsOnTheBus, 245
- ProgressBar, 447, 466, 467
 - Block, 447
 - Continuous, 447
 - Marquee, 447
 - Maximum, 447
 - Minimum, 447
 - Value, 447
- Project
 - opening, 26
 - prologue, 71, 99
 - Proper, 124
 - properties, 69
 - AllowDrop, 441
 - AutoCompleteCustomSource, 80
 - AutoCompleteMode, 80
 - AutoCompleteSource, 80
 - AutoSize, 82
 - BackColor, 82, 443
 - CenterScreen, 79
 - Checked, 259, 263
 - Color, 443
 - CommandText, 592
 - DataMember, 582
 - DataSource, 573, 587
 - Dock, 281
 - Enabled, 244
 - FileName, 327
 - filter, 328
 - Font, 83
 - ForeColor, 82, 443
 - FormBorderStyle, 79
 - GetItemChecked, 280
 - HeaderText, 579
 - Height, 79
 - Icon, 79
 - InitialDirectory, 327
 - Interval, 244
 - Items, 269
 - LargeChange, 282
 - Left, 204
 - Location, 204
 - Locked, 83
 - Maximize, 79
 - Maximum, 282, 447
 - Minimize, 79
 - Minimum, 282, 447
 - Orientation, 282
 - PictureBox, 81
 - properties, 79
 - ReadOnly, 80, 117
 - SelectedIndex, 270
 - SelectedItem, 269
 - Shortcut, 241
 - ShowIcon, 79
 - Size, 79
 - SizeMode, 82
 - SmallChange, 282
 - StartPosition, 79
 - TabIndex, 80
 - Text, 79
 - TextAlign, 80, 82
 - TickFrequency, 282
 - Top, 204
 - Value, 117, 282, 448
 - Visible, 78
 - Width, 79
 - WindowsDefaultLocation, 79
- Properties, 99
- Properties window, 17, 31
- Protected, 478, 511
- proximity line, 83, 100
- pseudocode, 164, 178
- Public, 31, 254, 452, 466, 469
- Public Class, 106

- Public procedure, 225
- pushpin, 16, 643
- Q**
 - query, 572, 594, 596
 - Query Builder, 589, 595
 - quotation mark. *See* string
 - Quote, 139
- R**
 - RadioButton, 305, 308
 - RadioButtons, 258
 - raise, 429, 467
 - random number, 113
 - Randomize, 116, 137–139
 - ReadLine, 318, 357, 360
 - ReadOnly, 482, 509, 511
 - record, 315, 357, 360, 625
 - Record Selection, 615
 - Rectangle, 528, 565, 567
 - ReDim, 376, 422, 424
 - Refresh, 400, 424
 - relational database, 571, 594, 596
 - relational operator, 145
 - relational operators, 178, 179
 - table, 145
 - Remove, 270, 290, 309
 - Remove Tab, 281
 - RemoveAt, 309
 - repetition, 4, 28, 31
 - Replace, 289, 310
 - Report Footer, 607, 609
 - Report Header, 625
 - Report Wizard, 602, 611, 625, 626
 - Reset Window Layout, 643
 - Return, 235, 254
 - Reverse, 402, 423, 424
 - RGB, 516, 565, 566
 - RichTextBox, 117, 137, 138
 - Rnd, 113, 139
 - rules of precedence, 45, 61
 - running total. *See* accumulator
 - Running Total Field, 609
 - Running Total Fields, 608
 - Running Totals, 608, 626
 - runtime, 29, 31. *See* design time
 - runtime error, 73, 100
- S**
 - SaveFileDialog, 329, 358, 360
 - schema, 592, 596
 - ScrollBar, 306
 - scope, 105, 136, 138
 - local, 106
 - module, 106
 - Scroll, 282, 306, 310
 - ScrollBar, 282, 308
 - HorizontalScrollBar, 282
 - VerticalScrollBar, 282
 - Search Criteria Builder wizard, 591
 - Select Case, 168, 180
 - Select Expert, 611
 - SelectAll, 434, 469
 - SelectedIndex, 270, 306, 310
 - SelectedItem, 269, 306, 310
 - selection, 4, 28, 31
 - selection sort, 403, 423, 424
 - SelectionLength, 434, 465, 469
 - SelectionStart, 434, 447, 465, 469
 - Sender, 457, 469
 - sentinel value, 190, 217, 218
 - sequence, 3, 28, 31
 - sequential file access, 317, 360
 - Set, 479, 509, 511
 - Shapes, 518, 522, 565, 566
 - table, 518
 - Short, 31
 - shortcut key, 82
 - Show, 138, 139, 285, 307, 310
 - Simple ComboBox, 306, 308
 - Size, 445, 469
 - SmallChange, 282, 310
 - SolidBrush, 521, 567
 - Solution Explorer, 17, 31
 - Sorted, 271, 306, 310
 - sound, 541
 - frequency, 542
 - pitch, 542
 - table, 542
 - Sound, 565, 567
 - Sound.PlayWaveFile, 541
 - Sound.PlayWaveSystem, 542, 565, 567
 - source, 439, 467
 - SouthwestTour, 612, 619
 - Splash screen, 466, 467
 - Splash Screen, 449
 - Split, 320, 357, 360
 - SQL. *See* Structured Query Language
 - FROM, 611, 657
 - GROUP, 657
 - ORDER, 608, 657
 - ORDER BY, 611
 - SELECT, 611
 - WHERE, 590
 - SqRt, 113, 139
 - Stacked If, 161, 178, 179

- Start Page, 13, 31
 - StartsWith, 288, 307, 310
 - startup form, 284, 308
 - StartValue, 186
 - Static, 452, 466, 469
 - Step, 186, 188, 217, 218
 - StreamReader, 317, 357, 360
 - StreamWriter, 324, 358, 360
 - string, 39, 64
 - manipulation, 123
 - String formatting, 286
 - strings
 - IndexOf, 289
 - Insert, 290
 - Length, 288
 - Like, 291
 - PadLeft, 287
 - PadRight, 286
 - Remove, 290
 - Replace, 289
 - StartsWith, 288
 - Substring, 288
 - Trim, 290
 - TrimEnd, 290
 - TrimStart, 290
 - structure, 415, 423, 424
 - creating, 415
 - manipulating, 417
 - member, 416
 - populating, 416
 - Structured Query Language, 572, 594, 597
 - Structured Query Language Basics, 657
 - Sub, 31, 225, 254
 - subscript, 369, 422, 424
 - Substring, 288, 307, 310
 - subtraction, 44
 - syntax, 39, 63, 100
 - syntax error, 73, 99
 - system sound, 566
 - System.Diagnostics.Process.Start, 446
 - System.Math class, 112
- T**
- Tab, 139, 281, 306, 308
 - Add Tab, 281
 - Collection Editor, 281
 - page, 281
 - Remove Tab, 281
 - Tab Order, 81
 - table, 575, 594, 603
 - Table, 578
 - TableAdapter, 578, 588, 591, 595, 597
 - Fill, 584, 588
 - target, 439, 467
 - Task List, 643
 - TblWagesTableAdapter, 582
 - text file. *See* data file
 - Text Object, 607, 626
 - TextChanged, 432, 465, 469
 - Then, 145, 180
 - Tick, 244, 254
 - TickFrequency, 282, 310
 - time. *See* date
 - formatting, 111
 - Timer, 243, 254
 - To, 169, 180, 186, 218
 - ToInt16, 84
 - ToLower, 123, 138, 139
 - Toolbox, 16, 31
 - ToolStrip, 528, 565, 566
 - ToolTip, 119, 137, 138
 - Top, 217, 218
 - top-driven loop, 198, 218
 - ToString, 64, 72
 - Totals, 608
 - ToUpper, 123, 138, 139
 - TouristStops.mdb, 601
 - TrackBar, 282, 306, 308
 - Maximum, 282
 - Minimum, 282
 - trap, 331, 360, 429, 467
 - Trim, 290, 307, 310
 - TrimEnd, 290, 307, 310
 - TrimStart, 290, 307, 310
 - Try, 331, 358, 360
 - Try-Catch, 331, 358
 - two-dimensional array, 406, 423, 424
 - creating, 407
 - loading, 409
- U**
- Unicode, 63
 - Until, 192, 218
 - user, 31. *See* developer
 - user interface, 16, 31
 - Using Debug, 650
 - Using Help, 646
- V**
- Value, 282, 310, 447, 448
 - ValueChanged, 117
 - variable, 11, 31, 39, 61, 63, 70
 - declaring, 42
 - naming conventions, 679
 - scope, 105

variable scope, 451
 global, 453
 Private, 451
 Public, 451
 Static, 451
VB Defaults, 644
vbNewLine, 118, 138, 139
VbStrConv.ProperCase, 124, 139
vertical bar, 328
VerticalScrollBar, 282, 306, 308
Visible, 78

W

Wages.mdb, 581
Watch window, 650
WHERE, 590, 595
While, 188, 218
Width, 527
wildcard character, 291, 308
 #, 291
 *, 291

?, 291
[], 291
Windows Form, 284
Windows Forms Application, 14
Windows Media Player, 544, 565,
 566
With, 476, 509, 511
WithEvents, 477, 509, 511
Write, 360. *See* WriteLine
WriteLine, 360
WriteOnly, 482, 509, 511

X

XML, 592. *See* Extensible Markup
 Language
XOr, 153, 178, 180
xsd file, 592, 595

Z

zero, 46
zero-based, 407, 424