

# Index

## A

**AbsolutePage property, 209–210**

**AbsolutePosition property, 168, 209–210**

**ACCDB. See Access Database file format**

**ACCDE. See Access Compiled Database file format**

**ACCDR. See Access Database Runtime file format**

**ACCDT. See Access Database Template file format**

**Access 2007, Microsoft**

ACE, 52–55

data types, 9–10

database objects, 8

deprecations in, 65–66, 788–789

DAPs, 65

Import RunCommand, 65

legacy export and import formats, 66

Snapshot Viewer, 66

external data sources, 59–60

Excel, 59

Outlook, 59–60

SQL Server, 35–36, 60

features on SharePoint, 563–576

Access Web Datasheet, 564–565

Import from SharePoint, 572–576

Open with Access, 566–572

file extensions, 786–787

history, 1–2

new features, 2, 33–66, 787–791

DAO, 113–115

development environment, 39–43

new look, 37–39

reports, 349–350

user benefits, 34–37

overview, 2–3

pulling data from, 556–559

security, 60–62, 595

selection of, 4

SharePoint, 561–563

SharePoint features in, 576–594

Access Views, 591–594

Linked Tables, 577–583

migrate, 583–588

publish, 57, 588–591

upgrading to, 783–814

changing file formats, 795–799

convert v. enable, 784–794

enabling, 803–804

multiple versions, 794–795

overview, 783–784

replicated, 801–802

secured database, 799–800

**Access Compiled Database file format (ACCDE)**

compile database, 603–604

upgrading, 798

VBA, 604–606

**Access data engine (ACE)**

Access 2007, 52–55

attachment field type, 53–54

MVF, 52–53

XML tables, schema, and data, 54–55

ODBC, 660–662

**Access Database file format (ACCDB)**

Access 2007, 52

client-server application, 652–664

ACE and Jet with ODBC, 660–662

ADP v., 670–672

DSN, 659

external data link, 653–659

## Access Database file format (ACCDB) (*continued*)

---

### **Access Database file format (ACCDB)** **(*continued*)**

- logon process, 670–675
- pass-through queries, 663–664
- performance improvement, 662–663

- convert to, 63

- DAO, 111–112, 192

- importing from SharePoint, 572–573

- MVF, 113–114

- security, 55, 60–61, 595–606

- overview, 595–597

- shared-level, 597–602

- VBA, 602–606

- SharePoint Linked Tables, 577–579

### **Access Database Project file format (ADP)**

- client-server application, 664–670

- ACCDB/MDB v., 670–672

- external data link, 664–668

- logon process, 675–678

- query options, 668–669

- overview, 664

### **Access Database Runtime file format** **(ACCDR), 723**

- upgrading, 798

### **Access Database Template creator,** **ACCDT, 64**

### **Access Database Template file format** **(ACCDT)**

- with Access Database Template creator, 64

- ADE, 731–747

- creating, 732–734

- deploying, 734–737

- overview, 737–738

- database folder, 742–745

- objects folder, 745–747

- root folder, 738–740

- template folder, 740–742

### **Access Developer Extensions (ADE), 36,** **63–65**

- ACCDT file format, 731–747

- creating, 732–734

- deploying, 734–737

- Access Runtime, 64, 722–724

- Access v., 723–724

- creating, 723

- overview, 722

- Database Template creator, 64

- overview, 721–722

- Package Solution Wizard, 64, 724–731

- additional files and registry keys, 728

- finishing, 730–731

- installation options, 725–728

- MSI file settings, 729–730

- starting, 724–725

- source code control support, 65, 747–752

- installation, 747–748

- using, 748–752

### **Access Object Model (OM)**

- AccessObject object, 918–919

- AllObjects collection, 914

- Application object, 905–913

- methods, 908–913

- properties, 906–908

- Control object, 937–940

- methods, 939–940

- properties, 937–939

- CurrentData object, 915

- CurrentProject object, 915–917

- DoCmd object, 919–923

- Form object, 923–937

- events, 936–937

- methods, 935

- properties, 923–935

- ImportExportSpecification object, 940

- methods, 940

- properties, 940

- Module object, 941–942

- methods, 941–942

- properties, 941

- Printer object, 942–943

- References collection and object, 943–944

- Report object, 944–953

- events, 952–953

- methods, 951–952

- properties, 944–951

- Screen object, 953

## ActiveX Data Object (ADO)

- Section object, 953–956
  - events, 955–956
  - properties, 954–955
- security
  - ACCDB password, 601–602
- SmartTag object, 956
- SubForm object, 956–960
  - events, 960
  - methods, 959
  - properties, 957–959
- SubReport object, 960
- template creation, 736–737
- Access Runtime**
  - Access v., 723–724
  - creating, 723
    - /Runtime command-line switch, 723
    - ACCDR file format, 723
  - overview, 64, 722
- Access SharePoint Contacts template, 567**
- Access SharePoint Issue Tracking template, 568**
- Access SharePoint Tasks template, 567–568**
- Access View on SharePoint, 591–594**
  - advertising, 592
  - DisplayOnSharePointSite property, 592–594
- Access Web Datasheet**
  - Datasheet Task pane, 565
  - Edit in Datasheet, 564
  - SharePoint, 564–565
- AccessObject object, 918–919**
- ACCFL files. See Field templates**
- ACE. See Access data engine**
- Action enumeration, SetPermissions method, 901**
- ActiveX controls**
  - forms, 339–346
    - insert, 339–340
    - populate, 340–346
  - ImageList, 340–341
  - ListView, 339–346
    - configure, 343–344
    - filling, 344–346
  - MDB user-level security, 636–646
    - group maintenance, 638–639
    - open connection, 637
    - permission maintenance, 641–644
    - sample setup code, 645–646
    - user maintenance, 640–641
  - TreeView, 339–346
    - filling, 341–343
- ActiveX Data Object (ADO)**
  - ambiguous references, 192–193
  - connecting to, 193–196, 637
    - client-side cursors, 195–196
    - Connection object, 193–195
    - cursor location, 195
    - Data Link, 197–198
    - rolling connection string, 196–197
    - server-side cursors, 195
    - transactions, 198–200
  - DAO v., 112, 192–193
  - data access, 200–204, 667–668
  - enumeration information, 889–903
  - events, 221–222
  - Execute method, 201–204
  - opening, 98–99
  - overview, 200–201
  - Recordset, 204–218, 880–883
    - columns, 209
    - Command object, 205–206
    - editing data, 212–214
    - filtering and ordering, 209
    - finding records, 210–212
    - navigating, 209–210
    - option verification, 208
    - persistent, 214–218
    - shaped, 206–208
  - referring to, 193
  - schema objects, 223–230
    - indexes, 228–230
    - relationships, 230
    - tables and columns, 226–228
    - views, 224–226
  - schema recordsets, 219–221
  - security, 231

## ActiveX Data Object (ADO) *(continued)*

---

### ActiveX Data Object (ADO) *(continued)*

- ACCDB password, 599–601
- State property, 223
- unbound form, 685–692
  - code for, 688–689
  - design, 685–686
  - editing, 689–692
  - recordset, 686–688

### ActiveX Data Object Extensions (ADOX)

- object model, 223–224
- schema objects, 223–230
- user-level security, 647

### Add method

- collection class, 468–469
- Collection object, 465–466
- Document object, 551–552

### AddNew method, 179, 212–213, 251

### ADE. See Access Developer Extensions

### ADO. See ActiveX Data Object

### ADOX. See ActiveX Data Object Extensions

### ADP. See Access Database Project file format

### ADTG. See Advanced Data Tablegram

### Advanced Data Tablegram (ADTG), recordsets, 214–215

### AfterUpdate event

- class modules, 446–448
- combo box synchronization, 314–316
- late binding, 329
- save e-mail addresses, 319–322

### Alias keyword, API, 494–495

### AllObjects collection, 914

### Allow Value List Edits, combo box, 307–309

### anchoring, forms, 298

### API. See application programming interface

### append-only field

- DAO, 114–115, 187–189
- SharePoint templates, 568

### Application object

- Access Object Model, 905–913
  - methods, 908–913
  - properties, 906–908

current user, 149

DBEngine, 117–122

Excel, 545–547

Outlook, 538–540

### application programming interface (API)

C parameters, 497–505

As Any data type, 505

array pointers, 504–505

C structure pointers, 503–504

function pointers, 505

numeric parameters, 498–501

numeric value pointers, 503

object parameters, 501

signed and unsigned integers, 498

string parameters, 501–503

variant parameters, 503

declaring, 493–497

Alias keyword, 494–495

Declare keyword, 494

Lib keyword, 495–497

procedure name, 494–495

specifying library and argument list, 495–497

distributing applications with, 507

Err.LastDLLError, 505–507

extending VBA with, 485–507

linking, 489–497

libraries, 490–497

overview, 489–490

overview, 485–489

reasons for, 487–489

rules of, 486–487

references, 973–979

books, 974–975

functions, 975–979

viewer, 973–974

websites, 974

Registry, 709–720

CreateKey function, 713–714

DeleteKey function, 718

DeleteValue function, 717

function wrappers, 718–720

GetKeyValue function, 715–717  
 getting started, 710–713  
 SetKeyValue function, 714–715  
 useful functions, 975–979  
   find computer name, 978  
   find form position, 976  
   find login name, 978  
   find Temp directory, 976–977  
   generate Temp filename, 977  
   open or print file, 979  
   play sound, 975

**arrays**

C and API, 504–505  
 with recordsets, 181–182

**As Any data type, C and API, 505****attachment field**

controls, 301–305  
 DAO, 113–114  
 new features of, 53–54  
 working with, 182–187  
   adding, 183–184  
   deleting, 186–187  
   navigating, 182–183  
   saving, 185

**AttachmentCount property, 303****AttachmentCurrent event, 302–303****AutoExec macro, 18****AutomationSecurity**

Disabled mode, 765–767  
 other uses, 766–767  
 programmatic opening, 765–766

**B****BeforeUpdate event**

class modules, 446–448  
 forms, 317–319

**beginning of file (BOF), Recordset object, 169–170****BeginTrans method, 120–121****BOF. See beginning of file****Bookmark, Recordset, 172–173, 254–256****boolean data type, 88**

C and API, 500

**breakpoints, for debugging, 74–75, 264****Builders, 1015****built-in properties, DAO, 127**

setting and retrieving, 128, 130–131

**buttons, for Ribbon customization, 386**

dynamic text, 399–401

**C****C parameters, API, 497–505**

As Any data type, 505  
 array pointers, 504–505  
 C structure pointers, 503–504  
 function pointers, 505  
 numeric parameters, 498–501  
 numeric value pointers, 503  
 object parameters, 501  
 signed and unsigned integers, 498  
 string parameters, 501–503  
 variant parameters, 503

**Call Stack dialog box, for debugging, 77–79****callback routines, Ribbon customization, 390–396**

checkbox, 392–393  
 combo box, 393–396  
 disabling control, 396  
 getImage, 398–399  
 loadImage, 397–398  
 macros, 390  
 onLoad, 399  
 from scratch, 412–414  
 VBA, 391–392

**CanGrow property, reports, 348–349, 360****CanShrink property, reports, 348–349, 360****CAS. See code-access security****case, in class naming, 442****CDbl function, dates and times, 270****charts, reports with, 360–361****check boxes**

Ribbon customization, 392–393  
 for Ribbon customization, 387

## class libraries

---

### class libraries

COM add-ins v., 828  
 debugging, 836–838  
 managed code, 820–828  
 referencing, 834–836

### class modules

Clone method, 463–464  
 collections class, 464–476  
   default procedure, 473–475  
   enumerating, 475–476  
   object keys, 471–472  
   overview, 467–471  
   testing, 472–473  
 creating, 427–440  
   adding to project, 427  
   instantiating, 429–430  
   methods, 429–432  
   naming, 428–429  
   property procedures, 432–440  
 error handling, 448–452  
   parsing errors, 451–452  
   raising custom-defined errors, 449–451  
   trapping VBA errors, 449  
 events, 443–452  
   custom, 444–445  
   Initialize and Terminate, 443–444  
   responding to, 445–448  
 forms as objects, 452–458  
   example, 454–458  
   overview, 452–454  
 history, 423  
 Instancing property, 482–483  
 Me, 461–463  
   creating parent property, 462–463  
   creating subclassed form, 462  
   subclassing form, 461–462  
 naming, 440–442  
   function, 441  
   verbs, nouns, and adjectives, 441–442  
 overview, 423–426  
 procedures, 242–245  
 reason for, 426–427

three pillars, 476–483  
   encapsulation, 476–477  
   inheritance, 477–478  
   inheriting interfaces, 478–482  
   polymorphism, 478  
 variables, 458–461  
   example, 458–461  
   scope and lifetime, 458

### Clear method, 471

### click-through, report view, 371

### client-server application

ACCDB and MDB, 652–664  
   ACE and Jet with ODBC, 660–662  
   DSN, 659  
   external data link, 653–659  
   pass-through queries, 663–664  
   performance improvement, 662–663  
 ACCDB/MDB v. ADP, 670–672  
   application file sharing, 671–672  
   local data storage, 671  
   Recordset, 670  
   security, 670–671  
 ADP, 664–670  
   external data link, 664–668  
   query options, 668–669  
 file formats, 652  
 file-server application v., 650  
 logon process, 672–678  
   ACCDB/MDB, 672–675  
   ADP, 675–678  
 overview, 649–652  
 recordsets, 678–684  
   form, combo box, or list box, 679  
   persistent, 682–684  
   report, 679–681  
 unbound forms, 684–692  
   creating, 685–692  
   reasons, 684–685

### Client-side cursors, ADO, 195–196

### CLng function, dates and times, 269–270

### Clone method

class modules, 463–464  
 Recordset, 173–175

- Close event, report, 358**
- Close method, DoCmd, 259–260**
- CLR. See Common Language Runtime**
- code-access security (CAS), managed code, 815**
- Code Project, new properties, 37**
- Code window, in VBA Editor, 68**
- cohesion, 241–242**
- Collection class**
  - Add method, 468–469
  - class modules, 464–476
    - default procedure, 473–475
    - enumerating, 475–476
    - object keys, 471–472
    - overview, 467–471
    - testing, 472–473
- Collection object, 464–467**
  - Add method, 465–466
  - Count property, 467
  - Item method, 466
  - Remove method, 466
  - unique object keys, 471–472
- collections**
  - AllObjects, 914
  - class modules, 464–476
  - Containers, 839–840
  - DAO object references, 115–117
  - Databases, 122–126, 842
  - Documents, 843–844
  - Errors, 121–122, 845, 875–876
  - Fields, 133–140, 845–846, 884–885
  - Groups, 147–153, 629–630, 638–639, 849–850
  - Indexes, 136–138, 850
  - Parameters, 163, 851, 879
  - properties, 858–859, 876
  - QueryDefs, 160
  - Recordsets, 852
  - Relations, 138–140, 861
  - TableDefs, 133–138, 141–143
  - Users, 147–153, 630–632, 640–641, 864
  - Workplaces, 117–121
  - Workspaces, 865
- ColumnHistory method**
  - append-only field, 187–189
  - as new feature, 41
  - SharePoint templates, 568–569
- COM add-in**
  - class libraries v., 828
  - debugging, 836–838
  - installing, 836
  - managed code, 828–833
- Combo Box Wizard, 306**
- combo boxes**
  - cascading, 522–524
  - client-server application, 679
  - forms, 305–316
    - AfterUpdate event, 314–316
    - Allow Value List Edits, 307–309
    - Field List, 314
    - List Items Edit Form, 309–312
    - look-up, 306–307
    - Not In List event, 312–313
  - Ribbon customization, 387–388, 393–396
- command buttons**
  - control wizard, 299–300
  - properties, 300–301
- Command object**
  - ADO, 200, 877–878
    - Execute method, 202–203
    - parameters, 203–204
  - Recordset creation, 205–206
- CommandType enumeration**
  - Connection, 889–890
  - Recordset, 892
- comments, 104–105**
- CommitTrans method, 120–121, 199–200**
- Common Language Runtime (CLR), 815**
- common type system (CTS), 815**
- CompactDatabase method, database password, 144–145**
- compile database**
  - ACCDE file format, 603–604
  - MDE file format, 614–616
  - upgrading, 794

## Connection object

---

### **Connection object, 193–195, 200, 873–875**

Data Link v., 197–198  
 events, 221–222  
 Execute method, 201–202, 889–890  
 OpenSchema method, 893–900  
 rolling, 196–197  
 transactions, 198–200

### **constants**

built-in, 107–108  
 new, 37  
 using, 107–109

### **Container object, 840**

### **Containers collection, 839–840**

### **contextual tabs, for Ribbon customization, 383–384**

### **control wizards, forms, 299–300**

### **Controllers. See Collection object**

### **controls**

attachment field, 301–305  
 control wizard, 299–300  
 events, 235–236, 960–961  
 forms and reports, 257–258  
 methods, 939–940  
 naming issues, 351–352  
 properties, 937–939  
   new, 37  
 for Ribbon customization, 385–390  
   buttons, 386  
   check boxes, 387  
   combo boxes, 387–388  
   dialogBoxLauncher, 389  
   edit boxes and labels, 388  
   grouping, 389–390  
   menus and menu separators, 385–386  
   separator, 388

### **CopyFromRecordset, Excel, 545–547**

### **Count property, Collection object, 467**

### **coupling, procedures, 241**

### **CreateDatabase method, database password, 145**

### **CreateField method**

creating indexes, 136–138

creating MVF, 141–143  
 creating relations, 138–140  
 creating tables, 133–136

### **CreateGroup method, 149–150**

### **CreateIndex method, 136–138**

### **CreateQueryDef, 158**

### **CreateTableDef method, 133–136**

### **CreateUser method, 150–151**

### **Cryptographic Service Provider (CSP), 146**

### **CSP. See Cryptographic Service Provider**

### **CTS. See common type system**

### **Current event, report, 354**

### **CurrentData object, 915, 918**

### **CurrentDb function, 917**

Databases collection, 123–124  
 libraries, 811

### **CurrentProject object, 915–917**

### **CurrentUser function, 149**

### **CursorLocation, 195**

### **CursorType enumeration, 205, 891**

## D

### **DAO. See Data Access Objects**

### **DAPs. See Data Access Pages**

### **dashboard reports, 367**

### **Data Access Objects (DAO)**

ACCDB, 192  
 ADO v., 112, 192–193  
 closing and destroying, 126  
 collection  
   Databases, 122–126  
   Errors, 121–122  
   Workspaces, 117–121  
 data access with, 157–187  
   attachment fields, 182–187  
   Bookmark, 172–173  
   QueryDefs, 158–162  
   Recordset, 162–172, 175–182  
 database encryption, 143–147  
   database password, 143–145  
   options, 146–147

## Debug.Assert statement

- DBEngine object, 115–117
- field types, 869–870
- MDB user-level security, 628–636
  - group maintenance, 629–630
  - permission maintenance, 632–633
  - PermissionEnum, 633–634
  - sample setup code, 634–636
  - user maintenance, 630–632
- new features, 113–115
  - append only fields, 114–115
  - attachment fields, 114
  - database encryption, 115
  - MVF, 113–114
- overview, 111–112
- properties of, 127–132
  - creating, 128–132
  - setting and retrieving, 128–132
  - types of, 127
- reasons for, 112–113
- Recordset
  - adding rows, 179
  - clones, 173–175
  - creating, 162
  - deleting rows, 180–181
  - editing rows, 179–180
  - filtering, 164–166
  - Find methods, 177–178
  - navigating, 167–172
  - opening, 162–164
  - ordering, 166–167
  - Seek method, 175–176
  - working with, 178–182
- referring to, 115–117
- schema objects, creating, 132–143
  - indexes, 136–138
  - MVF, 140–143
  - relations, 138–140
  - tables and fields, 133–136
- security, 147–157
  - ACCDB password, 598–599
  - creating security objects, 147–148
  - managing passwords, 153
  - managing permissions, 153–157
  - managing users and groups, 148–153
  - undocumented tools and resources, 866–869
- Data Access Pages (DAPs)**
  - Access 2007, 8
  - deprecation of, 65
- data encryption, ACCDB file format, 597–598**
- Data Link, 197–198**
- data source name (DSN)**
  - creating, 655–657
  - external data link, 655
  - types, 659
- Data Source task pane, 40**
- data types**
  - Access 2007, 9–10
  - SharePoint conversion, 584–585
- database encryption, DAO, 115, 143–147**
- Database object, 842–843**
- database password, setting, 143–145**
- database system selection, 2–4**
- database templates, 5–7**
- Databases collection, 122–126**
  - closing and destroying, 126
  - DAO, 842
  - default database, 123–126
    - CurrentDb function, 123–124
    - external database, 125–126
- date data type, 88–89**
  - CDate function, 271
- date handling, 269–271**
  - date and time storage, 269–270
  - simple date math, 270–271
- DateAdd function, 270**
- DBEngine**
  - DAO, 115–117, 841–842
  - errors collection, 121–122
  - workspaces collection, 117–121
- Debug.Assert statement, 74**

## debugging

---

### **debugging, 71–82, 260–267**

- breakpoints, 74–75, 264
- Call Stack dialog box, 77–79
- Debug.Assert, 74
- Debug.Print, 73–74
- of embedded macros, 51
- Immediate window, 72–73, 263–264
- Locals window, 79–80
- on-the-fly changes, 82
- run to cursor, 79
- stepping through code, 75–77, 266–267
- stop runaway code, 265
- timing of, 71–72
- variables, 261–263
- watch value, 265–266
- Watch window, 80–82

### **Debug.Print statement, 73–74**

### **Declare keyword, API, 494**

### **DefaultWorkspaceClone method, 120**

### **Delete method**

- group, 150
- QueryDef, 160
- Recordset, 180–181
- user, 151

### **Developer, new features for, 36–37**

### **development environment, new features, 39–43**

- automatic data type detection, 41
- Column History, 41
- Data Source task pane, 40
- field insertion, 41
- interactive form and report designing, 41
- managed code and Access add-ins, 43
- Navigation pane, 40
- in record selector, 42
- rich text fields, 41–42
- save database as, 42
- table and field templates, 40–41

### **Dialog Mode, asynchronous execution, 237–238**

### **dialogBoxLauncher, for Ribbon customization, 389**

### **dictionary-style headings, reports, 363–365**

### **digital certification, 769–776**

- self, 772–776
  - adding, 773–774
  - creating, 772–773
  - using, 774–776
- types of, 770–772
  - commercial, 771
  - internal, 771
  - obtaining, 771–772

### **digital signature, 769, 776–778**

- creating, 776–777
- extracting, 777–778

### **Dim, 97–99**

### **Disabled mode**

- AutomationSecurity, 765–767
- database enabling, 763–764
- macros, 767–769
- modal prompts, 765
- overview, 62, 761–762
- reasons, 762–763

### **DisplayOnSharePointSite property, 592–594**

### **DoCmd**

- Close, 259–260
- Maximize, 259
- methods, 919–923
  - new, 37
- OpenForm, 237, 331–333
- OpenReport, 332
- OutputTo, 323
- Restore, 259
- RunSQL, 160–161
- SendObject, 323
- SetWarnings, 280, 285, 313

### **Document object**

- DAO, 844–845
- permissions, 155–157
- Word, 551–552

### **Documents collection, 843–844**

### **double-click drill-down, 268–269**

### **drill-down**

- double-click, 268–269
- report view, 371

**drop-down boxes, Ribbon customization,**  
**387–388, 393–396**

**DSN. See data source name**

**dynamicMenu control, in Ribbon**  
**customization, 402**

## E

**e-mail addresses, AfterUpdate event,**  
**319–322**

**e-mail notifications**

Access and SharePoint, 57–58

error handling, 289–291

programmatic creation of, 538

**edit boxes, for Ribbon customization, 388**

**Edit in Datasheet, SharePoint, 564**

**Edit method, Recordset, 179–180**

**embedded macros**

debugging, 51

disabled mode, 51

error handling, 51

new features, 28, 50–51

temporary variables, 51

**encapsulation, OOP, 476–477**

**encode database, MDB file format, 612–614**

Access user interface, 612–613, 628

decoding, 614

VBA, 613–614

**encryption. See data encryption; database**  
**encryption**

**end of file (EOF), Recordset object,**  
**169–170**

**End user, new features for, 34**

**enums**

useful, 969–972

using, 109

**EOF. See end of file**

**Err object**

class modules, 450–451

LastDLError property, 505–507

**error handling, 275–290**

basic, 278–285

centralized message, 284–285

extra Resume, 279–284

class modules, 448–452

parsing errors, 451–452

raising custom-defined errors, 449–451

trapping VBA errors, 449

cleaning up after, 285–286

embedded macros, 51

issues in, 289–290

logging, 289–290

send e-mail, 290

new features, 26–28

procedures, 242

reasons for, 275–276

types of, 276–278

expected, 277–278, 286–289

unexpected, 276–277

**Error object, 845**

**Error Trapping setting, class modules, 449**

**Errors collection, 121–122**

ADO, 875–876

DAO, 845

VBA.Err v., 121

**Errors object**

DAO, 875–876

properties, 876

**events**

ADO, 221–222

AfterUpdate

class modules, 446–448

combo box synchronization, 314–316

late binding, 329

save e-mail addresses, 319–322

AttachmentCurrent, 302–303

BeforeUpdate

class modules, 446–448

forms, 317–319

class modules, 443–452

custom, 444–445

Initialize and Terminate, 443–444

responding to, 445–448

Close, 358

## events (continued)

---

### events (continued)

- Connection object, 221–222
- controls, 235–236, 960–961
- firing of, 233–238
  - asynchronous, 237–238
  - controls, 235–236
  - forms, 234–235
  - reports, 236
- Format, 355
- forms, 293–294, 936–937, 960–961
- Initialize, 443–444
- Load, 354
- NoData, 353
- Not In List, 312–313
- of objects, 84–85
- onClick, 331–333
- Open, 353
- order of, 960–962
- Page, 357–358
- Paint, 356
- Print, 357
- records, 221–222, 962
- reports, 236, 352–358, 952–953, 961–962
  - Close, 358
  - closing, 358
  - Current, 354
  - Format, 355
  - Load, 354
  - NoData, 353
  - Open, 353
  - opening, 352–354
  - Page, 357–358
  - Paint, 356
  - Print, 357
  - Retreat, 355–356
  - section, 354–358
  - Unload, 358
- Retreat, 355–356
- sections, 955–956, 961–962
- subforms, 960–961
- Terminate, 443–444
- Unload, 358
- VBA, 233–238, 293–294

### Excel, Microsoft

- Access 2007, 59
- working with, 543–549
  - CopyFromRecordset, 545–547
  - data in, 543–544
  - TransferSpreadsheet, 547–549

### Exchange Server, Outlook security, 541

#### Execute method

- ADO, 201–204
  - Connection object, 201–202, 889–890
- QueryDef, 161

#### ExecuteOption enumeration

- Connection, 890
- Recordset, 892

#### Exit Function, 278–279

#### Expression Service, 778–780

- sandbox mode, 778
  - limitations, 779–780
- workarounds, 780

#### expression(s), 247–249

- checking for nulls, 248–249
- If..Then, 247
- Select Case, 249

#### Extensible Markup Language (XML)

- with Access 2007, 54–55
- recordsets, 214–215
  - loading to, 683–684
  - persisting to, 682–683
- ribbon customizations, 375, 378–390
  - adding controls, 385–390
  - adding tabs and groups, 381–383
  - contextual tabs, 383–384
  - using ribbon schema, 379
  - writing XML, 380–381

#### external data sources

- Access 2007, 59–60
- OpenDatabase method, 125–126

## F

### field

- creation of, 133–136
- insertion of, 41

- retrieving, values, 178
- templates for, 40–41
- Field List, combo box, 314**
- Field object, 846–847**
- Field2 object, 847–849**
- Field templates (ACCFL files), ACCDT, 733**
- Fields collection**
  - ADO, 884–885
  - creating indexes, 136–138
  - creating relations, 138–140
  - creating tables, 133–136
  - DAO, 845–846
- Fields object, 884–885**
- file format, upgrading, 795–799**
  - ACCDE and MDE, 796
  - ACCDR, 796–797
  - considerations, 798–799
  - default, 795
  - overriding, 796
  - steps for, 797
- file-server application, client-server application v., 650**
- Filter property, Recordset, 165–166, 209**
- Find methods, Recordset, 177–178, 211–212**
- find records, 1054–1064**
  - code calling, 1055–1057
  - concatenation, 1062–1063
  - handling quotes, 1063
  - record finder code, 1057–1062
  - RecordsetClone, 1062
  - setting focus, 1063–1064
- FindFirst method, Recordset, 251–252**
- floating point numbers**
  - API and C, 501
  - rounding, 271–272
- ForceNewPage property, reports, 359**
- Format event, report, 355**
- form(s)**
  - ActiveX controls, 339–346
    - insert, 339–340
    - populate, 340–346
  - anchoring, 298
  - client-server application, 679
  - code behind, 20–21
  - combo boxes, 305–314
    - AfterUpdate event, 314–316
    - Allow Value List Edits, 307–309
    - Field List, 314
    - List Items Edit Form, 309–312
    - look-up, 306–307
    - Not In List event, 312–313
  - control wizards, 299–300
  - controls, 257–258
    - attachment field, 301–305
    - combo boxes, 305–314
    - command button properties, 300–301
    - control wizards, 299–300
    - ListView, 339–346
    - TreeView, 339–346
  - creation of, 13–15, 295–296
  - daisy-chain, 1049–1054
  - events, 234–235, 293–294, 935–937, 960–961
    - AfterUpdate event, 319–322
    - BeforeUpdate event, 317–319
    - OnClick, 331–333
  - ImageList, 340–341
  - informative captions, 1064–1067
  - IsLoaded property, 324–325
  - late binding, 327–331
  - layout
    - anchoring, 298
    - Modal Dialog form, 299
    - tabular and stacked, 296–297
    - types of, 295–296
  - Me, 257
  - methods, 935
  - multiple instances, 333–339
  - new features of, 43
    - alternating row color, 44
    - bound image controls, 46
    - column summaries, 45
    - date picker, 45–46
    - edit list items, 46–47
    - filtering and sorting, 45

## form(s) (continued)

---

### form(s) (continued)

- grouped control, 44
- interactive designing of, 41
- split forms, 43–44
- subforms, 47
- truncated number displays, 45
- as objects, 452–458
  - example, 454–458
  - overview, 452–454
- open
  - additional with OnClick event, 331–333
  - SQL, 513–514
- PDF output, 322–323
- pop-up memo with spell check, 1072–1079
- procedures, Public and Private, 240–241
- properties, 37, 292–293, 300–301, 323–327, 923–935
  - IsLoaded, 324–325
  - new, 37, 300–301
  - OnTimer, 325–327
  - OpenArgs, 323–324
- report creation from, 361
- reports v., 348–349
- SQL enhancement, 514–530
  - cascading combo boxes, 522–524
  - inside queries, 529–530
  - report selection criteria, 524–529
  - selections on index forms, 516–522
  - sorting on columns, 514–515
- stacked layout, 296–297
- subclassing, 461–462
- subforms, 258–259
- tabular layout, 296–297
- unbound, 684–692
  - code for, 688–689
  - creating, 685–692
  - design, 685–686
  - editing, 689–692
  - reasons for, 684–685
  - recordset, 686–688
- VBA in, 20–21, 256–260

### function

- C and API, 505
- of classes, 430–432
- sub v., 238–239

## G

- getImage callback, Ribbon customization, 398–399**
  - GetRows method, Recordset, 182**
  - Getting Started, as new feature, 38**
  - Group object, 850**
  - grouping controls, for Ribbon customization, 389–390**
  - groups, for Ribbon customization, 381–383**
    - from scratch, 408–410
  - Groups collection**
    - DAO, 849–850
    - managing, 148–153
      - ADO, 638–639
      - creating and deleting, 149–150
      - DAO, 629–630
      - operations, 151–152
      - users in, 152–153
    - security objects, 147–148
- ## H
- HasContinued property, 359**
  - HAVING clause, Recordset object, 209**
  - HKEY\_CLASSES\_ROOT, 698**
  - HKEY\_CURRENT\_CONFIG, 702**
  - HKEY\_CURRENT\_USER, 698–700**
  - HKEY\_LOCAL\_MACHINE, 700–701**
  - HKEY\_USERS, 701–702**
  - Home tab, for Ribbon customization, 410–415**
    - cruise group, 411–414
    - flight group, 410–411
    - hotel group, 415
    - rental car group, 415
  - Hyperlinks, report view, 371**

**I****icon, title bar, 488–489****If..Then, 247****ImageList, forms, 340–341****imageMSO attribute, Ribbon customization, 396–397****images, Ribbon customization, 396–399**

- getImage callback, 398–399
- imageMSO attribute, 396–397
- loadImage callback, 397–398

**Immediate window**

- variable value, 263–264
- Visual Basic Editor, 72–73

**Import from SharePoint, 572–576**

- into ACCDB, 572–573
- Access user interface, 576
- into MDB, 573–574
- TransferSharePointList method, 575–576

**Import RunCommand, deprecation, 65****ImportExportSpecification object, 59, 940**

- methods, 940
- properties, 940

**index creation**

- ADO, 228–230
- DAO, 136–138

**index form selections, 516–522**

- button disabling, 521–522
- in child records, 520–521
- easy criteria, 516–518
- expandable SelectRecords procedure, 519
- numeric keys, 519–520

**Index object**

- creating indexes, 136–138
- creating MVF, 141–143
- DAO, 851

**Index property, recordset, 167****Indexed Sequential Access Method (ISAM)**

- with ACE, 52
- external data, 653

**Indexes collection**

- creating indexes, 136–138
- DAO, 850

**inheritance**

- interfaces, 478–482
- OOB, 477–478

**InheritType enumeration, SetPermissions method, 903****Initialize event, class modules, 443–444****Instancing property, class module, 482–483****ISAM. See Indexed Sequential Access Method****ISAMStats method, 867****IsLoaded property, forms, 324–325****issues tracking, 57****IT department, new features for, 35–36****Item method, Collection object, 466****J****Jet database engine, Microsoft**

- DAO, 111–112
- ODBC, 660–662

**K****KeepTogether property, reports, 359–360****L****labels, for Ribbon customization, 388****LastDLLError property, Err object, 505–507****late binding, forms, 327–331****Layout view**

- as new feature, 48, 349–350
- reports, 369–370

**Lib keyword, API, 495–497****libraries, 490–497. See also references**

- building, 810–814
- broken, 812–814
- CurrentDB v. CodeDB, 811
- programmatically, 811–812
- declaring, 493–497
- referencing, 490–492
- resolving, 492–493

**Limit To List property, 312–313****line continuation, 105–107**

## Linked Tables

---

### Linked Tables

- creating, via code, 580–581
- offline mode, 581–583
- query processing, 581
- to SharePoint, 577–583
  - in ACCDB, 577–579
  - in MDB, 579–580

### linking

- dynamic, 490
- external data, 653–659
  - ACE and Jet with ODBC, 660–662
  - ADP file format, 664–668
  - performance improvement, 662–663
- libraries, 490–497
  - declaring, 493–497
  - referencing, 490–492
  - resolving, 492–493
- static, 489–490

### list boxes, client-server application, 679

### List Items Edit Form, combo box, 309–312

### Listview control, forms, 339–341

- configuring, 343–344
- filling, 344–346

### Load event, report, 354

### loadImage callback, Ribbon customization, 397–398

### Locals window, for debugging, 79–80

### LockType enumeration, Recordset, 205, 891

### logging, error handling, 289–291

## M

### Macro Designer, new features, 29–30

### MacroError, 27–28

### macros

- conditions for, 18
- creation of
  - without VBA, 17–18, 22–26
- description of, 22
- multiple instances, 337–339
- naming, 24
- new features, 26–30
  - embedded macros, 28

- error handling, 26–28
  - Macro Designer, 29–30
  - TempVar object, 28–29
- Ribbon customization, 390
- security
  - Disabled mode, 767–769
  - Trust Center, 760–761
- VBA v., 22–31
  - advantages to, 31

### mail merge

- VBA, 551–552
- Word Object Model, 549–551

### Mail object, Outlook, 539–540

### managed code

- overview, 815–820
  - terms, 817–820
  - use, 816
- using, 833–838
  - debugging, 836–838
  - installing COM add-in, 836
  - referencing class library, 834–836
  - registering, 833
- writing, 820–833
  - class libraries, 820–828
  - COM add-ins, 828–833

### Managers, 1015–1016

### Maximize method, DoCmd, 259

### MDB file format

- client-server application, 652–664
  - ACE and Jet with ODBC, 660–662
  - ADP v., 670–672
  - DSN, 659
  - external data link, 653–659
  - logon process, 670–675
  - pass-through queries, 663–664
  - performance improvement, 662–663
- convert to, 63
- DAO 3.6, 192
- importing from SharePoint, 573–574
- security, 606–647
  - encoding, 612–614
  - overview, 606–610

- shared-level, 611–612
- user-level, 616–647
- VBA code, 614–616
- SharePoint Linked Tables, 579–580
- user-level security, 616–647
  - Access user interface, 623–628
  - ADO, 636–646
  - ADOX, 647
  - DAO, 628–636
  - overview, 616–623
- MDE file format**
  - compile database, 614–616
  - upgrading, 798
  - VBA, 616
- MDW file**
  - creating, 622–624
  - joining, 624–625
  - linking, 628
  - updating, 625
  - user-level security, 617–618
- Me keyword**
  - class modules, 461–463
    - creating parent property, 462–463
    - creating subclassed form, 462
    - subclassing form, 461–462
  - forms, 257
  - reports, 257, 352
- menu bars, custom, 376–377**
- menus, for Ribbon customization, 385–386**
- Message Bar, security, 62, 761**
- methods**
  - Application object, 908–913
  - of classes, 429–432
    - enumerated types, 435–437
  - Control object, 939–940
  - DoCmd, 37, 919–923
  - Execute, 161, 201–204, 889–890
  - forms, 935
  - ImportExportSpecification object, 940
  - Module object, 941–942
  - objects, 84
  - Recordset
    - Find, 177–178
    - navigating, 162, 210
  - reports, 951–952
    - new, 47–48
  - Selection object, 22
  - subforms, 959
  - user-level security, 621
- Microsoft Access 2007. See Access 2007, Microsoft**
- Microsoft .NET. See .NET, Microsoft**
- Microsoft Office. See Office, Microsoft**
- Microsoft SQL Server 2005. See SQL Server 2005, Microsoft**
- mobile connectivity, Access and SharePoint, 58**
- Modal Dialog form, 299**
- Module object, 941–942**
  - methods, 941–942
  - properties, 941
- modules. See also class modules**
  - Public and Private procedures, 239
  - in VBA Editor, 67
  - writing, 19–20
- Move method, Recordset object, 167, 210**
- Move to SharePoint**
  - data type conversion, 584–585
  - database changes, 585–587
  - non-migrating features, 587–588
  - Wizard, 583–584
- MSI file format**
  - overview, 731
  - settings, 729–730
- multi-value field (MVF)**
  - in Access 2007, 52–53
  - creation of, 140–143
  - DAO, 113–114
  - navigation recordsets with, 171–172
- multiple instances**
  - forms, 333–339
  - reports, 371–372
- MVF. See multi-value field**

## naming conventions

---

### N

#### **naming conventions, 294–295, 1027–1044**

- history, 1028–1029
- Hungarian convention, 1029–1030
- reasons, 1027–1028
- reports, 351–352
- reserved words, 1017–1022
- rules for, 1030–1034
  - basics, 1030–1032
  - functions, 1032–1033
  - variables and routines, 1032
- special characters, 1023–1026
- standards, 1044
- tag tables, 1034–1044

#### **Navigation pane, as new feature, 40**

#### **.NET, Microsoft**

- Access add-ins, 43
- SQL Server 2005, 3

#### **NewCurrentDatabase method, SharePoint template creation, 569–571**

#### **NewPassword method, 143–144, 153**

#### **NoData event, report, 353**

#### **Not In List event, combo box, 312–313**

#### **Null, 93–95**

- checking for, 248–249

#### **number data type, 86–88**

- C and API, 498–501, 503

### O

#### **Object Browser**

- references, 808–809
- in VBA Editor, 69–71

#### **object keys, Collection object, 471–472**

#### **Object list box, VBA Editor, 68**

#### **Object-oriented programming (OOP )**

- inheriting interfaces, 478–482
- three pillars, 476–483
  - encapsulation, 476–477
  - inheritance, 477–478
  - polymorphism, 478
- VBA as, 83

#### **ObjectType enumeration, SetPermissions method, 901**

#### **ODBC. See Open Database Connectivity**

#### **ODBCDirect**

- in Access 2007, 839
- Workplaces collection, 118

#### **Office, Microsoft**

- Access, 1–2
- Trust Center, 37
- working with, 537–559
  - data directions, 537–538
  - Excel, 543–549
  - Outlook, 538–543
  - PowerPoint, 553–556
  - pulling data, 556–559
  - Word, 549–553

#### **Office Live, Microsoft, 58**

#### **Office menu customization, 418–420**

#### **Office Ribbon Developer Center, 422**

#### **OM. See Access Object Model**

#### **On Error GoTo statement, 278**

#### **On Error statement, 26**

#### **On Open**

- error handling, 287–288
- OpenArgs property, 323–324

#### **OnClick, forms, 331–333**

#### **onLoad callback, Ribbon customization, 399**

#### **OnOpenReport callback, Ribbon customization, 404**

#### **OnTimer property, forms, 325–327**

#### **OOP. See Object-oriented programming**

#### **Open Database Connectivity (ODBC)**

- with ACE, 52
- ACE and Jet, 660–662
- external data link, 653

#### **Open event, report, 353**

#### **Open with Access, SharePoint, 566–572**

- application templates, 566
- non-template lists, 571–572

#### **OpenArgs property, forms, 323–324**

#### **OpenCurrentDatabase method, SharePoint, 590**

**OpenDatabase method**

- external database, 124–125
- multiple databases, 122–123

**OpenForm method**

- asynchronous execution, 237
- DoCmd, 331–333

**OpenRecordset, 161–162**

- DAO constants, 870–872

**OpenReport method, DoCmd, 332****Option Explicit, 97****Options, Recordset, 205, 208, 891–892****ORDER BY clause**

- DAO, 166
- SQL, 514–515

**Outlook, Microsoft**

- Access 2007, 35–36, 59–60
- working with, 538–543
  - e-mail, 538–540
  - other objects, 542–543
  - security features, 540–542

**OutputTo method**

- DoCmd, 323
- Word, 552–553

**P****Package-and-Sign, 61****Package Solution Wizard**

- additional files and registry keys, 728
- installation options, 725–728
- MSI file settings, 729–730
- overview, 64, 724
- starting, 724–725

**Page event, report, 357–358****Paint event, report, 356****Parameter object, 879–880**

- Command object, 203–204
- DAO, 852

**Parameters collection**

- ADO, 879
- DAO, 851
- recordset based on, 163

**pass-through queries, client-server**

- application, 663–664

**password**

- ACCDB file format, 597–602
  - ADO, 599–601
  - DAO, 598–599
  - OM, 601–602
  - VBA code, 602–603
- managing
  - ADO, 231
  - DAO, 153
- MDB file format, 612

**PDF. See Portable Document Format****PercentPosition property, Recordset object, 168****PermissionEnum, 633–634****permissions**

- Access and SharePoint, 58
- managing, 153–157
  - ADO, 641–644
  - DAO, 632–633
  - reading, 155–157
  - setting, 157

**Personal Identifier (PID), new account, 147–148****PIA. See Primary Interop Assembly****PID. See Personal Identifier****PivotChart, 360–361****PivotTable, 49****plurality, in class naming, 442****polymorphism, 478****Portable Document Format (PDF)**

- output to, 322–323
- from reports, 49–50

**Power user, new features for, 34–35****PowerPoint, Microsoft, 553–556****prefixes, in class naming, 442****Primary Interop Assembly (PIA)**

- Access 2007, 1
- changes to, 43

**Print event, 357****Printer object**

- properties, 942–943
- reports, 362–363

**Privacy Options, 761**

## Private

---

### Private

form and report procedures, 240–241  
 module procedures, 239  
 Public v., 239–241  
 variables, 101

### PrivDBEngine object, 868–869

### Procedure list box, in VBA Editor, 68

### procedure(s)

class modules, 242–245  
 coupling and cohesion, 241–242  
 error handling, 242  
 function v. sub, 238–239  
 Public v. Private, 239–241  
 variables, 245–247
 

- data types and sizes, 245–246
  - global, 246–247

 VBA, 238–247

### progress meter report, 367–369

### properties

AbsolutePage, 209–210  
 AbsolutePosition, 168, 209–210  
 Application object, 906–908  
 AttachmentCount, 303  
 CanGrow, 348–349, 360  
 CanShrink, 348–349, 360  
 Code Project, 37  
 collections, 858–859, 876  
 command buttons, 300–301  
 controls, 37, 937–939  
 DAO, 127–132  
 DisplayOnSharePointSite, 592–594  
 Errors object, 876  
 Filter, 165–166, 209  
 ForceNewPage, 359  
 forms, 37, 292–293, 300–301, 323–327, 923–935  
 HasContinued, 359  
 ImportExportSpecification object, 940  
 Index, 167  
 Instancing, 482–483  
 IsLoaded, 324–325  
 KeepTogether, 359–360

LastDLLError, 505–507

Module object, 941

objects, 84

OnTimer, 325–327

OpenArgs, 323–324

PercentPosition, 168

Printer object, 942–943

PublishURL, 588–589

RecordCount, 168–169

references, 943–944

reports, 47–48, 358–360, 944–951

Section object, 954–955

Sort, 167, 209

State, 223

subforms, 37, 47, 957–959

SummaryInfo, 130–131

user-defined, 127

- creating, 128–130

- setting and retrieving, 131–132

VBA, 292–293

WillContinue, 359

### Properties collection

ADO, 876

DAO, 858–859

### Property Get

for classes, 433

read-write attributes, 435

### Property Let

for classes, 433–434

read-write attributes, 435

### Property object

ADO, 876–877

DAO, 859

### property procedures, of classes, 432–440

attributes, 439–440

creating flags, 437–439

enumerated types, 435–437

exiting, 439

friendly, 440

Get, 433

Let, 433–434

read-write attributes, 435

Set, 434–435

**Property Set**

- for classes, 434–435
- read-write attributes, 435

**Public**

- form and report procedures, 240–241
- module procedures, 239
- Private v., 239–241
- variables, 101

**Publish to SharePoint, 57, 588–591**

- Edit mode, 589–590
- PublishURL property, 588–589
- Read-Only mode, 589
- via code, 590–591

**PublishURL property, SharePoint, 588–589****Q****QTA. See Quick Access Toolbar****query. See also view**

- client-server application
  - options, 668–669
  - pass-through, 663–664
- creation of, 11–13
- Linked Tables, 581
- recordset based on, 162
- by report, 372–373
- SQL changes to, 529–530

**QueryDef**

- Execute method, 161
- Parameters collection, 163
- working with, 158–162
  - creating, 158
  - deleting, 160
  - executing, 160–162
  - modifying, 160
  - parameters, 159

**QueryDef object, 860–861****QueryDefs collection**

- DAO, 859
- deleting, 160

**Quick Access Toolbar (QTA), customization, 420****quotes, SQL string with, 510–511**

- single v. double, 511–512

**R****Raise method, class modules, 450–451****RDBMS. See Relational database****management system****Record object, 200, 886–887****record selector, search from, 42****RecordCount property, 168–169, 209****records**

- find, 1054–1064
  - code calling, 1055–1057
  - concatenation, 1062–1063
  - handling quotes, 1063
  - record finder code, 1057–1062
  - RecordsetClone, 1062
  - setting focus, 1063–1064
- preload, 1067–1071

**Recordset object**

- ACCDB/MDB v. ADP, 670
- ADO, 200, 204–218, 880–883
  - Open method, 891–892
- arrays with, 181–182
- client-server application, 678–684
  - form, combo box, or list box, 679
  - persistent, 682–684
  - report, 679–681
- clones, 173–175
- column referral, 209
- creating, 162, 204–218
  - from Command object, 205–206
  - shaped, 206–208
- DAO, 852–855
- events, 221–222
- Excel, 545–547
- filtering, 164–166, 209
- find records, 210–212, 1054–1064
  - code calling, 1055–1057
  - concatenation, 1062–1063
  - Find methods, 177–178, 211–212
  - FindFirst method, 251–252
  - handling quotes, 1063
  - record finder code, 1057–1062
  - RecordsetClone, 1062

## Recordset object *(continued)*

---

### **Recordset object *(continued)***

- Seek method, 175–176, 210–211
  - setting focus, 1063–1064
  - multiple, 252–256
    - Bookmark, 172–173, 254–256
    - cleaning up, 256
    - copying trees, 252–254
    - RecordsetClone, 254–256
  - navigating, 162–167, 209–210
    - AbsolutePage property, 209–210
    - AbsolutePosition property, 168, 209–210
    - looping, 250–251
    - methods, 162, 210
    - with MVF, 171–172
    - PercentPosition property, 168
    - properties, 163–170
    - RecordCount, 168–169, 209
    - testing for empty, 170
  - opening, 162–164, 250
    - lock out users, 164
    - multiple SELECT queries, 217–218
    - parameter based, 163
    - SQL statement based, 164
    - table or query based, 162
  - ordering, 166–167, 209
    - Index property, 167
    - ORDER BY, 166
    - Sort property, 167, 209
  - persistent, 214–218
    - client-server application, 682–684
    - disconnected, 216–217
    - file based, 215–216
  - pulling data, 556–559
  - supported options, 208
  - unbound forms, 686–688
  - updating, 252
  - working with, 178–182
    - adding rows, 179, 251
    - deleting rows, 180–181
    - editing rows, 179–180, 212–214
    - retrieving field values, 178
- Recordset2 object, 855–858**

### **RecordsetClone method, 173–175, 254–256**

- record finder code, 1062

### **Recordsets collection, 852**

### **Recycle Bin, Access and SharePoint, 58**

### **Redemption, Outlook security, 541–542**

### **references, 805–814**

- building code libraries, 810–814
  - broken, 812–814
  - CurrentDB v. CodeDB, 811
  - programmatically, 811–812
- properties, 943–944
- types of, 805–806
- using, 806–809
  - Object Browser, 808–809
  - order, 807–808

### **RegEdit.exe, 696–697**

### **RegEdit32.exe, 696–697**

### **Registry**

- accessing, 696–697
- ADE, 728
- API, 709–720
  - CreateKey function, 713–714
  - DeleteKey function, 718
  - DeleteValue function, 717
  - GetKeyValue function, 715–717
  - getting started, 710–713
  - SetKeyValue function, 714–715
- constant and user-defined type declarations, 1004–1007
- control by, 695
- data types, 981–982
- functions, 694–695
- organization, 697–702
  - HKEY\_CLASSES\_ROOT, 698
  - HKEY\_CURRENT\_CONFIG, 702
  - HKEY\_CURRENT\_USER, 698–700
  - HKEY\_LOCAL\_MACHINE, 700–701
  - HKEY\_USERS, 701–702
  - x64-based windows, 702–703
- overview, 693–694
- redirection, 702–703
- reflection, 703

- root key hives, 982–983
- VBA functions, 702–709, 983–1004
  - DeleteSetting, 706
  - GetAllSetting, 705–706
  - GetSetting, 704–705
  - SaveSetting, 704
  - uses for, 707–709
- Relation object**
  - creating relations, 138–140
  - DAO, 861–862
- Relational database management system (RDBMS), 1**
- Relations collection**
  - creating relations, 138–140
  - DAO, 861
- relations creation**
  - ADO, 228–230
  - DAO, 138–140
- Remove method, Collection object, 466**
- RepeatSection property, reports, 360**
- ReplaceOrderByClause function, 530–536**
- ReplaceWhereClause function, 530–536**
- Report Manager, integrated Ribbon, 401–404**
  - callback routines, 402–404
  - dynamicMenu control, 402
  - reports table, 401
- report(s)**
  - charts with, 360–361
  - client-server application, 679–681
  - Close event, 358
  - code behind, 20–21
  - common requests, 361–369
    - conditional control formatting, 366–367
    - dashboard reports, 367
    - dictionary-style headings, 363–365
    - information from form, 361
    - printer change, 362–363
    - progress meter report, 367–369
    - shading alternate rows, 365–366
  - controls, 257–258
    - conditional formatting, 366–367
    - naming of, 351–352
    - properties, 360
    - report view, 370–371
  - creation of
    - from form, 361
    - without VBA, 15–16, 351
  - dashboard, 367
  - events, 236, 952–953, 961–962
    - Close, 358
    - closing, 358
    - Current, 354
    - Format, 355
    - Load, 354
    - NoData, 353
    - Open, 353
    - opening, 352–354
    - Page, 357–358
    - Paint, 356
    - Print, 357
    - report view, 370
    - Retreat, 355–356
    - section, 354–358
    - Unload, 358
  - forms v., 348–349
  - layout view, 369–370
  - Me, 257, 352
  - methods, 951–952
    - new, 47–48
  - naming conventions, 351–352
  - new features, 47–50, 349–350
    - alternating row color, 49, 365–366
    - grid line controls, 49, 350
    - group, sort, and total, 48–49, 349
    - layout view, 48, 349–350, 369–370
    - PDF and XPS support, 49–50
    - PivotTable views and charts, 49
    - properties, methods, and events, 47–48
    - report browse, 48
  - overview, 347–350
  - printer change in, 362–363
  - Printer object, 362–363
  - procedures, Public and Private, 240–241

## report(s) (continued)

---

### report(s) (continued)

properties, 47–48, 358–360, 944–951

CanGrow, 348–349, 360

CanShrink, 348–349, 360

control, 360

ForceNewPage, 359

HasContinued, 359

KeepTogether, 359–360

new, 37

RepeatSection, 360

section, 359–360

WillContinue, 359

query by, 372–373

RunningSum, 349

sizing, 259

SQL, 513–514, 524–529

structure of, 347–348

subreports, 258–259

VBA in, 20–21, 256–260

view, 370–373

click-through, 371

considerations for, 370–371

drill-down, 371

Hyperlinks, 371

interactivity, 371–373

multiple instances, 371–372

XPS, 49–50

### reserved words

with error messages, 1019

list, 1019–1022

overview, 1017–1018

sources of, 1018–1019

### Restore method, DoCmd, 259

### Resume, error handling with extra, 279–284

### Retreat event, report, 355–356

### revision history, Access and SharePoint, 58

### Ribbon

additional tips and resources, 421–422

creating from scratch, 407–418

Administration tab, 417–418

defining tabs and groups, 408–410

Home tab, 410–415

Settings tab, 415–417

creating integrated, 401–407

building custom filter interface, 404–407

building Report Manager, 401–404

custom menu bars and toolbars, 376–377

customization, 377–421

defining with XML, 378–390

image display, 396–399

refreshing content, 399–401

saving, 377–378

writing callback routines and macros,  
390–396

as new feature, 38–39

Office menu customization, 418–420

overview, 375–376

Quick Access Toolbar customization, 420

### rich text fields, new features of, 41–42

### Rights enumeration, SetPermissions method, 901–902

### Rollback method, 120–121, 199–200

### Round function, 272–273

### rounding issues, 271–273

floating point numbers, 271–272

Round function, 272–273

sums, 271

### RSS notifications, Access and SharePoint, 57–58

### RunCommand, ACCDE file format, 605

### RunningSum, reports, 349

## S

### sandbox mode, 778

limitations, 779–780

workarounds, 780

### SCC. See source code control

### Schema enumeration, Connection object, 893–900

### Schema objects

ADOX creation, 223–230

indexes, 228–230

relationships, 230

tables and columns, 226–228

views, 224–225

- DAO creation, 132–143
  - indexes, 136–138
  - MVF, 140–143
  - relations, 138–140
  - tables and fields, 133–136
- schema recordsets, 219–221**
- Screen object, 953**
- Section object, 953–956**
- security, 58, 60–62, 595, 755–756**
  - ACCDB file format, 55, 60–61, 595–606
    - overview, 595–597
    - shared-level, 597–602
    - VBA, 602–606
  - ACCDB/MDB v. ADP, 670–671
  - ACCDE file format, 603–604
  - Access and SharePoint, 58
  - ADO, 231
  - DAO, 147–157
  - digital certification, 769–776
    - self, 772–776
    - types of, 770–772
  - digital signature, 769, 776–778
    - creating, 776–777
    - extracting, 777–778
  - Disabled mode
    - AutomationSecurity, 765–767
    - database enabling, 763–764
    - macros, 767–769
    - modal prompts, 765
    - overview, 62, 761–762
    - reasons, 762–763
  - encryption with database password, 60–61
  - Expression Service, 778–780
    - limitations, 779–780
    - sandbox mode, 778
    - workarounds, 780
  - libraries, 810
  - MDB file format, 606–647
    - encoding, 612–614
    - overview, 606–610
    - shared-level, 611–612
    - user-level, 616–647
    - VBA code, 614–616
  - Message Bar, 62, 761
  - Outlook, 540–542
    - Exchange Server, 541
    - Redemption, 541–542
  - signed database package, 61
  - Trust Center, 61–62, 756–761
    - features, 757–761
    - overview, 756
  - trusted locations, 61–62, 757–759
- Security IDentifier (SID), new account, 147–148**
- Security Warning message bar, 62**
- Seek method, Recordset, 175–176, 210–211**
- Select Case, 249**
- SELECT query, multiple, 217–218**
- Selection object, methods, 22**
- SelectRecords procedure, expandable, 519**
- SendObject method, DoCmd, 323**
- separator, for Ribbon customization, 388**
- Server-side cursors, 195**
- SetOption method**
  - Application object, 962–969
    - advanced, 967–968
    - current database, 963–964
    - datasheet, 964–965
    - object designers, 965–966
    - popular, 963
    - proofing, 966–967
  - database encryption, 146
- SetPermissions method, Groups and Users, 900–903**
- Settings tab, for Ribbon customization, 415–417**
- SetWarnings method, DoCmd, 280, 285, 313**
- Shape statement, Recordset object, 206–208**

## shared-level security

---

### shared-level security

- ACCDB file format, 597–602
  - data encryption, 597–598
  - encrypt and password protect, 598–602
- MDB file format, 611–612
  - Access user interface, 612
  - back-end databases, 611–612
  - VBA code, 612

**SharePoint.** *See* **Windows SharePoint Server**

**SID.** *See* **Security IDentifier**

**signed integers, C and API, 498**

**SingleStep action, 27**

**SmartTag object, 956**

**Snapshot Viewer deprecation, 66**

**Sort property, 167, 209**

**source code control (SCC)**

- installation, 747–748
- support for, 65, 747–753
- using, 748–752
  - add database, 749
  - creating database, 749
  - modifying database, 749
  - options, 750–752

**special characters**

- ASCII, 1025–1026
- code example, 1026
- list, 1024
- overview, 1023

**splash screen, 1071–1072**

**split application, 1064**

**SQL.** *See* **Structured Query Language**

**SQL Server 2005, Microsoft**

- Access 2007, 35–36, 60
  - upgrading to, 793–794
- client-server application, 650–651
- external data link, 665–668
- overview, 3
- query options, 668–669
  - functions, 669
  - procedures, 669
  - views, 668–669

**SQL Server Profile, Access, 660**

**stacked layout, forms, 296–297**

**State property, 223**

**Static variables, 101**

**Stream object, ADO, 200–201, 887–888**

**string**

- comparisons, 90–92
- data type, 89–90
  - C and API, 501–503

**string concatenation, 273–274**

- & v. +, 273–274
- example, 274
- SQL strings with, 512–513

**Structured Query Language (SQL)**

- enhance forms, 514–530
  - cascading combo boxes, 522–524
  - inside queries, 529–530
  - report selection criteria, 524–529
  - selections on index forms, 516–522
  - sorting on columns, 514–515
- open forms and reports, 513–514
- ReplaceOrderByClause function, 530–536
- ReplaceWhereClause function, 530–536
- statement
  - build with quotes, 510–511
  - concatenating long, 512–513
  - recordset based on, 164
  - single quotes v. double quotes, 511–512
  - in VBA, 509–513
  - VBA and, 509–536

**sub**

- of classes, 430–432
- function v., 238–239

**subforms, 956–960**

- events, 960–961
- methods, 959
- properties, 37, 47, 957–959
  - new, 37, 47
- refer to, 258–259

**subreports, 960**

- refer to, 258–259

**suffixes, in class naming, 442**

**SummaryInfo properties, setting and retrieving, 130–131**

**sums, rounding, 271**

**SysCmd 603, ACCDE file format, 604**

## T

**tab, for Ribbon customization, 381–383**

from scratch, 408–410

**tabbed windows, as new feature, 39**

**TableDef object, 862–864**

**TableDefs collection**

creating indexes, 136–138

creating MVF, 141–143

creating tables, 133–136

DAO, 862

**table(s)**

creation of

ADO, 226–228

DAO, 133–136

without VBA, 8–11

new features of

alternating row color, 44

filtering and sorting, 45

Recordset based on, 162

templates for, 40–41

**tabular layout, forms, 296–297**

**TempVar object, 28–29**

embedded macros, 51

**Terminate event, class modules, 443–444**

**testing VBA code, 71–82**

breakpoints, 74–75

Call Stack dialog box, 77–79

Debug.Assert, 74

Debug.Print, 73–74

Immediate window, 72–73

Locals window, 79–80

on-the-fly changes, 82

run to cursor, 79

stepping through code, 75–77

timing of, 71–72

Watch window, 80–82

**textbox, AfterUpdate event, 319–322**

**ThrowError, 470**

**toolbars, custom, 376–377**

**transaction**

ADO connection, 198–200

Workplaces collection, 120–121

**TransferSharePointList method, 575–576**

**TransferSpreadsheet**

Excel, 547–549

PowerPoint, 553

**TreeView control, forms, 339–341**

filling, 341–343

**Trust Center, 61–62, 756–761**

features, 757–761

add-ins, 759

locations, 757–759

macros, 760–761

Message Bar, 761

Privacy Options, 761

publishers, 757

in Office 2007, 37

overview, 756

**TypeParagraph method, 22**

**TypeText method, 22**

## U

**UDA. See Universal Data Access**

**underscores, in class naming, 442**

**Unicode, 495**

**Universal Data Access (UDA), 191**

**Unload event, report, 358**

**unsigned integers, C and API, 498**

**upgrading, 783–814**

changing file formats, 795–799

convert v. enable, 784–794

decision factors, 785–786

feature sets and file extensions,  
786–791

other considerations, 791–794

enabling, 803–804

multiple versions, 794–795

overview, 783–784

replicated, 801–802

secured database, 799–800

**user, determine name, 1079–1080**

## user-defined properties

---

### **user-defined properties, 127**

- creating, 128–130
- setting and retrieving, 131–132

### **user-level security, MDB, 616–620**

- Access user interface, 623–628
  - database object permissions, 626–627
  - database owner object, 627–628
  - encoding database, 628
  - linking database, 628
  - login dialog box, 625–626
  - MDW file, 623–625

### **ADO, 636–646**

- group maintenance, 638–639
- open connection, 637
- permission maintenance, 641–644
- sample setup code, 645–646
- user maintenance, 640–641

### **DAO, 628–636**

- group maintenance, 629–630
- permission maintenance, 632–633
- PermissionEnum, 633–634
- sample setup code, 634–636
- user maintenance, 630–632

### **database, 619–620**

### **MDW file, 617–618**

### **methods, 621**

### **Wizard, 621–623**

### **User object, 864–865**

### **Users collection, 864**

- managing, 148–153
  - ADO, 640–641
  - creating and deleting, 150–151
  - current, 149
  - DAO, 630–632
  - in groups, 152–153
  - operations, 151–152
- security objects, 147–148

### **USysRibbons, Ribbon customization, 377–378**

## **V**

### **validation, BeforeUpdate event, 317–319**

### **variables, 85–104**

- boolean data types, 88
- class modules, 458–461
  - example, 458–461
  - scope and lifetime, 458
- data types, 85–86
- date data types, 88–89
- declaring, 97–99
- naming, 99–100, 1027–1044
- Null, 93–95
- number data types, 86–88
- overlapping, 101–104
- procedures
  - data types and sizes, 245–246
  - global, 246–247
- scope and lifetime, 100–101
- string comparisons, 90–92
- string data types, 89–90
- use of, 96–97
- user-defined data type, 95–96
- variant data types, 92–93

### **variant data type, 92–93**

#### **C and API, 503**

#### **Null, 93**

### **VBA. See Visual Basic for Applications, Microsoft**

### **VBA.Err, Errors collection v., 121**

### **view, 224–225**

- creating, 225
- deleting, 226
- modifying, 225

### **Visual Basic Editor**

- anatomy of, 67–69
- Immediate window, 72–73
- Object Browser in, 69–71
- overview, 19–21
- security, password, 602–603
- testing and debugging, 71–82
  - breakpoints, 74–75
  - Call Stack dialog box, 77–79
  - Debug.Assert, 74
  - Debug.Print, 73–74

- Immediate window, 72–73
  - Locals window, 79–80
  - on-the-fly changes, 82
  - run to cursor, 79
  - stepping through code, 75–77
  - timing of, 71–72
  - Watch window, 80–82
- Visual Basic for Applications, Microsoft (VBA)**
- ACCDE file format, 604–606
  - API with, 485–507
    - application distribution, 507
    - C parameters, 497–505
    - Err.LastDLLError, 505–507
    - linking, 489–490
    - linking libraries, 490–497
  - basics, 291–295
    - naming conventions, 294–295
  - common techniques, 267–273
    - date handling, 269–271
    - double-click drill down, 268–269
    - rounding issues, 271–273
    - string concatenation, 273–274
  - debugging, 260–267
    - breakpoints, 264
    - Immediate window, 263–264
    - stepping through code, 266–267
    - stop runaway code, 265
    - variables, 261–263
    - watch value, 265–266
  - error handling, 275–290
    - absorbing expected, 277–278, 286–289
    - basic, 278–285
    - cleaning up after, 285–286
    - handling unexpected, 276–277
    - issues in, 289–290
    - reasons for, 275–276
    - types of, 276–278
  - events, 233–238, 293–294
  - expressions, 247–249
  - forms, 20–21, 256–260
    - enhancing, 291–346
  - macros v., 22–31
    - advantages to, 31
  - in modules, 19–20
  - objects, 83–85
  - password
    - ACCDB file format, 602–603
    - MDB file format, 612
  - procedures, 238–247
  - properties, 292–293
  - recordsets, 249–256
  - Registry functions, 702–709
    - DeleteSetting, 706
    - GetAllSetting, 705–706
    - GetSetting, 704–705
    - SaveSetting, 704
    - uses for, 707–709
  - reports, 20–21, 256–260
    - enhancing, 347–373
  - Ribbon customization, 391–392
  - security
    - ACCDB file format, 602–606
    - ACCDE file format, 603–606
    - MDB file format, 614–616
  - SQL and, 509–536
    - form enhancement, 514–530
    - functions, 530–536
    - open forms and reports, 513–514
    - strings, 509–513
  - structures, 104–109
    - comments, 104–105
    - constants, 107–109
    - enums, 109
    - line continuation, 105–107
  - testing and debugging, 71–82
  - variables, 85–104
    - boolean data types, 88
    - data types, 85–86
    - date data types, 88–89
    - debugging, 261–263
    - declaring, 97–99
    - naming, 99–100, 1027–1044
    - Null, 93–95
    - number data types, 86–88
    - overlapping, 101–104
    - scope and lifetime, 100–101

## Visual Basic for Applications (*continued*)

---

### **Visual Basic for Applications, Microsoft (VBA)** (*continued*)

- string comparisons, 90–92
- string data types, 89–90
- use of, 96–97
- user-defined data type, 95–96
- variant data types, 92–93

### **visual interface standards, 1045–1049**

- businesslike colors, 1045–1046
- button placement, 1047
- higher-level forms, 1047
- punctuation, 1046–1047
- read-only “index” forms, 1048
- table linkage, 1048
- translate delete message, 1048–1049
- well-marked exit, 1046

## **W**

### **Watch window, debugging, 80–82, 265–266**

### **WHERE clause, Recordset object, 209**

### **WhereCondition, SQL, 513–514**

### **WillContinue property, reports, 359**

### **Windows SharePoint Server (WSS)**

- Access features on, 563–576
  - Access Web Datasheet, 564–565
  - Import from SharePoint, 572–576
  - Open with Access, 566–572
- features in Access, 576–594
  - Access Views, 591–594
  - Linked Tables, 577–583
  - migrate, 583–588
  - publish, 57, 588–591
- security, 58

templates, 566–571

AppendOnly property, 568

ColumnHistory method, 568–569

contacts, 567

issue tracking, 568

NewCurrentDatabase method, 569–571

tasks, 567–568

working with, 35–36, 55–58, 561–563

### **WithEvents, 221–222**

class modules, 445

### **Wizards, 1009–1014**

### **Word, Microsoft, 549–553**

automate, 549–551

sending to, 552–553

VBA, 551–552

### **Workplaces collection, 117–121**

creating workspace, 118–120

ODBCDirect, 118

using transactions, 120–121

### **Workspace object**

creating, 118–120

DAO, 865–866

Groups and Users collections, 148–149

security, 147–153

### **Workspaces collection, 865**

### **WSS. See Windows SharePoint Server**

## **X**

### **XML. See Extensible Markup Language**

### **XML Paper Specification (XPS)**

output to, 322–323

from reports, 49–50

### **XPS. See XML Paper Specification**