

Index

Symbols

- “;#”, as separator, 229
- _vti_bin virtual directory, 155–157
- < (less than) and > (greater than) characters (XML), 678, 679

A

- AbstractConnectionManager** base class (listing), 639
- AbstractEntityInstance** abstract base class (listing), 640–641
- abstractions**. See *also* field types; list types; site columns; site content types; site definitions
 - basics of, 97
 - forms infrastructure and, 163
- AbstractSystemUtility** base class (listing), 638
- AccessControlList** schema type, 634–636
- Actions** schema type, 731–734
- activation dependency**, 440, 441
- Add Action** page, BDC and, 757–759
- AddContainer** method, 504
- AddFieldFromTemplate.aspx** page, 311
- AddItemToContainer** method, 504
- After** events, 445
- AllItems.aspx** page
 - adding new list items and, 102
 - custom field types, using and, 301
 - field type definition and, 239, 241
 - list provisioning and, 151, 382
- AllowFirstFocus** Boolean property, 277
- AllowPartiallyTrustedCallersAttribute**, 595
- <AllUsersWebPart>** element, 366
- alternate template (TemplateBasedWebPart)**, 530–531
- AlternateTemplate** property, 184–185
- application pages**
 - basics of, 70–72
 - code-behind approach. See code-behind approach (application pages)
 - inline approach. See inline approach (application pages)
 - vs. site pages, 70
- application pools**
 - basics of, 4–6
 - defined, 4
 - iterating through, 17
 - SPApplicationPool class, 6–8
- application.master** page, 78
- ApplicationStepManager**, **InitializeAppInstance** method and, 25–26
- ApplyChanges** method, 521
- ApplyWebTemplate** method, 390
- App_Web_jgyyqxek.0.cs** file, 46
- architecture (SharePoint)**, 1–52
 - ASP.NET hosting environment, 1–3
 - ASP.NET HTTP runtime pipeline. See ASP.NET HTTP runtime pipeline
 - ASP.NET dynamic compilation. See dynamic compilation
 - form-rendering server controls, 163–164
 - IIS, 3–6
 - ISAPIRuntime, 18–19
 - overview, xxiii
 - SharePoint Extensions. See extensions (SharePoint)
- <asp:Content>** tags, 109–110
- ASP.NET**
 - ASP.NET ISAPI extension module, 4
 - build environment, 44
 - dynamic compilation. See dynamic compilation
 - hosting environment, 1–3
- ASP.NET HTTP runtime pipeline, 19–52**
 - basics of, 19–23
 - Http handler factories/handlers/modules, developing custom, 42–52
 - HttpApplication, 23–26
 - IHttpHandlerFactory/IHttpHandler. See IHttpHandlerFactory/IHttpHandler

ASP.NET HTTP runtime pipeline (continued)

- SPHttpApplication, 26–28
- SPRequestModule, 28–30
- SPVirtualPathProvider, 30–32

ASP.NET Web Parts Framework

- AddContainer method, 504
- AddItemToContainer method, 504
- basics of, 487–491
- components, overview of, 496–497
- CreateChildControls method, 502–503
- deploying custom WebPart server control. See WebPart server control, deploying custom
- EditorPart controls, 518
- IWebActionable interface, 515–517
- IWebPart interface, 515
- Part base class, 498–499
- RssUrl property, 502
- SharePoint extensions to, 491–495
- templated web parts. See templated web parts
- WebPart control, 499–502

.aspx page, inline approach and, 73

assemblies

- ASP.NET compilation and, 49–50
- < Assemblies >, Web part solutions and, 614
- defined, 574

<Assembly> child element (<WebPart>), 366

Associations schema type, 734–740

- Association schema type (listing), 735
- Associations schema type (listing), 734
- DestinationEntity schema type (listing), 736
- SourceEntity schema type (listing), 736

attributes

- of < Association > element, 737
- of < DefaultValue > element, 688–689
- of < TypeDescriptor > element, 687–688
- of <Action> element, 732
- of <Form> element, 105–107
- of <List> element, 125–126
- of <ListTemplate> element, 122–123
- of <LobSystem> document element, 642, 646
- of <MethodInstance> element, 724, 728
- of <Parameter> element, 685
- of <SafeControl>, 51
- Association schema type, 735
- of <CodeGroup> element, 590
- of LobSystem schema type, 637. See also specific LobSystem schema type attributes
- of MetadataObject schema type, 629
- of <NamedPermissionSets> element, 589
- of <NavBars>, 346

- of <PermissionSet> element, 589
- supported by <Field> element, 306–307
- supported by <ListInstance> CAML element, 152–153
- of <trustLevel> element, 594

automating Web part solutions, 618–620

B

BaseFieldControl class, 268–280

- AllowFirstFocus Boolean property, 277
- BaseFieldControl class' implementation of IValidator (listing), 269
- CanCacheRenderedFieldValue Boolean property, 277
- CssClass, 270–271
- DisableInputFieldLabel, 271
- DisplayTemplate/DisplayTemplateName, 272–273
- Focus method, 278
- HasPostBackEditData Boolean property, 277–278
- IsFieldValueCached Boolean property, 278
- ItemFieldValue property, 273–274
- IValidator interface (listing), 268
- ListItemFieldValue property, 275
- PreviousControlMode property, 278
- RegisterFieldControl, 279
- RenderFieldForDisplay method, 280
- RenderFieldForInput method, 280
- RenderValidationMessage method, 280
- TabIndex property, 275
- UpdateFieldValueInItem method, 279
- Validate method, 279
- value virtual property, 276–277

BDC. See Business Data Catalog (BDC)

BDC application definition file listings

- basic listings, 655, 659–660, 667–668, 721–723
- for database LOB application, 647
- describing database LOB system, 661–662, 668–669, 674–679, 717–719
- describing LOB application, 649, 663–664, 670
- describing LOB system, 681–682
- for LOB application, 657
- XML file for database LOB application, 656

Before events, 445

BeginExecuteUrlForEntireResponse method, 37

bin directory, security of assemblies deployed to, 579–580

Bin, installing web part server controls in, 505–507**binding**

- item event handlers to list instance, 472–473
- item event handlers to site content type, 470–471
- list event handlers to list content type, 461–464
- list event handlers to list instance, 454–458
- list event handlers to list type, 452–454
- list event handlers to site content type, 458–461
- web event handler to existing site definition configuration, 478–480
- web event handler to new site definition configuration, 480–486
- web event to existing site, 476–478

blank configuration, 360**Body attribute (<NavBars>), 346****build environment (ASP.NET), 44, 46****BuildSteps method, 26****Business Data Catalog (BDC), 627–761. See also****BDC application definition file listings**

- AccessControlList schema type, 634–636
- Actions schema type, 731–734
- Associations schema type. See Associations schema type
- BDC metadata XML schema, 628
- ConnectionManager attribute, 639–640
- Entities schema type. See Entities schema type
- EntityInstance attribute. See EntityInstance attribute on <LobSystem> document element
- FilterDescriptors schema type. See FilterDescriptors schema type
- Identifiers schema type. See Identifiers schema type
- IndividuallySecurableMetadataObject schema type, 630–631
- InstanceCount schema type, 664
- LobSystem schema type, 636–637
- LobSystemInstances schema type. See LobSystemInstances schema type
- LobSystemType schema type, 637
- LocalizedDisplayName schema type, 631–632
- MetadataObject schema type, 629–630
- MethodInstances schema type. See MethodInstances schema type
- Methods schema type. See Methods schema type overview, xxvi
- Parameters schema type. See Parameters schema type
- Properties schema type, 632–633

- SystemUtility attribute, 638–639
- Type attribute, 637
- uploading to BDC. See example of uploading to BDC
- Version attribute, 637

buttons, used by RenderingTemplate control template, 206**C****C# switch construct, 137****cab.ddf file (listing), 623****cabinet files, 599–601****CAML. See Collaborative Application Markup Language (CAML)****CamlQueryRoot type definition (listing), 54****CanCacheRenderedFieldValue Boolean property, 277****CAS. See Code Access Security (CAS)****catalog zones, 495****CatalogIconImageUrl/TitleIconImageUrl properties (listing), 515****CatalogPart base class, defined, 496****CatalogPart server controls, defined, 488****CatalogZone server controls, defined, 488****CatalogZoneBase base class, defined, 496****Central Administration web application, launching, 740****Change Column page, 310****child elements**

- of < Association > element, 735
- of < Configuration > element, 353
- of < data > element, 507
- of < Entity > element, 658
- of < Feature > element, 441
- of < FormTemplates > document element, 114
- < FormUrls > element and, 335
- of < metaData > element, 507
- of < PolicyLevel > element, 589
- of < Project > document element, 346
- of < Solution > document element, 604
- of < View > element, 133
- of < WebPart > document element, 366
- of < webPart > element, 507, 508
- of <item> element, 402–403
- of <LobSystem> document element, 637, 642, 646
- of <Metadata> child element, 126, 159
- of <Receiver> element, 453
- of <Where> element, 55

child elements (continued)

GroupByHeader child element of <View> element, 133–140
of <RenderPattern>, 237–242

ChromeState property, 498

ChromeType property, 498

class hierarchy, SharePoint forms, 163–164

Code Access Security (CAS)

AllowPartiallyTrustedCallersAttribute, 595
benefits of, 573–574
capabilities of, 574–575
declarative security syntax, 576–578
GAC vs. bin, 579–580
imperative security syntax, 578–579
overview, xxvi
permissions, granting. See permissions, granting
security demands, 580–583
security requests, 583–585
SecurityAction enumeration type, 576

code access security settings, 615

code-behind approach (application pages), 83–95

<CustomAction> element adding new menu item (listing), 94
Default2.aspx.cs file content (listing), 85
Default3.aspx.cs file implementation (listing), 95
Default.aspx file content (listings), 84
feature.xml file referencing default2.xml file (listing), 90
implementation of Default2.aspx application page (listing), 93
vs. inline approach, 72, 84
XML document adding menu item to Site Actions menu (listing), 89

code listings

AbstractConnectionManager base class, 639
AbstractEntityInstance abstract base class, 640–641
AbstractSystemUtility base class, 638
AccessControlEntry schema type, 634
AccessControlList schema type, 634
Action schema type, 731
ActionParameter schema type, 733
ActionParameters schema type, 732
ActionPosition schema type, 732
Actions schema type, 731
AdventureWorksDW application definition excerpt, 750–752
Amazon E-Commerce web service application definition excerpt, 752–754

application page showing how to access IIS web sites, 9–10
application pools running in local farms, displaying, 7–8
App_Web_jgyyqkek.O.cs file, 46
Association schema type, 735
Associations schema type, 734
BaseFieldControl class' implementation of IValidator, 269
BDC application definition file, 659–660, 667–668, 721–723
BDC application definition file describing database LOB system, 661–662, 668–669, 674–679, 717–719
BDC application definition file describing web service LOB application, 649, 663–664, 670
BDC application definition file describing web service LOB system, 681–682
BDC application definition file excerpt, 760, 761
BDC application definition file for database LOB application, 647
BDC application definition file for web service LOB application, 657
BDC application definition XML file for database LOB application, 656
BDC application definition file, 655
BdcMetadata.xsd portion specifying target namespace, 628
BdcRightName schema type, 635, 636
BeginExecuteUrlForEntireResponse method, 37–38
binding list event handlers to list instance, 454
cab.ddf file, 623
CatalogIconImageUrl/TitleIconImageUrl properties, 515
CommandType enumeration type, 673
Compilation Source, 43
CompositeField field-rendering server control, 261–262
ConferenceRequestSiteColumns.xml file, 322–324
ConferenceRequestSiteColumns.xml file, feature referencing, 441
ConferenceRequestSiteContentTypes.xml file content, 318–319
ConsumerConnectionPoint class, 540
content of feature.xml file, 121
content of mybatchfile.bat file, 121
content of Program.cs file, 59–62
CssClass property, 270
CssClass property, assigning value of, 271

- custom feature receiver (timer jobs), 437–439
- custom timer jobs, feature to install, 437
- <CustomAction> element adding new menu item, 94
- CustomProvisioningProvider.cs, 385–388
- data description file, 599, 607–608
- DbAuthenticationMode enumeration type, 653–654
- DbConnectionManager and
 - WebServiceConnectionManager classes, 640
- DbEntityInstance and WebServiceEntityInstance classes, 641
- DbSystemUtility and WebServiceSystemUtility classes, 638
- declarative approach to site columns, 312–313
- default blank module, 368
- Default Module, 362–364
- Default2.aspx.cs file content, 85
- Default3.aspx.cs file implementation, 95
- Default.aspx file content, 78–81, 84
- default.aspx page, 42
- default.aspx.cdcab7d2 compiled file, 49
- Default.aspx.cs code-behind file, 46
- defaultdws.aspx page template, 370–371
- DefaultHttpHandler HTTP handler, 35
- DefaultValue schema type, 688
- DefaultValues schema type, 688
- definition of CamlQueryRoot type, 54
- definition of ElementManifestReference(s) type, 66
- definition of FeatureDefinition type, 64
- definition of FieldRefDefinitions type, 57
- definition of LogicalJoinDefinition type, 54
- definition of LogicalTestDefinition type, 55
- definitions of FieldRefDefinition and ValueDefinition types, 56
- DestinationEntity schema type, 736
- Displaying actual field names, 62–63
- DWS module, 369
- EditorPart base class, 518
- EditorParts property of EditorZoneBase base class, 523–524
- element manifest file, 453–454, 470–471, 478–479
- elements.xml file, 459–460, 480, 513, 607
- Entities schema type, 657
- Entity schema type, 658
- FavoriteItemWebPart control, 537
- feature receiver, 472–473, 476–478
- feature referencing element manifest file, 452
- feature stapling, 442–443
- feature with activation dependencies, 441
- FeatureSiteTemplateAssociations.xml file, 443–444
- feature.xml file, 309, 378–379, 428, 459, 461, 607
- feature.xml file content, 68
- feature.xml file referencing default2.xml file, 90
- field type definition for custom field types, 297
- field type definition for SPFieldChoice field type, 231–236
- FieldDescription field-rendering server control, 262–263
- FieldLabel field-rendering server control, 264–265
- FieldMetadata, internal implementation, 257–258
- FieldProperty field-rendering server controls, 263
- FilterDescriptor(s) schema type, 708
- FilterDescriptorType schema type, 708
- form.aspx page, 107–109
- FormComponent, internal implementation, 193–196
- FormField field-rendering server control, 281–282
- FormToolbar form-rendering control, 201–202
- GetApplicationInstance method, internal implementation, 21, 22
- GoogleMenuItem.xml file content, 68
- <GroupByFooter> element, 140–141
- <GroupByHeader> child element of <View> element, 134
- <GroupByHeader> element generated HTML, 135
- HighPriorityBugAlert timer job, 434–436
- HTML generated by <GroupByHeader> element, 135
- HttpAuthenticationMode enumeration type, 645
- <httpModules> section of root web.config file, 23
- HttpWorkerRequest API, 2
- Identifier(s) schema type, 665
- IHttpAsynchronousHandler interface, 36
- IHttpHandler interface, 32
- IHttpHandlerFactory interface, 33
- implementation of Default2.aspx application page, 93
- IndividuallySecurableMetadataObject schema type, 630
- Init method of SPRequestModule, implementation of, 30
- IPersonalizable interface, 562–564
- ISPStsadmCommand interface, 416–417
- ItemFieldValue simplified version of internal implementation, 273

code listings (continued)

- iterating through application pools, 18
- IValidator interface, 268
- IWebActionable interface, 517
- IWebEditable interface, 522–523
- IWebPart interface, 499
- ListFieldIterator server control, 210–211
- ListFormPageTitle server control, internal implementation, 166–167
- ListFormWebPart Web part, 110–112
- ListItem property, internal implementation, 200
- ListProperty, internal implementation, 170–171
- <LobSystem> document element, 628, 629
- LobSystemInstance schema type, 651
- LobSystemInstances schema type, 651
- LobSystemType schema type, 637
- LocalizedDisplayName(s) schema type, 631
- ManagerContentType site content type, 334
- ManagerContentTypeEditTaskForm code-behind class, 331–332
- ManagerContentTypeEditTaskForm.aspx page, 327–329
- manifest.xml file, 610–611, 624
- manifest.xml file structure, 602–603
- Method schema type, 671
- MethodInstance(s) schema type, 723
- MethodInstanceType schema type, 724
- Methods schema type, 671
- ModifyWebConfig custom command class, 417–422
- mybatchfile.bat file, 618, 622
- MyFeatureReceiver class, 425–427
- MyFeatureReceiver feature receiver, 455–457
- MyFieldTypeField custom field type class, 291–292
- MyFieldTypeFieldControl field-rendering control, 293–294
- MyItemEventReceiver item event receiver, 467–469
- MyListInstances.xml file, 376–378
- MyNewFeatureReceiver feature receiver, 461–464
- MyTasksListInstance.xml element manifest, 153
- MyWebEventReceiver web event receiver, 475–476
- new web application, creating and provisioning, 16
- onet.xml file, 379–380, 389–395
- onet.xml file for STS2 site definition, 480–482
- onet.xml file of STS site definition, 339–344
- Ordinal schema type, 733
- parameter metadata objects of GetProducts method, 691–694
- parameter metadata objects of ItemSearch web method, 698–701, 720–721
- Parameter schema type, 685
- ParameterDirection schema type, 685
- Parameters schema type, 684
- portion of onet.xml file of Global site definition, 348–351
- ProcessRequest method of HttpRuntime, 19–20
- ProcessRequest method of ISAPIRuntime, 19
- Properties schema type, 632
- Property schema type, 632
- ProviderConnectionPoint class, 539–540
- <Query> element, 142
- RenderingTemplate server control, 178, 296, 534
- RenderingTemplate server control with ID property value of CompositeField, 283
- RenderingTemplate server control with value of “ListForm”, 116
- RequiredFieldMessage server control, 208
- ReturnTypeDescriptorLevel schema type, 724
- Right schema type, 634
- RSS example, 402–403
- RssHandler HTTP handler, 404–409
- RssReaderEditorPart custom EditorPart control, 518–520
- RssReaderEditorPart3, implementing, 554–556
- RssReaderEditorPart4, 565–571
- RssReaderWebPart Web part, 500–502
- RssReaderWebPart3 control, 522
- RssReaderWebPart4 control, 537–538
- RssReaderWebPart4, implementing, 541–546
- RssReaderWebPart5, implementing, 548–553
- RssReaderWebPart6, implementing, 557–562
- schema.xml file excerpt that defines schema from survey list type, 104
- schema.xml file (portion of), 125, 130–131
- SecurityAction enumeration type, 576–577
- SharePoint object model to display web applications in local farm, 14
- <SharePoint:RenderingTemplate> tags, deploying, 179
- site column definition based on custom field type, 308
- site provisioning provider, 482–485
- site provisioning provider adding entries to web. config, 409–414
- SourceEntity schema type, 736
- SPControl main members, 165
- SPControlMode enumeration, 197

- SPControlTemplateManager, internal implementation, 181
- SPEventPropertiesBase class, 449–450
- SPEventReceiver class, 446
- SPEventReceiverDefinition class, 457–458
- SPFeatureReceiver abstract base class, 424
- SPField Class, 216–217
- SPFieldBoolean, internal implementation, 221–222
- SPFieldChoice class, 229–230
- SPFieldChoice field type, field type definition for, 231–236
- SPFieldMultiChoiceValue field value type, 227–228
- SPForm class, 115
- SPHttpApplication class, internal implementation, 27–28
- SPHttpHandler, internal implementation, 39–41
- SPItem abstract class, 192–193
- SPItemEventProperties type, 465–466
- SPItemEventReceiver class, 464–465
- SPJobDefinition base class, 429–431
- SPListEventProperties type, 447–449
- SPListEventReceiver base class, 446–447
- SPMultiChoiceField class, 223–224
- SPWebConfigModification class, 398–402
- SPWebEventProperties type, 474–475
- SPWebEventReceiver class, 474
- SPWebProvisioningProperties type, 385
- SPWebProvisioningProvider base class, 383–384
- SQL SELECT statement and GetProducts method, 690
- stapling feature, 478
- Tasks1ListInstance.xml file, 152
- Tasks1.xml file, 122
- TemplateBasedControl, internal implementation, 173–177
- TemplateBasedWebPart base class, 525–529
- TemplateBasedWebPart1 Web part, 532–533
- TemplateOverride enumeration type, 186
- type factory, 47–48
- TypeDescriptor schema type, 686
- TypeDescriptors schema type, 689
- view definition portion, 367
- <View> element that represents All Tasks view, 132–133
- <ViewBody> element, 143
- <ViewFields> element, 142
- web event receiver, 485–486
- web page that uses Lists.asmx web service for provisioning, 158
- Web part description file, feature for uploading, 512
- Web part description file for RssReaderWebPart control, 511
- Web part description for TemplateBasedWebPart1, 606
- web.config configuration settings, 469
- web.config file, 35, 594
- web.config file content, 29
- .webpart XML description file example, 508
- WebPartConnection class, 538, 540
- WebPartVerb class, 516–517
- WebServiceEntityInstance classes, 641
- WebTempMyWebTemp.xml file, 375–376, 388–389, 621–622
- WebTemp.xml file, 372–374
- wss_minimaltrust.config policy file, 586–593
- XML document adding menu item to Site Actions menu, 89
- XML file describing custom STSADM operation, 422–423
- <CodeGroup> element, 590**
- Collaborative Application Markup Language (CAML), 53–69**
 - basics of, 53–57
 - creating site content type with, 317
 - to define list types, 119–120
 - definition of CamlQueryRoot type (listing), 54
 - definition of FieldRefDefinitions type (listing), 57
 - definition of LogicalJoinDefinition type (listing), 54
 - definition of LogicalTestDefinition type (listing), 55
 - definitions of FieldRefDefinition and ValueDefinition types (listing), 56
 - feature example, 66–69
 - features, 63–66
 - overview, xxiii
 - queries. See queries (CAML)
 - rendering instructions. See rendering instructions (CAML)
 - schema files, 337
 - using to declaratively implement site columns. See declarative approach to site columns
- columns. See also field types; site columns**
 - Additional Column Settings section, 239
 - Change Column page, 310
 - Create Column page, 299
 - Create Column page Add caption, 238
 - creating based on field type, 238–239, 303
 - list columns, defined, 215–216, 303
 - list that contains column, 300
 - various meanings of, 215–216

command-line switches (STSADM), 420–421

command-line utilities

gacutil, 88

MAKECAB operating system, 599–601, 608–609
STSADM, 610–611, 617, 618–619

CommandType enumeration type (listing), 673

Compilation Source, dynamic compilation and, 43 components

of ASP.NET Web Parts Framework, 496–497
of Web part solutions, 604–605

CompositeField server control, 260–262

ConferenceRequestSiteColumns.xml file, feature referencing, 441

ConferenceRequestSiteColumns.xml file (listing), 322–324

ConferenceRequestSiteContentTypes.xml file content (listing), 318–319

configuration database, copying files into, 617

<Configurations> element (site definition), 353

attributes, 353
blank configuration, 360
child elements supported by, 353
Default configuration, 351, 354
default configuration, 354–359
DWS configuration, 360–362
<File> element, 353
Global site definition base list types, 351
Global site definition, onet.xml file of, 348–350
<Modules> element and, 352–353

ConnectionConsumerAttribute, 548

ConnectionManager attribute on <LobSystem>, 639–640

ConnectionProviderAttribute, 545

connections, web parts supporting. See web part controls, connecting

ConnectionsZone server controls, defined, 488

consumer connection points, 539

ConsumerConnectionPoint class, 540

<ContentType> element, 471

control template (TemplateBasedWebPart), 531

ControlMode property, 196–198

ControlTemplate property, 186–187

copying files

to deploy SharePoint solutions, 597–598
root files to subfolders, 598
into solution store of configuration database, 617
XML files to TEMPLATE folder, 598

crawls (BDC), 660, 730

create.aspx page, 98, 150

CreateChildControls method

basics of, 187–189, 502–503, 520

of FormToolBar, 207

RssReaderEditorPart4 and, 568–571

templates and, 531–532

CreateChildControls, of FormField, 284–285 creating

columns, 238–239, 303

Create Column page, 299

Create Column page Add caption, 238

new lists, 98–101

new web application, creating and provisioning, 16

new web application (listing), 16

site content types, 315–318

.webpart XML description file, 509–510,
511–514

CssClass property, 270–271

custom control development, 525

custom EditorPart controls, 519, 522–524

custom feature receiver, 437–439

custom field types

custom field-rendering controls, implementing,
293–296

field type definition, implementing, 297–301

implementing, 289–293

site column definition based on (listing), 308

using, 298–301

custom list item forms, 159–161

custom timer jobs. See timer jobs, custom

custom verbs, 517

<CustomAction> element adding new menu item (listing), 94

CustomProvisioningProvider.cs, 385–388

CustomTemplate and CustomAlternateTemplate properties, 189–190

D

Data Description File (.ddf), 599–601, 607, 608–609, 623

DbConnectionManager and WebServiceConnectionManager classes (listing), 640

DbEntityInstance and WebServiceEntityInstance classes (listing), 641

DDF files. See Data Description File (.ddf)

declarative approach to site columns, 305–313

basics of, 305–308

custom site columns, implementing and
deploying, 307

feature.xml file (listing), 309

- My Site Column site column, new version (listing), 312–313
 - site column definition based on custom field type (listing), 308
 - declarative creation of .webpart Xml file, 511–514**
 - declarative list provisioning, 152–153**
 - declarative security syntax, 576–578**
 - DeclarativeCatalogPart controls, defined, 488**
 - default blank module, 368**
 - default configuration, 351–352, 353–359**
 - Default module, 362–367**
 - Default Web Site (IIS), 8**
 - Default2.aspx application page implementation (listing), 93**
 - Default2.aspx application page, implementing (listing), 93**
 - Default2.aspx.cs file content (listing), 85, 87**
 - default2.xml file, feature xml file referencing (listing), 90**
 - Default3.aspx.cs file implementation (listing), 95**
 - default_.aspx class, 4, 5, 45**
 - Default.aspx file content (listings), 78–81, 84**
 - default.aspx page**
 - dynamic compilation and, 42
 - template, 493–494
 - default.aspx.cdcb7d2 compiled file (listing), 49**
 - Default.aspx.cs code-behind file, 46**
 - DefaultHttpHandler**
 - basics of, 39
 - custom handling requests with, 34
 - internal implementation of, 35
 - DefaultTemplateName property, 202–203, 204, 205–206**
 - DefaultValue schema type (listing), 688**
 - DefaultValues schema type (listing), 688**
 - demand type (security demands), 581–582**
 - dependency**
 - activation, 440
 - feature, 440–441
 - deploying**
 - custom HTTP handler to SharePoint, 402
 - custom WebPart server controls, 504–505
 - feature receivers, 423–424
 - site definitions, 337–338
 - templated web parts, 534
 - deployment, 597–625**
 - cabinet and DDF files, 599–601
 - overview, xxvi
 - scenarios. *See* site definition solutions; Web part solutions
 - SharePoint solution packages, 597–599
 - solution manifest (manifest.xml), 601–604
 - DeploymentTarget attribute values, 613**
 - derived site content types, 314**
 - Description attribute, 374**
 - DestinationEntity schema type (listing), 736**
 - DisableEventFiring method, 446**
 - DisableInputFieldLabel property, 271**
 - Discussion Forum type, 351**
 - DispForm.aspx page, 103, 104**
 - display modes, switching (Web parts page), 495**
 - display/new/edit list item forms, 104–119**
 - form.aspx page (listing), 107–109
 - ListFormWebPart. *See* ListFormWebPart
 - page template for, 107–110
 - schema.xml file excerpt that defines schema from survey list type (listing), 104
 - DisplayCategory attribute, 374**
 - DisplayPattern, CAML rendering and, 249**
 - DisplaySize property, 260**
 - DisplayTemplate virtual property, 272–273**
 - DisplayTemplateName virtual string property, 272–273**
 - document element (XML), 636**
 - Document Library type, 351**
 - DocumentLibrary value, ID property value of, 118**
 - DWS**
 - configuration, 360–362
 - module, 369–371
 - dynamic compilation, 42–52**
 - App_Web_jgyyqxek.0.cs file, 46
 - code-behind files and, 86
 - Compilation Source, 43
 - default.aspx page (listing), 42
 - default.aspx.cdcb7d2 compiled file (listing), 49
 - Default.aspx.cs code-behind file, 46
 - type factory and, 47–48
- ## E
- EditForm.aspx page, 103, 104**
 - editing. *See also* display/new/edit list item forms**
 - list items, 103–104
 - editor zones, 494–495**
 - EditorialReview page, 749**
 - EditorPart base class, defined, 496**
 - EditorPart controls**
 - ApplyChanges method, 521
 - basics, 518
 - CreateChildControls method, 520

EditorPart controls (continued)

- custom, 519, 522–524
- RssReaderEditorPart control, 518–520
- RssReaderWebPart3 control, 521–524
- SyncChanges method, 521

EditorPart server controls, defined, 488

EditorZone server controls, defined, 488

EditorZoneBase base class, defined, 496

EditPattern, CAML rendering and, 249–255

element manifest file

- item event receiver, 470–471
- list event receiver, 453–454
- web event receiver, 478–479

ElementManifestReference(s) type definition (listing), 66

<ElementManifests> element, 440

elements.xml file, 459–460, 480, 513, 607

EnableEventFiring method, 446

EnsureChildControls method, 532

enterprise search and indexing, 730–731

Entities schema type, 657–664

- BDC application definition file describing database LOB system (listing), 661–662
- BDC application definition file describing web service LOB application, 663–664
- BDC application definition file (listing), 659–660
- Entities schema type (listing), 657
- Entity schema type (listing), 658

EntityInstance attribute on <LobSystem> document element, 640–651

- AbstractEntityInstance abstract base class (listing), 640–641
- attributes of <LobSystem> document element, 646
- BDC application definition file describing web service LOB application (listing), 649
- BDC application definition file for database LOB application (listing), 647
- child elements of <LobSystem> document element, 646
- DbEntityInstance and WebServiceEntityInstance classes (listing), 641
- HttpAuthenticationMode enumeration type (listing), 645

enumeration

- CommandType enumeration type (listing), 673
- enumeration values of TemplateOverride enumeration type, 186
- HttpAuthenticationMode enumeration type (listing), 645

- SecurityAction enumeration type, 576
- SecurityAction enumeration values, 576–577
- SecurityAction.Request enumeration values, 584–585
- SPControlMode enumeration (listing), 197
- TemplateOverride enumeration type (listing), 186

EstimatedInstanceCount attribute, 664

event handlers

- Init method of HTTP modules and, 24
- SPItemEventReceiver, 465
- web event handlers, 474

event receivers

- item event receiver. See item event receiver
- list event receiver. See list event receiver
- overview, xxv, 445–446
- SPEventReceiver class, 446
- web event receiver. See web event receiver

events, of HttpApplication, 24–25

example of uploading to BDC, 740–761

- Add Action page, 757–759
- excerpt from the AdventureWorksDW application definition (listing), 750–752
- excerpt from the Amazon E-Commerce web service application definition (listing), 752–754
- excerpt from the BDC application definition file (listing), 760, 761
- Export Application Definition page, 747–748
- Import Application Definition page, 741–742
- launch SharePoint 3.0 Central Administration web application, 740
- Manage Permissions page, 744–745
- Modify Permissions page, 745–746
- Shared Services Administration, 741
- View Application page, 742–744
- View Entity page, 748–749, 756

ExchangeData method, 538

ExcludeFields property, 211

Execute method, of IExecutionStep object, 34

ExecuteStage method, ApplicationStepManager and, 26

Export Application Definition link, 747, 748

Export Application Definition page, BDC and, 747–748

eXtensible Markup Language (XML)

- < (less than) and > (greater than) characters and, 678, 679
- BDC and, 627
- BDC metadata XML schema, 628
- CAML and features, 63
- document element, 636

- feature.xml, 63
- files. See XML files
- XML element of
 - IndividuallySecurableMetadataObject, 630–631
 - XML schema of CAML, 53–57
- extensions (SharePoint), 6–18**
 - SPApplicationPool, 6–8
 - SPPlisWebSite, 8–11
 - SPWebApplication, 11–14
 - SPWebApplicationBuilder, 14–16
 - SPWebService, 16–18
- External Tools dialog, 391**
- F**
- FavoriteItemWebPart control, 537**
- FavoriteItemWebPart Web part, 546–548**
- feature activation**
 - approaches for, 440
 - feature dependency, 440–441
 - feature referencing
 - ConferenceRequestSiteColumns.xml file, 441
 - feature stapling, 442–443
 - feature with activation dependencies, 441
 - FeatureSiteTemplateAssociations.xml file, 443–444
- feature receivers**
 - binding item event handlers and, 472–473
 - binding web event handlers and, 476–478
 - feature.xml file, 428
 - implementing and deploying, 423–424
 - MyFeatureReceiver class, 425–427
 - SPFeatureReceiver abstract base class, 424
- FeatureActivated method, 462**
- FeatureDefinition type definition (listing), 64**
- features**
 - basics in CAML, 63–66
 - defined, 63
 - example of, 66–69
 - FEATURES folder, 90
 - Site Actions menu, 91–93
- feature.xml file**
 - content, 121
 - listings, 309, 378, 459, 461, 607
- <Field> element**
 - attributes supported by, 306–307
 - of SPFieldChoice field type, 237
- Field event handlers, 447**
- field names (CAML), displaying (listing), 62–63**
- Field property, of FieldMetadata, 259–260**
- field-rendering controls, 256–286**
 - BaseFieldControl. See BaseFieldControl class
 - CompositeField server control, 260–262
 - FieldDescription, 262–263
 - FieldLabel, 264–268
 - FieldMetadata. See FieldMetadata
 - FieldProperty, 263–264
 - FormField. See FormField
- field type definition**
 - <RenderPattern>, 237–242
 - additional columns settings, 239
 - AllItems.aspx page and, 239, 241
 - Create Column page Add caption, 238
 - defined, 215
 - DisplayPattern, 249
 - edit list item page, 240
 - EditPattern, 249–255
 - HeaderPattern type of RenderPattern, 242–249
 - implementing, 297–298
 - NewForm.aspx page, 241
 - NewPattern, 256
 - for SPFieldChoice field type (listing), 231–236
- field types**
 - creating columns based on, 238–239, 303
 - custom, 298–301
 - custom field-rendering control, implementing, 293–296
 - custom, implementing, 289–293
 - field-rendering controls. See field-rendering controls
 - field type class, defined, 215
 - field type definition. See field type definition
 - overview, xxiv
 - SPField. See SPField
 - variable field type property rendering, 286–289
- FieldDescription field-rendering server control, 262–263**
- FieldLabel field-rendering server control, 264–268**
- FieldMetadata, 256–262**
 - DisplaySize property, 260
 - Field property, 259–260
 - FieldMetadata, internal implementation (listing), 257–258
 - FieldName, 259
 - Visible property, 260
- FieldName string property, 259**
- FieldProperty field-rendering server control, 263–264**
- FieldRefDefinition and ValueDefinition types definitions (listing), 56**
- FieldRefDefinitions type definition (listing), 57**

<Fields> element, 129

Fields property, 199

<File> child elements, 353

<File> element, 353

files

- added to root directory (web part solution), 606
- copying into solution store of configuration database, 617
- copying to deploy SharePoint solutions, 597–598
- copying to subfolders (root files), 598
- copying to TEMPLATE folder (XML files), 598
- deployment files (site definition solutions), 620
- dynamically generated, for ASP.NET applications, 48
- image files, deploying to folders, 89

filter descriptors, 712–714

FilterDescriptors schema type

- BDC application definition file describing database LOB system (listing), 717–719
- BDC application definition file (listing), 721–723
- FilterDescriptor schema type (listing), 708
- FilterDescriptors schema type (listing), 708
- FilterDescriptorType schema type (listing), 708
- parameter metadata objects of ItemSearch web method (listing), 720–721

finder method, 729–730

FlushResponse method, 2

Focus method

- of BaseFieldControl class, 278
- of FormField, 286

<Form> element

- attributes of, 105–107
- custom list item forms and, 159, 160
- SetupPath element of, 105

form-rendering server controls, 163–213

- architecture, 163–164
- FormComponent class. See FormComponent class
- FormToolBar, 201–208
- ListFieldIterator, 210–213
- ListFormPageTitle, 166–169
- ListProperty, 169–172
- overview, xxiv
- RequiredFieldMessage, 208–210
- SPControl class, 165
- TemplateBasedControl. See TemplateBasedControl

FormComponent class, 192–201

- ControlMode property, 196–198
- Fields property, 199
- FormComponent, internal implementation (listing), 193–196
- Item property, 199

ItemContext property, 198–199

Itemid property, 199

List property, 200

ListId property, 200

ListItem property, 200–201

SPControlMode enumeration, 197

SPItem abstract class (listing), 192–193

FormField, 280–286

CreateChildControls, 284–285

Focus method, 286

FormField field-rendering server control (listing), 281–282

RenderingTemplate server control with ID property value of CompositeField (listing), 283

Value property, 286

ValueChanged and OnValue Changed members, 283–284

forms

- custom list item forms, 159–161
- form.aspx page (listing), 107–109
- form.aspx page template, 107–110

forms infrastructure. See also form-rendering server controls

- abstractions and, 163
- display/new/edit list item forms. See display/new/edit list item forms
- list items, editing, 103–104
- list items, viewing, 102–103
- new list items, adding, 101–102
- new lists, creating, 98–101

FormToolBar server control, 201–208

<FrameType> child element (<WebPart>), 366

G

GAC (Global Assembly Cache)

- installing web part server controls in, 505–507
- security of assemblies deployed to, 579–580

gacutil command-line utility, 88

GenerateAndCompileAppClassIfNecessary method, 21

Generic List type, 351

GetApplicationInstance method, 20–21, 22

GetContextSite method, 165

GetContextWeb method, 165

GetContextWebApplication method, 165

GetExecuteDelegate method, 3

GetFieldValue, override of, 225–226

GetHelpMessage method, 417

GetTemplateByName static method, 118

ghosted site pages, defined, 30–31

Global Assembly Cache (GAC)

- installing web part server controls in, 505–507
- security of assemblies deployed to, 579–580

Global site definition

- base list types, 351
- configuration, 479
- onet.xml file and, 348–350

global.asax file, 22, 26

Globally Unique IDentifiers (GUIDs)

- CAML XML schema and, 64–65
- guidgen.exe tool, 64–65

GoogleMenuItem.xml file content (listing), 68

graphics

- graphical approach to site columns, 304–305
- graphical creation of .webpart Xml file, 509–510
- graphical list provisioning, 150–151

GroupByFooter element, of <View> element, 140–142

GroupByHeader child element

- of <View> element, 133–140
- HTML generated by, 135

GUIDs (Globally Unique IDentifiers)

- CAML XML schema and, 64–65
- guidgen.exe tool, 64–65

gyyqxek.out file, 48

H

handlers. See specific handlers

HasPostBackEditData Boolean property, 277–278

HeaderPattern type of RenderPattern, 242–249

Hidden Boolean attribute, 374

hierarchy

- containment hierarchy, 638, 639, 640, 641, 687
- levels (BDC), 726

HighPriorityBugAlert timer job, 434–436

hosting ASP.NET, 1–2

HTML (HyperText Markup Language)

- generated by <GroupByHeader> element (listing), 135
- generated by <ViewBody> element, 144–145

HTTP handler, deploying, 402

Http handlers, developing custom, 42–52

HTTP Protocol Stack (http.sys), 6

HttpApplication, 23–26

HTTPEndpointFactory, HttpRuntime and, 20

HttpAuthenticationMode enumeration type (listing), 645

HttpExtensionProc function, 18

<httpHandler> section of web.config, 33, 34–35

Httpmodules, developing custom, 42–52

<httpModules>, of web.config file, 23

http.sys, 6

HttpWorker Request, 2–3

HyperText Markup Language (HTML)

- generated by <GroupByHeader> element (listing), 135
- generated by <ViewBody> element, 144–145

I

ID property values, 118

< Identifier > child element, 665, 666

Identifiers schema type, 665–671

- BDC application definition file describing database LOB system (listing), 668–669
- BDC application definition file describing web service LOB application (listing), 670
- BDC application definition file (listing), 667–668
- Identifier schema type (listing), 665
- Identifiers schema type (listing), 665

IHttpAsyncHandler interface, 36

IHttpHandlerFactory/IHttpHandler, 32–41

- basics of, 32–34
- IHttpHandlerFactory interface, 33
- SPHttpHandler, 34–42

IHttpModule interface, 24

IIS. See Internet Information Services (IIS)

IL DASM tool, 615–616

image files, deploying to folders, 89

ImageUrl attribute, 374

imperative list provisioning, 154–159

imperative security syntax, 578–579

Impersonate property, 576

Import Application Definition page, BDC and, 741–742

ImportCatalogPart controls, defined, 489

INamingContainer interface, 499

indexing, enterprise search and, 730–731

IndividuallySecurableMetadataObject schema type, 630–631

inheritance demands, 583

Init method

- of HTTP module, 24
- of SPRequestModule, 30, 31

InitializeAppInstance method

- ApplicatonStepManager and, 25–26
- HTTP modules and, 24

inline approach (application pages), 73–83

basics of, 73–77

vs. code-behind approach, 72, 84

Default.aspx file content (listings), 78–81

IntelliSense support for CAML, 66–67

Internet Information Services (IIS)

IIS Manager, _vti_bin virtual directory and, 155–157

IIS web sites, accessing, 9–10

SharePoint architecture and, 3–6

IPersonalizable interface, 562–564

ISAPIRuntime, 3, 18–19

IsFieldValueCached Boolean property, 278

ISPStsadmCommand interface, 416–417

IsStatic attribute, 672

Issues List type, 351

item event receiver

binding item event handlers to list instance, 472–473

binding item event handlers to site content type, 470–471

MyItemEventReceiver item event receiver, 467–469

SPItemEventProperties type, 465–466

SPItemEventReceiver class, 464–465

web.config configuration settings, 469

Item property, 199

ItemContext property, 198–199

ItemFieldValue property, 273–274

Itemid property, 199

IWebActionable interface, 515–517

IWebEditable interface, 522–523

IWebPart interface, 499, 515

J

jgyyqkek.cmdline file, 48

jgyyqkek.err file, 48

L

LAYOUTS folder

deploying application pages and, 71

deploying application pages to, 81, 82–83

Line of Business (LOB), 627. See also

EntityInstance attribute on <LobSystem> document element; LobSystemInstances schema type

link demands (security demands), 582

<List> child element, 353–356

list columns, defined, 215–216, 303

<List> element, attributes of, 125–126

list event receiver

binding list event handlers to list content type, 461–464

binding list event handlers to list instance, 454–458

binding list event handlers to list type, 452–454

binding list event handlers to site content type, 458–461

element manifest file, 453–454

feature referencing element manifest file, 452

implementing custom, 450–452

SPEventPropertiesBase, 449–450

SPListEventProperties type, 447–449

SPListEventReceiver base class, 446–447

list item columns, defined, 216

list item forms, custom, 159–161

List property, 200

list provisioning

declarative, 152–153

graphical, 150–151

imperative, 154–159

site definition best practices and, 375–383

list types, 119–150

content of feature.xml file (listing), 121

content of mybatchfile.bat file (listing), 121

custom, 119–120, 160–161

<GroupByFooter>, 140–142

GroupByHeader, 133–140

<GroupByHeader> child element of <View> element (listing), 134

<GroupByHeader> element generated HTML (listing), 135

HTML generated by <ViewBody> element, 144–145

<List> element attributes, 125–126

list provisioning from. See list provisioning

<ListTemplate> element attributes, 122–123

overview, xxiii–xxiv

<Query> element (listing), 142

schema.xml file (portion of) (listing), 125, 130–131

Tasks1.xml file (listing), 122

Type attribute values, 123–124

<View> element that represents All Tasks view (listing), 132–133

<ViewBody> element (listing), 143

<ViewFields> element (listing), 142

ListDir attribute (site definitions), 345

ListFieldIterator server control, 210–213

ListFormPageTitle server control, 166–169

ListFormWebPart, 110–119

- ID property values, 118
- ListFormWebPart Web part (listing), 110–112
- RenderingTemplate server control with value of “ListForm” (listing), 116
- SPForm class (listing), 115

ListId property, 200

listings, code. See **code listings**

<ListInstance> CAML element, attributes supported by, 152–153

ListItem property, 200–201

ListItemFieldValue property, 275

ListItemVersion property, 274

ListProperty server control, 169–172

lists

- custom list item forms, 159–161
- display/new/edit list item forms. See **display/new/edit** list item forms
- list items, editing, 103–104
- list items, viewing, 102–103
- list provisioning. See **list provisioning**
- list types. See **list types**
- new list items, adding, 101–102
- new lists, creating, 98–101

Lists.aspx web service to provision a list (listing), 158

<ListTemplate> element, attributes of, 122–123

LOB. See **Line of Line of Business (LOB)**

LobSystem schema type, 636–637

< LobSystemInstances > element, 651

LobSystemInstances schema type, 651–657

- BDC application definition file for web service LOB application (listing), 657
- BDC application definition XML file for database LOB application (listing), 656
- BDC application definition file (listing), 655
- DbAuthenticationMode enumeration type (listing), 653–654
- LobSystemInstance schema type (listing), 651
- LobSystemInstances schema type (listing), 651

local farm

- displaying application pools running in, 7–8
- displaying names of web applications in, 14

LocalizedDisplayName schema type, 631–632

< LocalizedDisplayNames > child element, 629, 631–632

LogicalJoinDefinition type definition (listing), 54

LogicalTestDefinition type definition (listing), 55

M

main template (TemplateBasedWebPart), 529–530

MAKECAB operating system command-line utility, 599–601, 608–609

Manage Permission(s) link, 744, 748, 761

Manage Permissions page, BDC and, 744–745

ManagerContentType site content type (listing), 334

ManagerContentTypeEditTaskForm code-behind class (listing), 331–332

ManagerContentTypeEditTaskForm.aspx page (listing), 327–329

manifest.xml file (solution manifest), 601, 610–611, 624

menus

- <CustomAction>** element adding new menu item (listing), 94
- custom menu items added to Site Actions menu, 66–67
- GoogleMenuItem.xml file content, 68
- Site Actions menu, 91–93
- Tab menu option, adding, 73–77
- View Response menu option, 102–103, 104
- XML document adding menu item to Site Actions menu (listing), 89

metadata attribute

- ConnectionConsumerAttribute, 548
- ConnectionProviderAttribute, 545

<MetaData> child element, 126, 127, 129

MetadataObject schema type, 629–630

method metadata objects

- < DefaultValue >** elements and, 689
- defined, 672–673, 686, 689, 710, 724
- defining, 674, 680, 682, 685–686
- name conflicts and, 720
- properties supported by, 673
- SQL SELECT statements and, 690, 717
- web methods/database queries and, 682–683

MethodInstances schema type, 723–731

- enterprise search and indexing, 730–731
- finder method and, 729–730
- MethodInstance schema type (listing), 723
- MethodInstances schema type (listing), 723
- MethodInstanceType schema type (listing), 724
- ReturnTypeDescriptorLevel schema type (listing), 724
- scalar method and, 731

methods

- of EditorPart base class, 518
- of IHttpAsyncHandler interface, 36
- of IPersonalizable interface, 562–563
- public, SPApplicationPool class, 7
- public, SPisWebSite, 8–9
- public, SPWebApplication class, 13
- public, SPWebApplicationBuilder class, 15
- public, SPWebService class, 17
- of SPEventReceiverDefinition, 458
- of SPFeatureReceiver abstract base class, 424
- of SPField class, 216–218

Methods schema type, 671–684

- BDC application definition file describing database LOB system (listing), 674–679
- BDC application definition file describing web service LOB system (listing), 681–682
- CommandType enumeration type (listing), 673
- Method schema type (listing), 671
- Methods schema type (listing), 671

Microsoft Office SharePoint Server 2007 (MOSS), 627

minimal security requests, 574

minimum security requests, 584

MobilityRedirect site-scoped feature, 358–359

Modify Permissions page, BDC and, 745–746

ModifyWebConfig custom command class, 417–422

modules

- ASP.NET ISAPI extension module, 4
- Blank module, 368
- Default module, 362–367
- DWS module, 369–371
- Http handler factories/handlers/modules, developing custom, 42–52
- Init method of HTTP modules, 24
- Init method of SPRequestModule, implementation of, 30
- SPRequestModule, 28–30

MOSS (Microsoft Office SharePoint Server) 2007, 627

MoveToContent method (XmlReader), 503

My Site Column site column, new version (listing), 312–313

mybatchfile.bat file

- adding to, 88
- content of, 121
- implementing, 338
- listings, 121, 618, 622

MyCustomColumn.xml file implementation, 308

MyFeatureReceiver class, 425–427

MyFeatureReceiver feature receiver, 455–457

MyFieldTypeField custom field type class (listing), 291–292

MyFieldTypeFieldControl field-rendering control (listing), 293–294

MyItemEventReceiver item event receiver, 467–469

MyListInstances.xml file, 376–378

MyNewFeatureReceiver feature receiver, 461–464

MySurveyList SharePoint list, 101

MyTasksListInstance.xml element manifest (listing), 153

MyWebEventReceiver web event receiver, 475–476

N

Name attribute

- Identifiers schema type and, 666, 670
- of <LobSystem> document element, 645, 651
- naming metadata objects and, 629
- of <NavBarLink>, 347
- of <NavBar>, 346
- of < Identifier > element, 666
- < Parameter > element and, 694

<NamedPermissionSets> element, 589

names

- of <LobSystem> document element attributes, 646
- for custom field types, 220
- determining underlying field names (CAML), 62–63
- displaying names of web applications in local farm, 14
- name conflicts and metadata objects, 720

namespace

- BDC XML schema and, 628
- default XML, 647

<NavBar> element, 346–347

<NavBarLink> element, 347

new list item forms. See display/new/edit list item forms

new.aspx page

- creating new lists and, 99
- list provisioning and, 151

NewForm.aspx page, 101, 104, 241

NewPattern, CAML rendering and, 256

O**object model**

- interacting with, 59
- using, 154

ObjectModel property, 576**onet.xml file, 339–346, 379–380, 389–395****onet.xml file for STS2 site definition, 480–482****optional security requests, 574, 584****<OrderBy> element (CAML), 54, 57****Ordinal schema type (listing), 733****OverrideExecuteUrlPath method, 36****P****PageCatalogPart controls, defined, 488****pages, supported by SharePoint, 70****PageUri method, 165****parameter metadata objects of GetProducts method (listing), 691–694****parameter metadata objects of ItemSearch web method (listing), 698–701, 720–721****Parameters schema type, 684–707**

- DefaultValue schema type (listing), 688
- DefaultValues schema type (listing), 688
- parameter metadata objects of GetProducts method (listing), 691–694
- parameter metadata objects of ItemSearch web method (listing), 698–701
- Parameter schema type (listing), 685
- ParameterDirection schema type (listing), 685
- Parameters schema type (listing), 684
- SQL SELECT statement and GetProducts method (listing), 690
- TypeDescriptor schema type (listing), 686
- TypeDescriptors schema type (listing), 689

Part base class, 498–499**permissions, and security metadata attributes, 576****permissions, granting**

- overview, 585
- web.config file, 594
- wss_minimaltrust.config policy file, 586–593

<PermissionSet> element, 590**Persisted metadata attribute, 400****PersonalizationDictionary, 563****PersonalizationEntry class, 563–564****PipelineRuntime class, 3****PopulateTemplateCollection static method, 183****Prefix attribute (<NavBars>), 346****PreviousControlMode property, 278****process boundaries (application pools), 4****ProcessRequest method**

- of HttpRuntime, 19–20
- of ISAPIRuntime, 3, 19

Program.cs file content (listing), 59–62 properties

- of EditorPart base class, 518
- of entity metadata object of LOB system metadata object, 660
- of field types, 238
- of filter descriptor metadata object, 717
- of IWebPart interface, 500
- of LOB system instance metadata object, 652–653, 654
- of LOB system metadata objects, 643–644
- of a method metadata object, 673
- of PersonalizationEntry class, 563
- public, SPApplicationPool class, 6–7
- public, SPLisWebSite, 8–9
- public, SPWebApplication class, 12
- public, SPWebApplicationBuilder class, 14–15
- public, SPWebService class, 16–17
- of SPEventPropertiesBase, 450
- of SPEventReceiverDefinition, 457
- of SPField class, 216, 218–219
- of SPLItemEventProperties type, 466
- of SPListEventProperties type, 448
- of SPWebEventProperties type, 475
- of TemplateBasedWebPart, 530–531
- of WebPartVerb class, 517

< Properties > child element, 643, 651, 685, 694, 732**Properties schema type, 632–633****< Property > element, 632****property schema for field types, 287****provider connection points, 539****ProviderConnectionPoint class, 539–540****Provision method, 390****ProvisionAssembly attribute, 384****ProvisionClass attribute, 384****ProvisionData attribute, 384****provisioning, list. See list provisioning****public methods**

- SPApplicationPool class, 7
- SPLisWebSite, 8–9
- SPWebApplication class, 13
- SPWebApplicationBuilder class, 15
- SPWebService class, 17

public properties

- SPApplicationPool class, 6–7
- SPLisWebSite class, 8–9
- SPWebApplication class, 12
- SPWebApplicationBuilder class, 14–15
- SPWebService class, 16–17

PublicKeyBlob, 615, 617

PublicKeyBlob property, 593

Q

queries (CAML), 57–63

- content of Program.cs file (listing), 59–62
- Displaying actual field names (listing), 62–63
- examples of, 58

<Query> element (listing), 142

R

ReadToDescendant method (XmlReader), 503

Really Simple Syndication (RSS), 402–403

<Receivers> element, 453

refuse security requests, 575, 584–585

RegisterFieldControl, 279

RegisterGetVaryByCustomStringHandler method, 28

RenderContext property, 191

RenderFieldForDisplay method, 280

RenderFieldForInput method, 280

rendering

- BaseFieldControl, and field rendering, 268
- CAML instructions. See rendering instructions (CAML)
- custom field-rendering control, implementing, 293–296
- field-rendering controls, 256, 261, 262–263, 264–265
- FormField and, 280–283
- RenderingTemplate server control with value of “ListForm”, 283
- variable field type property rendering, 286–289

rendering instructions (CAML)

- basics of, 237, 239–242
- DisplayPattern, 249
- EditPattern, 249–250
- HeaderPattern, 242–243

RenderingTemplate server control (listings), 178, 283, 296, 534

<RenderPattern>

- child elements, 237–242

- child elements of <FieldType> element, 237–238

DisplayPattern and, 249

EditPattern and, 249–250

HeaderPattern and, 242–243

RenderValidationMessage method, 280

RequiredFieldMessage server control, 208–210

ReturnPropertyDescriptorLevel schema type (listing), 724

root files, copying to subfolders, 598

RootWebOnly attribute (<Module>), 353

RSS (Really Simple Syndication), 402–403

RSSHandler

basics of, 403

RssHandler HTTP handler, 404–409

RSSReader

RssReaderEditorPart control, 518–520

RssReaderEditorPart3, implementing, 554–556

RssReaderEditorPart4, 565–571

RssReaderWebPart Web part, 500–502

RssReaderWebPart3 control, 521–524

RssReaderWebPart4 control, 535–536

RssReaderWebPart4, implementing, 541–546

RssReaderWebPart5, implementing, 548–553

RssReaderWebPart6, implementing, 557–562

RssUrl property, 502

Run method, 417, 421–422

runtime class (ASP.NET), 2, 3

Runtime object model, 738, 739

S

<SafeControl>, attributes of, 51

scalar method, 731

schemaLocation attribute, 647

schema.xml file

<Fields> element of, 129

defining schema of list types and, 125

excerpt that defines (listing), 104

portions of (listings), 125, 130–131

Scope attribute (<Feature> element), 479

searching, enterprise, 730–731

security. See also Code Access Security (CAS);

permissions, granting

code access security settings (Web part solutions), 614–616

declarative security syntax, 576–578

demands, 576–578, 580–583

imperative security syntax, 578–579

inheritance demands, 583

- link demands, 582
- permissions, and security metadata
 - attributes, 576
- refuse security requests, 575
- requests, 576–578, 583–585
- SecurityAction enumeration type, 576
- SecurityAction enumeration values, 576–577
- SecurityAction.Request enumeration values, 584–585
- <SecurityClasses> element, 589
- SelectCommandCallback method, 548**
- server control development, 525**
- SetupPath element, of <Form> element, 105**
- Shared Services Administration, BDC and, 741**
- SharePoint**
 - 3.0 Central Administration web application, launching, 740
 - creating site content type with, 315–317
 - object model, web configuration modification via.
 - See web configuration modification
 - SharePoint Timer Service (owstimer.exe), 428
- SharePoint solution packages. See also site definition solutions; Web part solutions**
 - basics of, 70, 597–599
 - cabinet and DDF files and, 599–601
 - solution manifest (manifest.xml), 601–604
- SharePointPermission metadata attributes, 576–578**
- SimpleWorkerRequest, 2**
- Site Actions menu, adding menu item to (listing), 89**
- site columns, 303–313**
 - basics of, 303–304
 - declarative approach. See declarative approach to site columns
 - defined, 215, 303
 - graphical approach, 304–305
 - site column gallery, 220, 304, 309
- site content types**
 - basics of, 313–315
 - ConferenceRequestSiteColumns.xml file (listing), 322–324
 - ConferenceRequestSiteContentTypes.xml file content (listing), 318–319
 - creating, 315–318
 - edit task forms, 326–334
 - element manifest files, feature that references (listing), 324
 - ID, 319–322
 - manage content type page, 317
 - ManagerContentType site content type (listing), 334
 - ManagerContentTypeEditTaskForm code-behind class (listing), 331–332
 - ManagerContentTypeEditTaskForm.aspx page (listing), 327–329
 - overview, xxiv
 - parts of, 319–322
 - settings, 313
 - Site Content Type Gallery, 315
- site definition solutions, 620–625**
 - defined, 620
 - deployment files, 620
 - example of, 620–624
- site definitions**
 - <Modules> element, 383
 - <Configurations> elements. See <Configurations> element (site definition)
 - default blank module, 368
 - default module, 362–367
 - DWS module, 369–371
 - implementing and deploying, 337–338
 - list provisioning, 375–383
 - <NavBar> element, 346–347
 - onet.xml files, 339–346
 - WebTemp.xml file, 372–373
- site pages**
 - vs. application pages, 70
 - ghosted, 30–31
 - unghosted, 31, 51
- site provisioning providers**
 - adding entries to web.config with, 409–414
 - basics, 383
 - CustomProvisioningProvider.cs, 385–388
 - onet.xml file, 389–395
 - SPWebProvisioningProperties type, 385
 - SPWebProvisioningProvider base class, 383–384
 - WebTempMyWebTemp.xml file, 388–389
- <SiteFeatures> child element, 353**
- SiteURLs, 345**
- < Solution > document element child elements, 604**
- solution packages. See SharePoint solution packages**
- SourceEntity schema type (listing), 736**
- SPApplicationPool, 6–8**
- SPAutoSerializingObject, 400**
- SPControl class main members, 165**
- SPControlMode enumeration (listing), 197**
- SPControlTemplateManager, internal implementation (listing), 181**

- SPDailySchedule**, 432
 - SPEventPropertiesBase**, 449–450
 - SPEventReceiver** class, 446
 - SPEventReceiverDefinition** class, 457–458
 - SPFeatureReceiver** abstract base class, 424
 - SPField**, 215–231. *See also* columns
 - different meanings of, 215–216
 - methods of, 217–218
 - properties of, 218–219
 - site column gallery, 220
 - SPFieldBoolean, 220–223
 - SPFieldChoice, 229–231
 - SPFieldMultiChoice, 223–229
 - SPFieldChoice** field type field type definition for (listing), 231–236
 - SPForm** class (listing), 115
 - SPHourlySchedule**, 432
 - SPHttpApplication** class
 - basics of, 26–28
 - SharePoint applications and, 23
 - SPHttpHandler**
 - basics of, 34–42
 - internal implementation of, 39–41
 - SPLisWebSite**, 8–11
 - SPItem** abstract class (listing), 192–193
 - SPItemEventProperties** type, 465–466
 - SPItemEventReceiver** class, 464–465
 - SPJobDefinition** base class, 429–431
 - SPListEventProperties** type, 447–449
 - SPListEventReceiver** base class, 446–447
 - SPMinuteSchedule**, 431–432
 - SPMonthlySchedule**, 432–433
 - SPOneTimeSchedule**, 431
 - SPRequestModule**, 28–30
 - SPVirtualPathProvider**
 - ASP.NET and, 31–32
 - basics of, 30–32
 - SPWebApplication**, 11–14
 - SPWebApplicationBuilder**, 14–16
 - SPWebConfigModification** class, 398–402, 595
 - SPWebConfigModification** objects, 410–411
 - SPWebEventProperties** type, 474–475
 - SPWebEventReceiver** class, 474
 - SPWebPartManager**, 491–492
 - SPWebProvisioningProperties** type, 385
 - SPWebProvisioningProvider** base class, 383–384
 - SPWebService**, 16–18
 - SPWeeklySchedule**, 433
 - SPYearlySchedule**, 433–434
 - SQL SELECT** statement and **GetProducts** method (listing), 690
 - standard verbs**, 517
 - stapling** feature, 442–443, 478
 - StrongNameMembership** membership condition, 593
 - STS2** site definition, **onet.xml** file for, 480–482
 - STSADM** command-line utility
 - custom operation, 422–423
 - extending, 416
 - features and, 612
 - ISPSstadmCommand interface, 416–417
 - ModifyWebConfig custom command class, 417–422
 - solution package files and, 617, 618–619
 - switches, 420–421
 - stsadm.exe**, 90–91
 - Suffix** attribute (<NavBarLink>), 347
 - SurveyList** value, **ID** property value of, 118
 - <Switch>** CAML element
 - of <GroupByFooter>, 142
 - C# switch construct, 137
 - switches**, **command-line (STSADM)**, 420–421
 - SyncChanges** method, 521
 - SystemUtility** attribute, on <LobSystem>, 638–639
- ## T
- Tab** menu option, adding with inline approach, 73–77
 - TabIndex** property, 275
 - Tasks1ListInstance.xml** file (listing), 152
 - Tasks1.xml** file (listing), 122
 - TeamCollab** site-scoped feature, 358–359
 - Template** attribute, 106
 - <Template>** element, 374
 - template files/TEMPLATE** folder, 597–598
 - template** property, 177–183
 - basics of, 177
 - RenderingTemplate server control (listing), 178
 - SPControlTemplateManager, internal implementation (listing), 181
 - TemplateBasedControl**, 172–192
 - AlternateTemplate property, 184–185
 - ControlTemplate property, 186–187
 - CreateChildControls method, 187–189
 - CustomTemplate and CustomAlternateTemplate properties, 189–190
 - internal implementation of, 172–177
 - RenderContext property, 191

template property. See template property
 TemplateOverride property, 185–186

TemplateContainer class, 117–118

TemplateContainerAttribute metadata attribute, 189

templated web parts

- deploying, 534
- server control development, 525
- TemplateBasedWebPart base class, 525–532
- TemplateBasedWebPart1, 532–534

TemplateName property, 113–115

TemplateOverride property, 185–186, 529

templates

- form.aspx page template, 107–110
- Web part description for TemplateBasedWebPart1 (listing), 606

timer jobs, custom

- custom feature receiver, 437–439
- feature to install, 437
- HighPriorityBugAlert timer job, 434–436
- implementing, 428
- SPDailySchedule, 432
- SPHourlySchedule, 432
- SPJobDefinition base class, 429–431
- SPMinuteSchedule, 431–432
- SPMonthlySchedule, 432–433
- SPOneTimeSchedule, 431
- SPWeeklySchedule, 433
- SPYearlySchedule, 433–434

Title attribute (site definitions), 344, 374

<Title> child element (<WebPart>), 366

TitleIconImageUrl properties (listing), 515

toolbars

- of document library's display list item, 206–207
- FormToolbar form-rendering control, 201–202

toolbox, adding server controls to (Visual Studio), 73–77

trust levels, 506–507

<trustLevel> element, 594

Type attribute

- of <Form> element, 105
- <LobSystem> and, 637
- <Property> element and, 633
- values of, 123–124

type factory (listing), 47–48

<TypeDescriptor > child element, 696, 697, 701, 702, 703–706

TypeDescriptor schema type (listing), 686

TypeDescriptors schema type (listing), 689

TypeName attribute, 665, 704, 706, 707

<TypeName> child element (<WebPart>), 366

U

unghosted site pages

- compilation and, 51
- defined, 31

UnionCodeGroup code groups, 591–593

UnsafeSaveOnGet property, 576

UpdateFieldValueInItem method, 279

URL attribute, 105

Url attribute

- of <Module>, 352
- of <NavBarLink>, 347

UseLegacyForm attribute, 107

user control development, 525

utilities

- gacutil command-line utility, 88
- MAKECAB operating system command-line utility, 599–601, 608–609
- STSADM command-line utility, 610–611, 617, 618–619

V

Validate method, 279

Value property

- of BaseFieldControl class, 276–277
- of FormField, 286

ValueChanged and OnValue Changed members, 283–284

values

- BdcRightName schema type, 635
- ID property values, 118
- of Name attributes on < Identifier > elements, 670
- of Type attribute, 123–124

variable field type properties

- CAML rendering and, 242
- defined, 238
- variable field type property editor, 287–288

verbs

- custom, 517
- defined, 515

Version attribute on the <LobSystem>, 637

View Application page, BDC and, 742–744

<View> element

- <ViewBody> child element of, 143
- <ViewFields> child element and, 142

<View> element (continued)

<View> element (continued)

- child elements of, 133, 134
- Default module and, 363, 366–367
- GroupByFooter element of, 140–142
- GroupByHeader child element of, 133–140
- that represents All Tasks view (listing), 132–133
- View Entity page, BDC and, 748–749, 756**
- View Response menu option, 102–103, 104**
- <ViewBody> element (listing), 143**
- <ViewBody> element, output HTML generated by (listing), 144–145**
- <ViewFields> element (listing), 142**
- viewing list items, 102–103**
- VirtualPathProvider, 31**
- Visible property, 260**
- Visual Studio Toolbox, adding server controls to, 73–77**
- Vote (Survey) type, 351**
- _vti_bin virtual directory, 155–157**

W

web applications. See **SPWebApplication**

web configuration modification

- adding entries to web.config with site provisioning provider, 409–414
- basics, 397–398
- deploying custom HTTP handler to SharePoint, 402
- RSS, 402–403
- RssHandler, 403
- RssHandler HTTP handler, 404–409
- SPWebConfigModification class, 398–402

web event receiver

- binding web event handler to existing site definition configuration, 478–480
- binding web event handler to new site definition configuration, 480–486
- binding web event to existing site, 476–478
- MyWebEventReceiver web event receiver, 475–476
- SPWebEventProperties type, 474–475
- SPWebEventReceiver class, 474

web part controls, connecting

- ConsumerConnectionPoint class, 540
- FavoriteItemWebPart control, 537
- FavoriteItemWebPart Web part, 546–548
- IPersonalizable interface, 562–564
- ProviderConnectionPoint class, 539–540

- RssReaderEditorPart3, implementing, 554–556
- RssReaderEditorPart4, 565–571
- RssReaderWebPart4 control, 535–536
- RssReaderWebPart4, implementing, 541–546
- RssReaderWebPart5, implementing, 548–553
- RssReaderWebPart6, implementing, 557–562
- WebPartConnection class, 538, 540

Web part description for TemplateBasedWebPart1 (listing), 606

Web Part Gallery

- adding .webpart description files to, 512
- defined, 505

Web part solutions, 604–620

- < Assemblies > and, 614
- automating, 618–620
- code access security settings and, 614–616
- components of, 604–605
- copying file into solution store of configuration database, 617
- defined, 604
- deploying to front-end web servers, 617
- example of, 605–613

Web parts, defined, 491

Web Parts Framework, ASP.NET. See ASP.NET Web Parts Framework

web parts, templated. See **templated web parts**

Web public property (SPWeb type), 532

web reference, adding, 154–155

web servers, deploying, 617

web sites. See *also* **SPLisWebSite**

- IIS web sites, accessing, 9–10
- for information on BDC namespace, 628

web.config file

- adding entries to, 398, 409–414, 598
- adding <httpHandlers> to, 34–35
- configuration settings, 469
- <httpHandler> section of, 33
- <httpModules> of, 23
- permissions and, 594
- SPRequestModule and, 28–29

<WebFeatures> child element, 353

<WebPart> document element, 366

WebPart server control, deploying custom

- Bin vs. GAC, 505–507
- procedure for, 504–505
- .webpart XML description file. See **.webpart XML description file**

WebPart server controls

- defined, 487
- developing, 495

.webpart XML description file

- declarative approach to creating, 511–514
- example, 508
- graphical approach to creating, 509–510
- overview, 507–508

WebPartManager server control, defined, 491**WebPartPage base class, defined, 495–496****WebPartVerb class, 516–517****WebPartZone server controls**

- basics of, 492–494
- defined, 488

WebPartZoneBase base class, defined, 496**WebPartZoneId attribute, 106****WebServiceEntityInstance classes (listing), 641****WebTempMyWebTemp.xml file (listings), 375–376, 388–389, 621–622****WebTemp*.xml file, 372–373****WebZone controls, defined, 487****<Where> element (CAML), 54, 57****wildcard filters**

- defined, 643
- descriptor metadata objects, 712

using, 711–712

WildcardCharacter property, 643**WildcardCharacterEscapeFormat property, 643****worker request class (ASP.NET), 1–2. See also HttpWorker Request****.wsp extension (cabinet files), 599****WSS web applications, 506****WSS_Minimal trust level, 575, 580****wss_minimaltrust.config policy file, 586–593**

X

XML. See eXtensible Markup Language (XML)**XML files. See also schema.xml file**

- copying to TEMPLATE folder, 598
- file describing custom STSADM operation, 422–423

XML Schema markup language, CAML and, 53–57, 63**<XmlDocuments> child element, 471****XmlReader, 503**