

Index

COPYRIGHTED MATERIAL

Index

SYMBOLS AND NUMERICS

- <> (angle brackets), 63
- ~ (tilde), 68
- 3D structures, realty-related tools, 339–343

A

- ActivePerl distribution, 60
- `addControl()` method, 43, 106–107
- `addGraph()` method, 203
- `addListener()` method, 49
- `addMarker()` method, 115, 120, 147
- `addOverlay()` method, 44, 46, 111, 125
- `addPoint()` method, 233–234
- addresses
 - adding to information windows, 122
 - defining locations with, 4–5
 - defining locations without, 5
 - geocoding
 - `geocoder.us` service, 97
 - global information, 97–101
 - latitude/longitude information, 96–97
 - overview, 95
 - U.S. information, 96–97
 - postal code
 - community sites, 209
 - discussed, 5
 - search results, 28
 - street
 - discussed, 5
 - routes by, 118
- aerial photography, 4
- airport data, Google Earth application, 300
- AJAX (Asynchronous JavaScript and XML), 82, 151–152
- alternate words, spelling system, 60
- alternative routes, 275
- altitude
 - Google Earth application, 301–302
 - `LookAt` element, 330
 - anchor points, `TLabel` class, 229–230
 - `anchorLatLng` property, 229
 - `anchorPoint` property, 230
 - angle brackets (<>), 63
 - A9 Maps mapping service, 349
 - API (Application Programming Interface)
 - browser compatibility, 37
 - elements and styles, 39
 - Google Maps
 - browser compatibility example, 105
 - documentation, 346
 - groups, 346
 - help options, 346
 - resources, 345–346
 - web site, 346
 - Google Web
 - downloading, 53–54
 - FAQ section, 55
 - `Filter` parameter, 56
 - help options, 346
 - `Input Encoding` parameter, 56
 - `Key` parameter, 55
 - language comparison samples, 60–63
 - `Language Restrict` parameter, 56
 - `Max results` parameter, 55
 - `Output Encoding` parameter, 56
 - `Query string` parameter, 55
 - remote procedure call, 61–62
 - `Restrict` parameter, 56
 - `SafeSearch` parameter, 56
 - searches, 55–59
 - `Start index` parameter, 55
 - web site, 54
 - Javascript language, 40
 - key registration, 36
 - limits and usage, 36
 - query limitations, 55
 - VML (Vector Markup Language), 38–39
 - XHTML (Extensible HTML), 37–38
 - XML (Extensible Markup Language), 39

API Key, Flickr photos, 279–280
 APIs_Reference.html file, 54
 application initialization, front-end interface, 264–265
 Application Programming Interface. *See* API
 arrow buttons, map movement, 15
 arrow pointers, 230–231
 Asynchronous JavaScript and XML (AJAX), 82, 151–152
 attributes, tag, 73
 auto-update function, Google Earth application, 318

B

backend database interface
 community sites, 211–213
 database structure, 266
 message response, 267
 operations, 265
 routes
 alternative, 275
 deleting, 269–270
 distance calculation, 271–272
 listing existing, 267–268
 obtaining single, 270–271
 saving, 268–269
 simple wrapper example, 266–267
 standardized message, 265
 banks, custom created icons, 213
 bar graphs, statistical data, 189–192
 bind() method, 50
 Blackbird spotter, trackers and locators, 139–140, 142
 boolean values, searches, 57
 bounding boxes
 adding to maps, 116–117
 GBound class, 52
 boundingbox() method, 117
 Brooklyn Bridge map view, 8–9, 26
 browser compatibility
 API (Application Programming Interface), 37
 Google Maps example, 105

buildings, Google Earth application, 304
 business, searches by, 29

C

cachedSize element, 58
 camera views, traffic solutions, 135
 car-based route finders, 136
 case-sensitivity, searches, 101
 center points, dynamic generated maps, 173
 centerAndZoom() method, 44, 109, 186
 centerAtLatLng() method, 43, 109
 CGI scripts, XML generation through, 160–161
 circles, statistical data demonstration, 192–193
 city lists, loading, dynamic generated maps, 169–171
 classes
 GBounds, 52
 GEvent
 methods, 49–50
 properties, 121
 GIcon
 properties, 48–49
 uses for, 201
 GMap
 controls, adding and removing, 43
 event configuration, 45–46
 information windows, adding, 44–45
 map option configuration, 43
 new object creation, 42
 overlays, adding and removing, 44
 status information, 43–44
 GMarker
 event triggers, 47
 icon creation, 202
 information windows, adding, 47
 points, highlighting, 46
 properties, 111
 GPoint, 51
 GPolyline
 points, 47–48
 properties, 116
 GSize, 51–52

- GXml, 50
- GxmlHttp, 50
- GXslt, 51
- TLabel
 - addpoint() method, 233–234
 - anchor points, 229–230
 - anchorLatLng property, 229
 - anchorPoint property, 230
 - arrow pointers, 230–231
 - content property, 230
 - global variables, 232
 - HTML interface, 236
 - id property, 229
 - lastpoint variable, 234
 - markerOffset property, 230
 - percentOpacity property, 230
 - pictures, embedding as labels, 231–232
 - points, showing and hiding, 235
 - setMapType() method, 233
 - text example of, 228
- TPhoto
 - overlays, 240–242
 - reference points, 239
- clearListeners() method, 49
- clearOverlays() method, 44, 46
- click and drag method, moving within maps, 298
- click events, 46, 123
- click locations, element identification
 - area detail, 247–248
 - inbounds() method, 246
 - map location, resetting, 246–247
 - object opacity, resetting, 247
 - registering objects on map, 244–245
 - setTimeout() method, 247
- closeInfoWindow() method, 45
- closing tags, 73
- cloud cover obstruction, satellite images, 25
- code. *See* listings
- comma-separated values (CSV), 66, 68–69
- community sites
 - attractions, custom created icons for, 213–215
 - backend database interface, 211–213
 - country fragments, 209
 - data, creating and storing, 209–211
- entities
 - global objects, 215–216
 - HTML example, 215
 - information windows, 222
 - markers, adding, 218–219
 - markers, loading, 219–220
 - markers, removing, 218
 - movemap() method, 217
 - showentitylist() method, 216
 - types, loading, 217
 - map, recentering, 220–221
 - markers, highlighted points, 207–208
 - page structure, 221
 - postal code addresses, 209
 - town fragments, 209
- competitor resources, 349
- connections, SQL databases
 - with Perl language, 85
 - with PHP language, 86–87
- content property, 230
- controls
 - addControl() method, 106–107
 - GLargeMapControl, 42
 - GMapTypeControl, 42
 - GSmallMapControl, 42
 - GSmallZoomControl, 42
 - hiding, 107
 - markers
 - adding from points, 113
 - adding to multiple maps, 125–128
 - addmarker() method, 115, 120, 147
 - alternatives to, 227–228
 - creating during startup, 114–115
 - highlighting, 31, 207–208
 - how to use, 30–32
 - lines, adding, 115–116
 - loading for city lists, 171
 - multiple, 112–115
 - pop-ups, 31–32
 - routes between two points, 32
 - single, 111–112
 - uses for, 41
 - removing, 43
- copyright data, Google Local interface, 15

country fragments, community sites, 209
 CPAN web site, 78
 crime statistics, Google Earth application, 298
 CSV (comma-separated values), 66, 68–69
 current map view, Google Local interface, 15
 current route, clearing, 256
 cursor key method, moving within maps, 298
 custom overlay images, 22

D

data set plots, statistical data, 194–196
 data source name (DSN), 85
 Database Drivers (DBDs), 85
 database-driven content, dynamic generated
 maps, 177
 databases
 backend interface
 alternative routes, 275
 database structure, 266
 deleting routes, 269–270
 distance calculation, routes, 271–272
 existing routes, listing, 267–268
 message response, 267
 operations, 265
 saving routes, 268–269
 simple wrapper example, 266–267
 single routes, 270–271
 standardized message, 265
 front-end interface
 application initialization, 264–265
 current routes, clearing, 256
 deleting routes, 257–258
 discussed, 251
 four-panel layout, 252–253
 global variables, 254
 HTML wrapper, 252
 last point, clearing, 256
 list of routes, loading, 259–261
 markers, adding, 264
 new route initialization, 256–257
 recentering and zooming map, 265
 recording process, disabling, 255–256

 recording process, enabling, 254–255
 saving routes, 258–259
 single routes, loading, 261–264
 open source, 83
 populating, 158–159
 source data, generating XML from, 159–160
 SQL
 connections, 85–87
 creating, 83–84
 data extraction, 89–92
 populating, 87–89
 table structure creation, 157–159
 Data::Dumper object, 90
 date taken, Flickr photos, 286
 DBDs (Database Drivers), 85
 decimal, converting degrees to, 52
 deleting routes
 backend database interface, 269–270
 front-end interface, 257–258
 delimited files
 reading, 68–69
 writing, 69–70
 delroute command, 257
 developer kit, Google Web, 53–54
 direct routes, 6
 directoryCategories element, 57
 directoryCategory element, 58
 directoryTitle element, 58
 disableDragging() method, 43
 disableInfoWindow() method, 43
 distance calculation, routes, 271–272
 DISTINCT statement, 212
 <div> tag, 105, 129
 do() method, 86
 Document tag, 306
 documentation, Google Maps API, 346
 documentFiltering element, 57
 DOM (Document Object Model)
 DOM method, 78
 within Perl language, 77
 XML documents, 79–80
 dotnet/ directory, 54
 double-clicking, map movement, 15

- downloading Google Web API, 53–54
 - dragging mouse, map movement, 15
 - `draggingEnabled()` method, 43
 - Dreamhost web site, 36
 - DSN (data source name), 85
 - dynamic generated maps
 - database-driven content, 177
 - entity types, 177
 - JavaScript language
 - center points, 173
 - city lists, loading, 169–171
 - global variables, 169
 - information window display, 171
 - initialization, 173–174
 - interactive operations, 168
 - markers, adding, 172
 - KML (Keyhole Markup Language), 315–316
 - properties, 148–150
 - restaurant additions, 176–177
 - XML generated, 174–176
 - markers, removing, 218
 - `movemap()` method, 217
 - dynamic generated maps, 177
 - markers, loading, 219–220
 - `showentitylist()` method, 216
 - `entitylist()` method, 212
 - `entitymarker` object, 216
 - errors, in searches, 30
 - `estimatedTotalResultsCount` element, 57
 - `estimateIsExact` element, 57
 - events
 - click, 46, 123
 - configuring, 124
 - example of, 41
 - `GEvent` class
 - methods, 49–50
 - properties, 121
 - `infowindowclosed`, 46
 - `infowindowopen`, 46
 - map movement, monitoring, 123–125
 - `maptypechanged`, 46
 - `Move`, 45
 - `Moveend`, 46
 - `Movestart`, 46
 - `removeoverlay`, 46
 - uses for, 41
 - zoom, 46, 123
 - `exec()` method, 87
 - Extensible HTML (XHTML), 37–38
 - Extensible Markup Language. *See* XML
 - Extensible Stylesheet Language. *See* XSL
 - extension tools resources, 348–349
 - extraction, SQL database data, 89–92
- E**
- east location element, 339
 - ECMAScript, JavaScript language, 40
 - element identification, click locations
 - area detail, 247–248
 - `inbounds()` method, 246
 - map location, resetting, 246–247
 - object opacity, resetting, 247
 - registering objects on map, 244–245
 - `setTimeout()` method, 247
 - elements and styles, API, 39
 - `enableDragging()` method, 43
 - `enableInfoWindow()` method, 43
 - `endIndex` element, 57
 - entities
 - community sites
 - global objects, 215–216
 - HTML example, 215
 - information windows, 222
 - markers, adding, 218–219
- F**
- FAQ section, Google Web API, 55
 - files
 - delimited
 - reading, 68–69
 - writing, 69–70

Continued

- files (*continued*)
 - fixed-width files
 - reading, 70–72
 - writing, 72
 - flat-text, 66
 - Google Web developer kit, 54
 - Filter parameter, 56
 - Firefox web browsers, system requirements, 13
 - Fitzgerald, Michael (*XSL Essentials*), 164
 - fixed-width files
 - reading, 70–72
 - writing, 72
 - flat-text files, 66
 - Flickr photos
 - API key, 279–280
 - date taken, 286
 - descriptions, 286
 - geographic data additions, 280–281
 - getphotoinfo() method, 283
 - individual photo data, retrieving, 284–285
 - parsed data, 283–284, 287–288
 - proxy service, 281–282
 - searching, 282–284
 - titles, 286
 - XSL layout, 286–287
 - floating-point values, 83
 - Folder tag, 306
 - format types, stored information, 65
 - formatting information windows, 161–162
 - front-end database interface
 - application initialization, 264–265
 - discussed, 251
 - four-panel layout, 252–253
 - global variables, 254
 - HTML wrapper, 252
 - routes
 - current route, clearing, 256
 - deleting, 257–258
 - last point, clearing, 256
 - loading list of, 259–261
 - loading single, 261–264
 - markers, adding, 264
 - new route initialization, 256–257
 - recentering and zooming map, 265
 - recording process, disabling, 255–256
 - recording process, enabling, 254–255
 - saving, 258–259
 - functions. *See* methods
- ## G
- GBounds class, 52
 - GBrowserIsCompatible() method, 37
 - general information resources, 347
 - Geocode America web site, 348
 - Geocoder web site, 348
 - geocoding
 - address specific information, 101
 - geocoder.us service, 97
 - global information
 - discussed, 97
 - GLatLng element, 99–100
 - scrapping, 98–99
 - latitude/longitude information, 96–97
 - overview, 95
 - resources, 347–348
 - U.S. information, 96–97
 - geographic data, adding to Flickr photos, 280–281
 - geographical locations
 - defining with addresses, 4–5
 - defining without addresses, 5
 - direct routes, 6
 - east element, 339
 - finding, 128–129
 - mapping, 3–4
 - mental map concepts, 3–4
 - monitoring, 128–131
 - movement between, 6
 - north element, 339
 - south element, 339
 - statistical data as, 9–10
 - west element, 339
 - geometry types, Google Earth application, 307
 - GET request, 169
 - getAttribute() method, 154

- getAttributeNode() method, 79
- getBoundsLatLng() method, 43
- getCenterLatLng() method, 43
- getCurrentMapType() method, 44
- getElementsByTagName() method, 79
- getMapTypes() method, 44
- getphotoinfo() method, 284
- getroute() method, 272
- getSpanLatLng() method, 43
- getZoomLevel() method, 43
- GEvent class
 - methods, 49–50
 - properties, 121
- GIcon class
 - properties, 48–49
 - uses for, 201
- GLargeMapControl control type, 42
- GLatLng element, 99–100
- global information, geocoding
 - address specific information, 101
 - discussed, 97
 - GLatLng element, 99–100
 - scrapping, 98–99
- global objects, community site entities, 215–216
- global variables
 - dynamic generated maps, 169
 - front-end interface, 254
 - TLabel class, 232
- GMap class
 - controls, adding and removing, 43
 - event configuration, 45–46
 - information windows, adding, 44–45
 - map option configuration, 43
 - new object creation, 42
 - overlays, adding and removing, 44
 - status information, 43–44
- gMap it! tool, 348
- GMapTypeControl control type, 42
- GMarker class
 - discussed, 111
 - event triggers, 47
 - icon creation, 202
 - information windows, adding, 47
 - points, highlighting, 46
- Google Earth application
 - airport data, 300
 - altitude, 301–302
 - auto-update function, 318
 - basic interface, 294–295
 - buildings, 304
 - crime statistics, 298
 - functionality, 295–296
 - geometry types, 307
 - Google Earth Enterprise application, 294
 - Google Earth Plus application, 294
 - Google Earth Pro application, 294
 - icons, 321–324
 - KML (Keyhole Markup Language)
 - data generation, 310–313
 - discussed, 294
 - Document tag, 306
 - documents, highlighting, 307
 - dynamic generated maps, 315–316
 - Folder tag, 306
 - network resources, 317–318
 - photos, 331–332
 - properties, 294, 304–305
 - self-reloading files, 320–321
 - structure of, 304–305
 - tags, exporting, 305–306
 - zipped version, 305, 336
 - open-air feel, 304
 - overlays, 298, 307
 - overview, 293
 - paths, 300–301
 - photos
 - as placemarks, 327
 - view, 330
 - points, creating, 334
 - points of interest, 300
 - realty-related tools
 - overlays, 337–339
 - 3D structures, 339–343
 - refresh options, 318–320

Continued

- Google Earth application (*continued*)
 - routes, 300–301
 - satellite images
 - core functionality, 295–296
 - interstitial images, 296
 - map, moving within, 298
 - scaled icons, 329
 - shared files, 305–306
 - terrain, 301–302
 - train station data, 300
 - web site, 345
 - Google Local interface
 - copyright data, 15
 - current map view, 15
 - hybrid views, 27
 - Link to this page option, 15
 - Maps view, 25–26
 - navigation and zoom controls, 15
 - satellite imagery, 26
 - scale information, 15
 - search field, 14
 - view controls, 15
 - Google Maps
 - API
 - browser compatibility example, 105
 - documentation, 346
 - groups, 346
 - help options, 346
 - resources, 345–346
 - web site, 346
 - installation example, 103–104
 - web site, 14
 - Google Maps China web site, 345
 - Google Maps Japan web site, 345
 - Google Maps Mania web site, 347
 - Google Maps UK web site, 345
 - Google Maps USA web site, 345
 - Google Moon web site, 345
 - Google Sightseeing web site, 347
 - Google Web API
 - downloading, 53–54
 - FAQ section, 55
 - Filter parameter, 56
 - help options, 346
 - Input Encoding parameter, 56
 - Key parameter, 55
 - language comparison samples, 60–63
 - Language Restrict parameter, 56
 - Max results parameter, 55
 - Output Encoding parameter, 56
 - Query string parameter, 55
 - remote procedure call, 61–62
 - Restrict parameter, 56
 - SafeSearch parameter, 56
 - searches
 - conducting, 55–56
 - limitations, 58–59
 - results, 56–58
 - Start index parameter, 55
 - web site, 54
 - Google Web developer kit, 53–54
 - GoogleAPIDemo.java file, 54
 - googleapi.jar file, 54
 - GoogleSearch.wsdl file, 54
 - GPoint class, 51
 - GPolyline class
 - points, 47–48
 - properties, 116
 - GPS navigation systems, traffic solutions, 136
 - Greenwich map view, 19–20, 22–23
 - grid references, 5
 - groups, Google Maps API, 346
 - GSize class, 51–52
 - GSmallMapControl control type, 42
 - GSmallZoomControl control type, 42
 - GXml class, 50
 - GxmlHttp class, 50
 - GXslt class, 51
- ## H
- heading, LookAt element, 330
 - help options
 - Google Maps API, 14, 346
 - Google Web API, 346
 - hide links, 107–108

- hidecontrol() method, 107
 - hidepoints() method, 235
 - highlighting
 - KML documents, 307
 - markers, 31, 207–208
 - points, 46
 - horizontal coordinates, GPoint class, 51
 - horizontal grid references, 5
 - hostName element, 58
 - hot maps, 133
 - <href> tag, 321
 - HTML components
 - additional points, adding, 145–146
 - entity example, 215
 - front-end interface, 252
 - map creation process, 148–151
 - TLabel class, 236
 - Hubble Space Telescope tracker, 139–141
 - Hurricane Katrina, 10
 - hurricanes, trackers and locators, 137–138
 - hybrid views, 27
- I**
- iconAnchor property, GIcon class, 48
 - icons
 - for community sites, 213–215
 - Google Earth application, 321–324
 - non-scaled/scaled, 329
 - for statistical data
 - placing on map, 202
 - shadow overlays, 198–200
 - size, 201, 203–204
 - style selection, 197
 - iconSize property, GIcon class, 48
 - id property, 229
 - Image property, GIcon class, 48
 - imageMap property, GIcon class, 49
 - images
 - overlays, 240–242
 - reference points, 239
 - inbounds() method, 246
 - indexes, searches, 57
 - indexOf() method, 288
 - information windows
 - adding to map, 44–45, 47
 - addresses, adding, 122
 - basic window example, 162
 - community site entities, 222
 - dynamic generated maps, 171
 - formatting, 161–162
 - links, adding, 122
 - openInfoWindow() method, 122, 161
 - openInfoWindowHtml() methods, 122
 - openInfoWindowXslt() method, 122
 - opening, 120–122
 - size limitations, 122
 - titles in, 120
 - uses for, 41
 - XML created, 163–164
 - XSL files, 165
 - XSLT created, 165–167
 - infoWindowAnchor property, GIcon class, 48
 - infoWindowClose event, 46
 - infoWindowEnabled() method, 43
 - infoWindowOpen event, 46
 - initialization, dynamic generated maps, 173–174
 - Input Encoding parameter, 56
 - INSERT statement, 84
 - int() method, 71
 - interactive operations, dynamic generated maps, 168
 - interface, Google Local
 - copyright data, 15
 - current map view, 15
 - hybrid views, 27
 - Link to this page option, 15
 - Maps view, 25–26
 - navigation and zoom controls, 15
 - satellite imagery, 26
 - scale information, 15
 - search field, 14
 - view controls, 15
 - International Space Station (ISS), 139–140
 - Internet Explorer web browser, 13
 - interstitial images, satellite images, 296

J

- Java language
 - code example, 63
 - parsing XML with, 79–82
- javadoc/ directory, 54
- JavaScript language
 - dynamic generated maps
 - center points, 173
 - city lists, loading, 169–171
 - global variables, 169
 - information window display, 171
 - initialization, 173–174
 - markers, adding, 172
 - ECMAScript, 40
- join statement, 69
- joystick controls, moving within maps, 298

K

- Key parameter, 55
- key registration, API, 36
- KML (Keyhole Markup Language)
 - data generation, 310–313
 - discussed, 294
 - Document tag, 306
 - documents, highlighting, 307
 - dynamic generated maps, 315–316
 - Folder tag, 306
 - network resources, 317–318
 - photos, 331–332
 - properties, 294, 304–305
 - self-reloading files, 320–321
 - structure of, 304–305
 - tags, exporting, 305–306
 - zipped version, 305, 336

L

- labels
 - adding and removing labels, 229
 - addpoint() method, 233–234
 - anchor points, 229–230
 - anchorLatLng property, 229
 - anchorPoint property, 230
 - arrow pointers, adding, 230–231
 - content property, 230
 - global variables, 232
 - HTML interface, 236
 - id property, 229
 - lastpoint variable, 234
 - markerOffset property, 230
 - percentOpacity property, 230
 - pictures, embedding as labels, 231–232
 - points, showing and hiding, 235
 - setMapType() method, 233
 - text example of, 228
- lack of information in searches, 30
- language comparison samples
 - Java language, 63
 - Perl language
 - ActivePerl distribution, 60
 - PPM (Perl Package Manager), 60
 - remote procedure call, 62
 - simple Perl code example, 61
- Language Restrict parameter, 56
- lastpoint variable, 234
- latitude
 - anchorLatLng property, 229
 - centerAtLatLng() method, 43, 109
 - decimal, converting degrees to, 52
 - floating-point values, 83
 - geocoding, 96–97
 - getBoundsLatLng() method, 43
 - getCenterLatLng() method, 43
 - getSpanLatLng() method, 43
 - grid references, 5
 - how to find, 129–130
 - location searches, 128
 - LookAt element, 330
 - recenterOrPanToLatLng() method, 44, 109
- license limitations, searches, 58
- licenses/ directory, 54
- LICENSE.txt file, 54
- limitations, Google Web API searches, 58–59
- limits and usage, API, 36

- lines
 - color and width, polylines, 48
 - between points, 115–116
- Link to this page option, Google Local interface, 15
- links, adding to information windows, 122
- listings
 - backend database interface
 - message response, 267
 - routes, listing existing, 268
 - routes, obtaining single, 270–271
 - routes, saving, 268–269
 - simple wrapper example, 266–267
 - community sites
 - backend database interface, 211–213
 - creating and storing data, 209–211
 - restaurant information, 209
 - CSV (comma-separated values) file, 68–69
 - delimited files, 68
 - dynamic generated maps
 - center points, 173
 - city lists, 170
 - global variables, 169
 - marker creation, 172
 - fixed-width files
 - reading, 70–71
 - writing, 72
 - Flickr photos
 - individual photo data, retrieving, 285
 - parsed data, 283–284, 287–288
 - proxy service, 281–282
 - searching, 282–284
 - XSL layout, 286–287
 - geocoding
 - GLatLng element, 99–100
 - scraping information, 98–99
 - U.S. information, 96
 - Google Earth application
 - icons, adding, 322–323
 - placemarks, 309
 - Google Web API remote procedure call, 62
 - information windows
 - adding, 120
 - formatting, 162
 - XML created, 163–164
 - XSL files, 165
 - XSLT created, 165–166
 - Java language code example, 63
 - KML (Keyhole Markup Language)
 - data generation, 310–313
 - tags, exporting, 305–306
 - locations, finding, 128–129
 - maps
 - bounding boxes, adding, 116–117
 - controls, adding, 106–107
 - HTML file generation, 148–150
 - monitoring movement of, 123–124
 - moving within, 109–110
 - routes, 118–119
 - markers
 - adding for map movement, 112
 - adding from points, 113
 - creating during startup, 114–115
 - points, adding additional, 146–147
 - overlays, adding to multiple maps, 126–127
 - Perl language example, 61
 - SQL databases
 - connections, 85–87
 - extracting data from, 89–91
 - populating, 87–89
 - table creation, 84
 - static file generation, 153, 156
 - statistical data
 - bar graphs, 190–191
 - circles demonstrating, 192–193
 - data set plots, 195
 - internal data representation, 188–189
 - source data, converting to XML, 183–184
 - table structure creation, 158
 - text files, padded data, 71
 - 3D structures, 339–343
 - VML (Vector Markup language), 39
 - XHTML (Extensible HTML), 37
 - XML
 - dynamic generated maps, 174–176
 - generating from database source data, 159–160

Continued

- listings (*continued*)
 - generating through CGI scripts, 160–161
 - parsing, 77–79
 - loadCity() method, 170
 - loading
 - markers, 171
 - routes
 - list of, 259–261
 - single, 261–264
 - loadRoute() method, 258
 - localized objects, searches by, 29
 - locations
 - defining with addresses, 4–5
 - defining without addresses, 5
 - direct routes, 6
 - east element, 339
 - finding, 128–129
 - mapping, 3–4
 - mental map concepts, 3–4
 - monitoring, 128–131
 - movement between, 6
 - north element, 339
 - south element, 339
 - statistical data as, 9–10
 - west element, 339
 - locators and trackers
 - Blackbird spotter, 139–140, 142
 - Hubble Space Telescope tracker, 139–141
 - hurricanes, 137–138
 - ISS (International Space Station), 139–140
 - Space Station Tracker system, 139
 - well-known landmarks, 137
 - London map view, 19, 23
 - longitude
 - anchorLatLng property, 229
 - centerAtLatLng() method, 43, 109
 - decimal, converting degrees to, 52
 - floating-point values, 83
 - geocoding, 96–97
 - getBoundsLatLng() method, 43
 - getCenterLatLng() method, 43
 - getSpanLatLng() method, 43
 - grid references, 5
 - how to find, 129–130
 - location searches, 128
 - LookAt element, 330
 - recenterOrPanToLatLng() method, 44, 109
 - LookAt element, 330
 - lowest zoom level, 16–17
- ## M
- Manhattan map view, 26–28
 - MapBuilder web site, 348–349
 - Maplandia web site, 347
 - MapQuest web site, 349
 - maps
 - dynamic generated
 - center points, 173
 - city lists, loading, 169–171
 - database-driven content, 177
 - entity types, 177
 - global variables, 169
 - information window display, 171
 - initialization, 173–174
 - interactive operations, 168
 - KML (Keyhole Markup Language), 315–316
 - markers, adding, 172
 - properties, 148–150
 - restaurant additions, 176–177
 - XML generated, 174–176
 - generating data from, 10–11
 - GMap class
 - controls, adding and removing, 43
 - event configuration, 45–46
 - information windows, adding, 44–45
 - map option configuration, 43
 - new object creation, 42
 - overlays, adding and removing, 44
 - status information, 43–44
 - Google Maps installation example, 103–104
 - hot, 133
 - HTML components, 148–151
 - location of, resetting, 246–247

- moving within
 - click and drag method, 298
 - cursor key method, 298
 - Google Earth application, 298
 - joystick controls, 298
 - scrolling method, 298
- recentering, 220–221
- Maps view, Google Local interface, 25–26
- Map24 web site, 350
- maptypechanged event, 46
- markerOffset property, 230
- markers. *See also* points
 - adding
 - to multiple maps, 125–128
 - from points, 113
 - routes, 264
 - addmarker() method, 115, 120, 147
 - alternatives to, 227–228
 - creating during startup, 114–115
 - dynamic generated maps, 172
 - GMarker class
 - discussed, 111
 - event triggers, 47
 - icon creation, 202
 - information windows, adding, 47
 - points, highlighting, 46
 - highlighting, 31, 207–208
 - how to use, 30–32
 - lines, adding, 115–116
 - loading, 219–220
 - loading for city lists, 171
 - multiple, 112–115
 - points, adding additional, 145–147
 - pop-ups, 31–32
 - removing, 218
 - routes between two points, 32
 - single, 111–112
 - uses for, 41
- mash-ups
 - defined, 133
 - speed camera locations, 136
- Max results parameter, 55
- message response, backend database interface, 267
- methods
 - addControl(), 43, 106–107
 - addgraph(), 203
 - addListener(), 49
 - addmarker(), 115, 120, 147
 - addOverlay(), 44, 46, 111, 125
 - addpoint(), 233–234
 - boundingbox(), 117
 - centerAndZoom(), 44, 109, 186
 - centerAtLatLng(), 43, 109
 - clearListeners(), 49
 - clearOverlays(), 44, 46
 - closeInfoWindow(), 45
 - disableDragging(), 43
 - disableInfoWindow(), 43
 - do(), 86
 - draggingEnabled(), 43
 - enableDragging(), 43
 - enableInfoWindow(), 43
 - exec(), 87
 - GBrowserIsCompatible(), 37
 - getAttribute(), 154
 - getAttributeNode(), 79
 - getBoundsLatLng(), 43
 - getCenterLatLng(), 43
 - getCurrentMapType(), 44
 - getElementsByTagName(), 79
 - getMapTypes(), 44
 - getphotoinfo(), 283
 - getroute(), 272
 - getSpanLatLng(), 43
 - getZoomLevel(), 43
 - hidecontrol(), 107
 - hidepoints(), 235
 - inbounds(), 246
 - indexOf(), 288
 - int(), 71
 - loadcity(), 170
 - loadRoute(), 258

Continued

methods (*continued*)

movemap(), 110, 112, 217
 mysql_connect(), 86
 onLoad(), 105
 openInfoWindow(), 45, 47, 122, 161
 openInfoWindowHtml(), 45, 47, 122
 openInfoWindowXslt(), 45, 47, 122
 parseFloat(), 155
 parseInt(), 155
 printf(), 72
 quote(), 88
 recenterandzoom(), 186, 265
 recenterOrPanToLatLng(), 44, 109
 removeControl(), 43
 removeListener(), 49
 removeOverlay(), 44, 46
 setMapType(), 44, 233
 setOpacity(), 229
 setPosition(), 229
 setTimeout(), 247
 showcityList(), 170
 showMapBlowup(), 45, 47
 showpoints(), 235
 showRouteList(), 259
 sort(), 187
 sprintf(), 72
 startRoute(), 254–256
 trigger(), 50
 upack(), 70–71
 XMLHttpRequest(), 283
 xmlhttpmessage(), 270–271
 zoomTo(), 44
 MGeocoder web site, 348
 minus sign button, zoom slider, 15
 Mobile GMaps web site, 348
 Move event, 45
 Moveend event, 46
 movemap() method, 110, 112, 217
 movement between locations, 6
 Movestart event, 46
 moving within maps
 click and drag method, 298
 cursor key method, 298

 discussed, 109–110
 Google Earth application, 298
 joystick controls, 298
 scrolling method, 298
 Mozilla web browser, system requirements, 13
 mozPrintImage property, GIcon class, 49
 MultiGeometry element, 340
 Multimap web site, 350
 multiple markers, 112–115
 mysql_connect() method, 86

N

National Maritime Museum map view, 24, 29
 navigation and zoom controls, Google Local
 interface, 15
 Netscape web browser, system requirements, 13
 network resources, Google Earth application,
 317–318
 new object creation, GMap class, 42
 New Orleans, Hurricane Katrina, 10
 New York map view, 30
 north location element, 339

O

object opacity, resetting, 247
 offline and online information, combining, 64
 one-way streets, 25–26
 onLoad() method, 105
 opacity settings
 overlay visibility, 247
 polylines, 48
 open source databases, 83
 open-air feel, Google Earth application, 304
 openInfoWindow() method, 45, 47, 122, 161
 openInfoWindowHtml() method, 45, 47, 122
 openInfoWindowXslt() method, 45, 47, 122
 opening information windows, 120–122
 opening tags, 73
 Opera web browser, system requirements, 13
 outerBoundary element, 340
 Output Encoding parameter, 56

- overlays
 - adding and removing, 44
 - `addOverlay()` method, 111, 125
 - bounding boxes, 116–117
 - custom images, 22
 - Google Earth application, 298, 307
 - hot maps, 133
 - how to use, 32
 - markers
 - adding from points, 113
 - `addmarker()` method, 115
 - creating during startup, 114–115
 - lines, adding, 115–116
 - multiple, 112–115
 - single, 111–112
 - uses for, 41
 - points, 41
 - realty-related tools, 337–339
 - routes, adding, 118–119
 - `TPhoto` class, 240–242
- P**
- padded data in text files, removing, 71–72
 - parameters, Google Web API searches, 55–56
 - parsed data, Flickr photos, 283–284, 287–288
 - `parseFloat()` method, 155
 - `parseInt()` method, 155
 - parsing
 - text files, 67
 - XML, 73, 77–79
 - paths, Google Earth application, 300–301
 - PDO (PHP Data Object), 86
 - `percentOpacity` property, 230
 - Perl language
 - ActivePerl distribution, 60
 - DOM within, 77
 - parsing XML with, 77–79
 - populating SQL databases with, 88
 - PPM (Perl Package Manager), 60
 - remote procedure call, 62
 - simple Perl code example, 61
 - SQL database connections, 85
 - Perl Package Manager (PPM), 60
 - pharmacies, custom created icons, 213
 - photos
 - embedding as labels, 231–232
 - Flickr photos
 - API key, 279–280
 - date taken, 286
 - descriptions, 286
 - geographic data additions, 280–281
 - individual photo data, retrieving, 284–285
 - parsed data, 283–284, 287–288
 - searching, 282–284
 - titles, 286
 - KML (Keyhole Markup Language), 331–332
 - as placemarks, 327
 - relation of locations to, 4
 - subject identification, 7–9
 - `TPhoto` class
 - overlays, 240–242
 - reference points, 239
 - views, 330
 - PHP Data Object (PDO), 86
 - PHP language
 - populating SQL database with, 88–89
 - SQL database connections, 86–87
 - pictures. *See* photos
 - PKZip file, 54
 - placemarks
 - adding detail to, 331
 - discussed, 307, 309
 - photos as, 327
 - plus sign button, zoom slider, 15
 - pointers, arrow, 230–231
 - points. *See also* markers
 - adding additional, 145–147
 - adding markers from, 113
 - Google Earth application, 334
 - `GPoint` class, 51
 - `hidepoints()` method, 235
 - hiding, 235

Continued

points (*continued*)

- highlighting, 46
- last point, clearing, 256
- lastpoint variable, 234
- lines between, 115–116
- showing and hiding, 235
- showpoints() method, 235
- statistical data, 184–187
- uses for, 41

points of interest, Google Earth application, 300

polylines

- discussed, 38
- GPolyline class
 - points, 47–48
 - properties, 116
- line color and width, 48
- opacity setting, 48
- routes, adding to maps, 118–119

populating

- databases, 158–159
- SQL databases
 - data, inserting, 87–88
 - with Perl language, 88
 - with PHP language, 88–89

population growth, statistical data, 181–182

pop-ups, markers, 31–32

postal code addresses

- community sites, 209
- discussed, 5
- search results, 28

PPM (Perl Package Manager), 60

print statement, 69

printf() method, 72

printImage property, GIcon class, 48

printShadow property, GIcon class, 49

proxy service, Flickr photos, 281–282

Q

query number limitations, API, 55

query string length, search limitations, 59

Query string parameter, 55

quote() method, 88

R

range, LookAt element, 330

RDBMS (Relational Database Management System), 66–67

reading

- delimited files, 68–69
- fixed-width files, 70–72

README.txt file, 54

realty-related tools

- overlays, 337–339
- 3D structures, 339–343

recenterandzoom() method, 186, 265

recentering maps, 220–221

recenterOrPanToLatLng() method, 44, 109

reference points, TPhoto class, 239

refresh options, Google Earth application, 318–320

regular expressions, 63

relatedInformationPresent element, 58

Relational Database Management System (RDBMS), 66–67

remote procedure call, 62

removeControl() method, 43

removeListener() method, 49

removeOverlay() method, 44, 46

resolution quality, zoom levels and, 24

resources

- competitors and alternatives, 349
- extension tools, 348–349
- general information, 347
- geocoders, 347–348
- Google Map services, 345–346

responseXML field, 154

restaurants

- community sites, 209
- custom created icons, 213
- dynamic generated maps, 176–177
- mapping locations, 4

Restrict parameter, 56

resultElements element, 57

results, Google Web API searches, 56–58

- routes
 - adding to maps, 118–119
 - alternative, 275
 - backend database interface
 - deleting, 269–270
 - distance calculation, 271–272
 - listing existing routes, 267–268
 - obtaining single, 270–271
 - saving, 268–269
 - car-based route finders, 136
 - enable routing stage, 272
 - front-end interface
 - current route, clearing, 256
 - deleting, 257–258
 - last point, clearing, 256
 - loading list of, 259–261
 - loading single, 261–264
 - markers, adding, 264
 - new route initialization, 256–257
 - recentering and zooming map, 265
 - recording process, disabling, 255–256
 - recording process, enabling, 254–255
 - saving, 258–259
 - getroute() method, 272
 - Google Earth application, 300–301
 - loadRoute() method, 258
 - mapping locations, 4
 - showRouteList() method, 259
 - startRoute() method, 254–256
 - by street address, 118
 - between two points, markers, 32
 - Space Station Tracker system, 139
 - uses for, 26
 - world map, 21
 - zoom level comparison, 20
 - saving routes
 - backend database interface, 268–269
 - front-end database, 258–259
 - scale information, Google Local interface, 15
 - scaled icons, Google Earth application, 329
 - scrapping, geocoding, 98–99
 - scrolling method, moving within maps, 298
 - searchComments element, 57
 - searches
 - by address, 28
 - boolean values, 57
 - cachedSize element, 58
 - case-sensitivity, 101
 - directoryCategories element, 57–58
 - directoryTitle element, 58
 - documentFiltering element, 57
 - endIndex element, 57
 - errors in, 30
 - estimatedTotalResultsCount element, 57
 - estimateIsExact element, 57
 - Flickr photos, 282–284
 - Google Web API
 - limitations, 58–59
 - parameters, 55–56
 - results, 56–58
 - hostName element, 58
 - lack of information in, 30
 - license limitations, 58
 - by localized objects or business, 29
 - by postal code, 28
 - relatedInformationPresent element, 58
 - resultElements element, 57
 - search field
 - Google Local interface, 14
 - map movement, 15
 - searchComments element, 57
- S**
- Safari web browser, system requirements, 13
 - SafeSearch parameter, 56
 - satellite images
 - cloud cover obstruction, 25
 - Google Earth application
 - core functionality, 295–296
 - interstitial images, 296
 - map, moving within, 298
 - shadows on, 25

Continued

- searches (*continued*)
 - searchQuery element, 57
 - searchTime element, 57
 - searchTips element, 57
 - Snippet element, 58
 - startIndex element, 57
 - Summary element, 58
 - text strings, 57
 - Title element, 58
 - URL element, 58
- searchQuery element, 57
- searchTime element, 57
- searchTips element, 57
- SELECT statement, 84
- self-reloading KML files, 320–321
- setMapType() method, 44, 233
- setOpacity() method, 229
- setPosition() method, 229
- setTimeout() method, 247
- SGML (Standard Generalized Markup Language), 73
- shadow overlays, custom icon creation, 198–200
- Shadow property, GIcon class, 48
- shadowSize property, GIcon class, 48
- shared files, Google Earth application, 305–306
- show links, 107–108
- showcityList() method, 170
- showMapBlowup() method, 45, 47
- showpoints() method, 235
- showRouteList() method, 259
- Simple Object Access Protocol (SOAP), 53, 60
- single markers, 111–112
- sites. *See* web sites
- size limitations, information windows, 122
- size representation, Maps view, 25–26
- Snippet element, 58
- SOAP (Simple Object Access Protocol), 53, 60
- soap-samples/ directory, 54
- sort() method, 187
- south location element, 339
- Space Station Tracker system, 139
- speed cameras, traffic solutions, 136
- spelling system, alternate words, 60
- sports shops, custom created icons, 213
- sprintf() method, 72
- SQL (Structured Query Language)
 - databases
 - connections, 85–87
 - creation, 83–84
 - data extraction, 89–92
 - populating, 87–89
 - discussed, 66
 - DISTINCT statement, 212
 - INSERT statement, 84
 - interfacing to database, 84
 - SELECT statement, 84
 - UPDATE statement, 84
 - uses for, 82
- Standard Generalized Markup Language (SGML), 73
- standardized message, backend database interface, 265
- Start index parameter, 55
- startIndex element, 57
- startRoute() method, 254–256
- static XML file generation, 152, 156
- station information, subway maps, 134–135
- statistical data
 - bar graphs, 189–192
 - basic non-statistical map, 187
 - circles demonstrating, 192–193
 - custom created icons
 - icon style, 197
 - placing on map, 202
 - shadow overlays, 198–200
 - size representation, 203–204
 - internal data representation, 188–189
 - as location point, 9–10
 - mapping locations, 4
 - multiple data sets, plotting, 194–196
 - point maps, 184–187
 - population growth, 181–182
 - source data, converting to XML, 182–184
 - U.S. Census data, 182
- status information, GMap class, 43–44

- stored information
 - format types, 65
 - in RDBMS, 67
 - in XML, 66
 - street addresses
 - discussed, 5
 - routes by, 118
 - Structured Query Language (SQL)
 - databases
 - connections, 85–87
 - creation, 83–84
 - data extraction, 89–92
 - populating, 87–89
 - discussed, 66
 - DISTINCT statement, 212
 - INSERT statement, 84
 - interfacing to database, 84
 - SELECT statement, 84
 - UPDATE statement, 84
 - uses for, 82
 - StuffIt Expander application, 54
 - style, API, 39
 - subtags, 76
 - subway maps
 - station information, 134–135
 - traffic solutions, 133–134
 - Summary element, 58
 - system requirements, 13
- T**
- tab-delimited file (TDF), 66, 69
 - tables, database structure creation, 157–159
 - tags
 - accessing by name, 78
 - attributes, 73
 - closing, 73
 - <div>, 105, 129
 - getElementsByTagName() method, 79
 - <href>, 321
 - opening, 73
 - subtags, 76
 - XML, 73
 - TDF (tab-delimited file), 66, 69
 - terrain, Google Earth application, 301–302
 - text files
 - CSV (comma-separated values), 66, 68
 - delimited files
 - reading, 68–69
 - writing, 69–70
 - fixed-width files
 - reading, 70–72
 - writing, 72
 - flat-text files, 66
 - generating, 67
 - padded data, removing, 71–72
 - parsing, 67
 - TDF (tab-delimited file), 66, 69
 - updating, 72
 - text strings, searches, 57
 - text, TLabel object, 228
 - 3D structures, realty-related tools, 339–343
 - tilde (~), 68
 - tilt, LookAt element, 330
 - Title element, 58
 - titles
 - Flickr photos, 286
 - in information windows, 120
 - TLabel class
 - adding and removing labels, 229
 - addpoint() method, 233–234
 - anchor points, 229–230
 - anchorLatLng property, 229
 - anchorPoint property, 230
 - arrow pointers, adding, 230–231
 - content property, 230
 - global variables, 232
 - HTML interface, 236
 - id property, 229
 - lastpoint variable, 234
 - markerOffset property, 230
 - percentOpacity property, 230
 - pictures, embedding as labels, 231–232
 - points, showing and hiding, 235
 - setMapType() method, 233
 - text example of, 228

- topographical views, 4
- Toronto Transit Commission (TTC) map, 133–135
- town fragments, community sites, 209
- TPhoto class
 - overlays, 240–242
 - reference points, 239
- trackers and locators
 - Blackbird spotter, 139–140, 142
 - Hubble Space Telescope tracker, 139–141
 - hurricanes, 137–138
 - ISS (International Space Station), 139–140
 - Space Station Tracker system, 139
 - well-known landmarks, 137
- traffic direction, one-way streets, 25–26
- traffic solutions
 - car-based route finders, 136
 - GPS navigation systems, 136
 - speed cameras, 136
 - subway maps, 133–134
 - traffic camera views, 135
- train station data, Google Earth application, 300
- transformations, `GXslt` class, 51
- Transparent property, `GIcon` class, 49
- travel agents, custom created icons, 213
- `trigger()` method, 50
- TTC (Toronto Transit Commission) map, 133–135

U

- United Kingdom map view, 18
- unzip tool, 54
- `unpack()` method, 70–71
- UPDATE statement, 84
- updates
 - auto-update function, 318
 - text files, 72
- URL element, 58
- U.S. Census data, statistical data, 182
- U.S. information, geocoding, 96–97

V

- validation, 38
- Vector Markup Language (VML), 38–39
- vertical coordinates, `GPoint` class, 51
- vertical grid references, 5
- views
 - controls, Google Local interface, 15
 - photographs, 330
- Virtual Earth web site, 349
- VML (Vector Markup Language), 38–39

W

- weather conditions
 - trackers and locators, 137–138
 - zoom level examples, 22
- web browsers, system requirements, 13
- Web Services Description Language (WSDL), 53
- web sites
 - CPAN, 78
 - Dreamhost, 36
 - Geocode America, 348
 - Geocoder, 348
 - Google Earth, 345
 - Google Maps API, 346
 - Google Maps China, 345
 - Google Maps, help section, 14
 - Google Maps Japan, 345
 - Google Maps Mania, 347
 - Google Maps UK, 345
 - Google Maps USA, 345
 - Google Moon, 345
 - Google Sightseeing, 347
 - Google Web API, 54
 - MapBuilder, 348–349
 - Maplandia, 347
 - MapQuest, 349
 - Map24, 350
 - MGeocoder, 348
 - Mobile GMaps, 348
 - Multimap, 350

- publicity web site services, 36
- Virtual Earth, 349
- Wikipedia, Google Maps entry, 347
- W3C validator, 38
- Yahoo! Maps, 349
- west location element, 339
- world map
 - satellite images, 21
 - zoom level example, 16–17
- writing
 - delimited files, 69–70
 - fixed-width files, 72
- WSDL (Web Services Description Language), 53
- W3C validator web site, 38

X

- XHTML (Extensible HTML), 37–38
- XML (Extensible Markup Language)
 - discussed, 39, 66
 - DOM (Document Object Model), 79–80
 - dynamic generated maps, 174–176
 - generating
 - from database source data, 159–160
 - from a database through CGI scripts, 160–161
 - information window creation, 163–164
 - parsing
 - with Javascript language, 79–82
 - with Perl language, 77–79
 - responseXML field, 154
 - static file generation, 152, 156
 - statistical source data conversion, 182–184
 - stored information in, 66
 - tags, 73
- XML:::DOM object, 78

- XML:::Generator object, 76
- XMLHttpRequest() method, 283
- xmlmessage() method, 270–271
- XSL Essentials* (Fitzgerald), 164
- XSL (Extensible Stylesheet Language)
 - discussed, 163
 - Flickr photos, 286–287
 - information window creation, 165
- XSLT (XSL Transformation)
 - discussed, 163
 - information window creation, 165–167

Y

- Yahoo! Maps web site, 349

Z

- zip files
 - discussed, 54
 - zipped KML version, 305, 336
- zooming
 - centerAndZoom() method, 44, 109, 186
 - centering zoom levels, 186
 - getZoomLevel() method, 43
 - GMapTypeControl control type, 42
 - high resolution example, 21–22, 24
 - levels, 15–17
 - lowest level example, 16–17, 20
 - recenterandzoom() method, 186, 265
 - resolution quality and, 24
 - satellite image comparison, 20
 - weather condition examples, 22
 - world map example, 16–17
 - zoom events, 46, 123
 - zoom slider options, 15
 - zoomTo() method, 44

