Index

Ajax, continued portlets using, 446–449, 450–454, **450–454** browser support for, 434, 437 predecessor techniques to, 434–345 client-side page aggregation and, 446 processing flow of, 436-443, **437** concepts of, 434 Rational Application Developer (RAD) data values coded in, 451, 452 using, 450-454 Document Object Model (DOM) and, Representational State Transfer (REST) 434, 435, 445, 454, 459, **459** services and, 446 Dojo toolkit for, 460–461, **461** response format in, 453, 453 dynamic HTML (DHTML) and, 440 RSS feeds in, 446 Eclipse toolkit for, 462 security and, 440, 448, 462-463 example of, 449–460 separation of client state/URL in, 440 Extensible Application Markup separation of content and presentation Language (XMAL) for, 442 using, 440, 448 Flex vs., 439, 441–442 server load and efficiency using, 440 frameworks for, 460–462 server logic and, 440 hidden frame technique vs., 435 server response format using, 442–443 HTML and, 442, 446, 457, 459 servlet execution and, 447 HTTP and secure HTTP (sHTTPS) in, 463 state and, in client/server, 448 integrated development environments state and, in portlets, 447 (IDEs) for, 440 toolkits for, 439 introduction to, and development of, URLs and, 434–435, 447, 449 433-436 use of, 436 JavaScript and, 434, 435, 437, 440, 445, user interfaces in, 438–439, 47 453–460, 463 Web Services for Remote Portlets JavaScript function in, 457–460, **458–459** (WSRP) remote service and, 456 JavaScript Object Notation (JSON) and, WebSphere Application Server (WAS) 443, 459 and, 462 JavaServer Page (JSP) using, 453–456, WebSphere Portal and, 444–445 455-447 XML and, 440, 442, 445, 451–452, **451**, JSR 286 and, 446, 469 **452**, 459 Kabuki toolkit for, 461–462 XML User Interface Language (XUL) Lightweight Third-Party Authentication and, 442 (LTPA) and, 462 XMLHttpRequest objects and, 434, 436, logic for requests in, 452, 452 **436**, 444, 458–460, **458**, 469 Macromedia Flash vs., 441 AJAX Toolkit Framework (ATF), 462 markup langauges and, 442 analysis tools, Service Oriented Modeling mashups using, 441–442 and Analysis (SOMA) and, 179 namespace encoding nd, 457 anatomy of a portlet, 26-28, 26 Open Ajax and, 439, 441, 461–462 Apache, 483 performance using, 448 Apache Struts Bridges Framework, 94 portal environments using, 443–449, 444

API code library, Workplace Forms and, 381, 409, 427–428, 427 , 428 application architecture. <i>See</i> Service Oriented Architecture (SOA) application integration in portlets, 6, 17, 187–189 inter-portlet communication and, and cooperative portlets for, 306–308, 306 , 307 Workplace Forms and, 405–408, 406 , 407 application view, 85, 85 applications for portals, 9 architecture. <i>See</i> Service Oriented Architecture (SOA) arrays, 77 asynchronous code patterns, 96–103, 96 Asynchronous JavaScript and HTML (AJAH), 96, 96 , 101–102, 101 Asynchronous JavaScript and XML. See Ajax ATOM feeds, 446	JSP coding in, 108 markup restrictions, portlet-specific, 108 Model View Controller (MVC) and, 104 namespaces in, 108–109 naming conventions, 108 navigational states and, 110–115 packaging of portlets and, 114–115 parallel rendering in, 106–107 persistent and transient data use in, 110 persistent state and, 111–113 Platform for Privacy Preferences (P3P) and, 106 session state and, 111 spawning threads from portlets, 106 tag libraries in, 109 URL encoding and, 106 vendor-specific portal extensions in, 107 versioning information and, 104–108 bidirectional language support, 133 binding information, inter-portlet communication and, 311, 329–333, 329,
authentication, 349	330, 333
authentication proxy servers, 350	book scenarios, 172–175
authorization, 349	Classic Models business template for, 172–173, 173
В	data access layer in, 175
back-end considerations, Service Oriented	data used in, from Eclipse.org, 172, 173
Architecture (SOA) and, 191	database and schema in, 173–174, 174
Backing Beans, 141	scenario use cases, 173
BEA, 214	bookmarking
best practices, 89, 103–110	JavaServer Faces (JSFs) and, 162
class assignments in, 108	Struts and, 162
for coding portlets, 104 cross-site scripting and, 109–110	Booth, Jonathan, 214 Bowstreet, 211–212. <i>See also</i> Portlet Factory
frameworks as, 104	browser support
GET and POST in, 107	Ajax and, support for, 434, 437
IFrames use, 109	Workplace Forms and, 407
instance variables and, 104	Builder Editor, Portlet Factory and, 220, 220
internationalization and, 113–114	builders, in Portlet Factory, 213, 215–217,
J2EE roles and, 105–106	231

code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 142–143, 142 , 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276	Business Intelligence and Reporting Tools (BIRT), 172	JSP modifications for, 125–130, 126–130
business-to-consumer (B2C) portals, 182 business-to-employee (B2E) portals, 182–183 Button builder, in Portlet Factory, 273, 274, 278–280, 280, 281 buttons action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86	business service repositories, 208	locale selection for, 123-124, 124
business-to-consumer (B2C) portals, 182 business-to-employee (B2E) portals, 182–183 Button builder, in Portlet Factory, 273, 274, 278–280, 280, 281 buttons action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86		
business-to-employee (B2E) portals, 182–183 Button builder, in Portlet Factory, 273, 274, 278–280, 280, 281 buttons action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86	business-to-consumer (B2C) portals, 182	
Button builder, in Portlet Factory, 273, 274, 278–280, 280, 281 buttons action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86	· · · · · · ·	
278–280, 280, 281 buttons action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86		
buttons action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198 , 199 , 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204 , 205 , 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85 , 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 Java Standard Tag Library (JSTL) tags in, 65, 68–69, 68 , 81 JavaServer Pages (JSPs) in, 65, 79–81, 80 Model View Controller (MVC) pattern in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–7 running, 85–86, 85 , 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77 , 79, 79 View mode in, 66 View mode JSP for, 81–83, 81 , 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158 , 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306 , 321–326 classes, 108 JavaServer Pages (JSPs) in, 65, 79–81, 80 Model View Controller (MVC) pattern in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–7 running, 85–86, 85 , 86 ToDo portlet code for, 75–77, 75–77 , 79, 79 View mode in, 66 View mode JSP for, 81–83, 81 , 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158 , 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306 , 321–326 classes, 108 JavaServer Pages (JSPs) in, 65, 69–71, 70–7 running, 85–86, 85 , 86 tasks for, 65, 68–69, 68, 68, 68 Cancel button, 158–159, 158 , 159 caption attributes, inter-portlet communi	The state of the s	
action events in JSF for, 152–156, 152–156 Portlet Factory and, 241, 273, 278, 279, 280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198 , 199 , 470–471 DistributedMap cache in, 197, 198–199, 198 , 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204 , 205 , 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85 , 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 in, 65, 68–69, 68 , 81 JavaServer Pages (JSPs) in, 65, 79–81, 80 Model View Controller (MVC) pattern in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–7 : running, 85–86, 85 , 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77 , 79, 79 View mode JSP for, 81–83, 81 , 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158 , 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306 , 321–326 classes, 108 JavaServer Pages (JSPs) in, 65, 79–81, 80 Model View Controller (MVC) pattern in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–7 : running, 85–86, 85 , 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77 , 79, 79 View mode JSP for, 81–83, 81 , 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158 , 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306 , 321–326 classes, 108 JavaServer Pages (JSPs) in, 65, 79–81, 80 Model View Controller (MVC) pattern in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–7 running, 85–86, 85 , 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77 , 79	buttons	
Portlet Factory and, 241, 273, 278, 279, 280, 281 C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86	action events in JSF for, 152–156, 152–156	
280, 281 C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 Model View Controller (MVC) pattern in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–72 running, 85–86, 85, 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77, 79, 79 View mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in,79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276	Portlet Factory and, 241, 273, 278, 279,	
C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–72 running, 85–86, 85, 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77, 79, 79 View mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		- , , , , , , , , , , , , , , , , , , ,
C C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 in, 65 packaging of, 83, 84 render parameters and, 65, 69–71, 70–72 running, 85–86, 85, 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77, 79, 79 View mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		Model View Controller (MVC) pattern
C language, 381 C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 adding ToDo items to, 85–86, 85, 86 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86	C	
C Programming Language, 25 caching, 197–206, 198, 199, 470–471 DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 Crender parameters and, 65, 69–71, 70–72 running, 85–86, 85, 86 ToDo portlet code for, 75–77, 75–77, 79, 79 View mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		packaging of, 83, 84
caching, 197–206, 198 , 199 , 470–471 DistributedMap cache in, 197, 198–199, 198 , 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204 , 205 , 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85 , 86 tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77 , 79, 79 View mode in, 66 View mode JSP for, 81–83, 81 , 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158 , 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306 , 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142 , 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
DistributedMap cache in, 197, 198–199, 198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 actionization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 DistributedMap cache in, 197, 198–199, tasks for, 65, 65 ToDo portlet code for, 75–77, 75–77, 79, 79 View mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 deploying, 85–86, 85, 86 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
198, 199 DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 ToDo portlet code for, 75–77, 75–77, 79, 79 View mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in,79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
DistributedObjectCache in, 197 dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 Diew mode in, 66 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
dynamic cache service for, 197 Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 View mode in, 66 View noteral and in particular		
Java Virtual Machine (JVM) and effect of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 View mode JSP for, 81–83, 81, 82–83 viewDate JSP code in, 79, 80 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		View mode in, 66
of, 197 JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 Vencode for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276	· ·	
JNDI access to, 198 SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 Cancel button, 158–159, 158, 159 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
SystemOut.Log for, 202 viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 caption attributes, inter-portlet communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
viewing the DistributedMap in, 203–206, 203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 communication and, 332 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
203–204, 205, 206 WebSphere Application Server (WAS) for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 Chart builder, in Portlet Factory, 245, 259 choreography, process, 208 CityListPortlet example, 306–308, 306, 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
WebSphere Application Server (WAS) choreography, process, 208 for, 197, 200 CityListPortlet example, 306–308, 306, Calendar Portlet, 64–86 321–326 actions in, 66 classes, 108 adding ToDo items to, 85–86, 85, 86 JavaServer Faces (JSFs) and, and RAD, code for, 71–79, 72–74 142–143, 142, 143 customization in, 66 Classic Models business template, data sharing in, 65, 66–68, 66, 67 172–173, 173 deploying, 85–86, 85, 86 click-to-action (C2A), 276		Chart builder, in Portlet Factory, 245, 259
for, 197, 200 Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85 , 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 CityListPortlet example, 306–308, 306 , 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142 , 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		choreography, process, 208
Calendar Portlet, 64–86 actions in, 66 adding ToDo items to, 85–86, 85, 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66, 67 deploying, 85–86, 85, 86 321–326 classes, 108 JavaServer Faces (JSFs) and, and RAD, 142–143, 142, 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276		
adding ToDo items to, 85–86, 85 , 86 code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 JavaServer Faces (JSFs) and, and RAD, 142–143, 142 , 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276	Calendar Portlet, 64–86	321–326
code for, 71–79, 72–74 customization in, 66 data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 142–143, 142 , 143 Classic Models business template, 172–173, 173 click-to-action (C2A), 276	actions in, 66	classes, 108
customization in, 66 Classic Models business template, data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 click-to-action (C2A), 276	adding ToDo items to, 85-86, 85 , 86	JavaServer Faces (JSFs) and, and RAD,
data sharing in, 65, 66–68, 66 , 67 deploying, 85–86, 85 , 86 172–173, 173 click-to-action (C2A), 276	code for, 71–79, 72–74	142–143, 142 , 143
deploying, 85–86, 85 , 86 click-to-action (C2A), 276	customization in, 66	Classic Models business template,
	data sharing in, 65, 66–68, 66, 67	172–173, 173
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	deploying, 85–86, 85 , 86	click-to-action (C2A), 276
deployment descriptors for, 83, 84 inter-portlet communication and, 305	deployment descriptors for, 83, 84	inter-portlet communication and, 305
Edit mode JSP for, 82–83, 82–83 client-capabilities access, 470	Edit mode JSP for, 82–83, 82–83	client-capabilities access, 470
internationalization and localization of, code generators, 213–214. <i>See also</i> Portlet 123–131 Factory		code generators, 213–214. <i>See also</i> Portlet

collaborative portals, 185, 186 . See also	Java Naming and Directory Interface
cooperative portlets	(JNDI) lookups in, 337–338
commitment control, Portlet Factory and, 278–279	JavaServer Pages (JSPs) in, 320, 341–344, 341 –3 43 , 344–347,
Compact HTML (cHTML), 134	345–346, 347
compiling code, 29–30, 29	JSR 168 and, 309
Component Object Model (COM), 381	messaging and, 308
composite applications, Service Oriented	page aggregation in, 310
Architecture (SOA) and, 181, 187–189,	parameters, actions, and properties in,
188	311–312, 311 , 330–333
Composite Capabilities/Preference Profiles	Portlet Wiring Tool for, 313–315, 314
(CC/PP), 134, 470	portType in, 324–325, 324, 328, 328
compression, 169	properties in, input and output, 309–312,
computed-aided design (CAD) software,	311
211-215, 213. See also Portlet Factory	Property Broker for, 308, 312, 315, 317,
Config mode, 55, 58, 112–113, 112	318–320, 338, 339
configuration, SystemOut.Log to check, 202	render phase in, 310
connection pools, database, 195	source portlet code for, 336–337, 336–337
connections or persistent channels, in inter-portlet communication, 313	source portlet doView method in, 338–339, 339
Console view in RAD, 46, 46	source portlet init method for, 337–338,
container, portlet, 9-10, 10 , 53	338
modes and, 54	source portlet JSP for, 341–344, 341–343
Content Access Services, 171	source portlet processAction method in,
content, portlet, 15, 15	340–341, 340–341
contextual portals, 184	source portlet WSDL for, 326–337, 326,
controller, portlet, 27	327–330, 332
cooperative portlet, 306–308, 306 , 307 , 315–320, 317	target and source portlets in, 314–315, 320–326
action phase in, 310–312, 311	target portlet JSP for, 344–347, 345–346,
architecture of, 315–320, 317	347
binding information in, 311, 329–333,	target portlet WSDL in, 334–335, 334–335
329, 330, 333	WAR files and, 318–320
building, using RAD, 320–326	Web Service Description Language
caption attributes in, 332	(WSDL) files and, 312, 317, 318, 320,
connections or persistent channels	321–337, 322 , 323–324 , 326
beween, 313	WebSphere Portal Core in, 316-320, 317
deployment descriptors for, 320	WebSphere Portal Datastore in,
guard variables and, 337	317–320, 317
hypertext references (HREFs) in, 340	wiring in, 310, 312-315, 314

Cooperative Source builder, in Portlet slots in, 354, 356–364, 359–364, **360**, Factory, 276 361*t*, 374–377 coordination concepts in JSR 286, 466-468 structure of, 354–364, **354** core, WebSphere Portal Core in, 316–320, 317 system slots in, 356, 374–377 Craigslist, 441 Uniform Resource Identifiers (URIs) createCredentialSlot method, 359-360, 360 and, 350 Credential Vault, 171, 349–377 user-managed segments in, 355–356, adding a vault slot in, 375, 375, 376 359, 360, **360** administrative slots in, 356, 374–377, 377 vault adapters in, 354 administrator-managed segments in, VaultSlotName parameter in, 357, 357–358 355–356, 359 credentials. See Credential Vault authentication and, 349 cross-site scripting, 109–110 authentication proxy servers in, 350 customer lookup cache, 198-199, 198, 199 authorization and, 349 Customer Relationship Management binding rules or policies concerning (CRM), 182 portlet access in, 363 CustomerData model, Portlet Factory and, configuration of segments in, 354 252, 256, 256 configuring a slot in, 375–376, 375 CustomerList portlet creation, Portlet createCredentialSlot method in, Factory and, 238-239, 239 359–360, **360** CustomerListView model, Portlet Factory credentials defined for, 352-353, 358, and, 249 364-374 customization, 51, 56–59, 112, 259 HTTP and secure HTTP (sHTTPS) in, Config mode and, 58 350, 369–374 flyweight pattern and, 56, 57, 59 HttpBasicAuth active credential example inheritance settings and, 56, 57 in, 369–374, **371–372**, **373** levels of, 57, 57, 58–59 IDs and passwords in, 349, 354 patterns and, 56 inactive credentials in, 367–374, 370 portlet definitions and, 57–58 opaque identifiers in, 359 portlet entities in, 58 passive credentials in, 364–367 Portlet Factory and, 259 portal administration link in, 374, 374 portlet windows and, 58-59, 471 private slots in, 357 preferences and, 60–61, 66 resource name of slots in, 357, 359 retrieving of, in a portlet, 353, 353 D secrets in, 352-353, 354, 361 segments in, 354, 355–356, 359, 360 Dashboard Framework builder, in Portlet Factory, 245, 259 setting/getting credentials in, 358, 358 shared slots in, 356 data access layer, 175 single sign on and, 349–351, **351** Data Access Object (DAO), 175, 474 slotID in, 359, 359, 361–363 Data Access Service example, 195–206

caching in, 197–206 198 , 199 . See also	testing setup in, 481, 481
caching	unzipping files for, 475
connection pools and, 195	WebSphere Application Server (WAS)
customer lookup cache in, 198–199, 198,	data sources and, 487
199	Data Field Modifier (DFM) builder, in Portlet
DistributedMap cache in, 197, 198–199,	Factory, 243, 244 , 266–267, 269, 269
198, 199	Data Hierarchy Modifier builder, in Portlet
DistributedMap cache setup in WAS for,	Factory, 265–266, 266 , 271
200–202, 200–202	Data Integration builders, in Portlet
doView method in, 203–204, 203–204	Factory, 245
local service layer in, 195	data models, 59–62, 60
portlet access to, 195	creating in Portlet Factory, 246–248
processAction in, 204–205, 205	Data Page builder, in Portlet Factory,
security and portlet access in, 195	234–237, 236 , 237 , 245, 251, 251 , 259,
singleton for, 195–197, 196 , 195	260–274, 260 , 273 . See also Portal
viewing the DistributedMap in, 203–206, 203–204, 205, 206	Factory, forms using
WebSphere Application Server (WAS)	data sharing, 65, 66–68, 66 , 67
for, 197, 200	Data View builder, in Portlet Factory and,
data access, singleton for, 474–475	245
Data Column Modifier (DCM) builder, in	database management system (DBMS), 195
Portlet Factory, 239–241, 240 , 241 , 245	database, sample applications, 173–174, 174
data component setup for sample apps,	datastore, WebSphere Portal Datastore in,
473–487	317–320, 317
class loader in, 478–479, 478 , 479	DB2 Universal Database, 8, 195
custom setup options for, 482–487	decoration area, 15
Data Access Objects (DAOs) and, 474	definitions, portlet, 57–58. See also
Derby database custom setup in,	customization
483–487, 484 , 486	deploying a portlet, 85–86, 85 , 86
extended library for, 475–480, 476–480	deployment descriptor files, 22, 27–28,
iBATIS and, 473–474, 487	31–32, 31 , 32 , 83, 84
interactive Java (ij) tool in, 485–487	customization and, 112
Java Database Connectivity (JDBC) and,	inter-portlet communication and, 320
474	language support/specification in,
modifying source code in, 487	119–121, 120
quick start setup in, 474–482	MIME types and, 52–53, 53
Rational Application Developer (RAD)	packaging portlets and, 83, 84
and, 481–482, 482	read-only data in, 111–112
saving configurations in, 480, 480	rendering and, 52–53, 53
singleton model of data access in, 474–475	Deployment Server, Workplace Forms and,
SUL IVIADS AND 4/4	381

Derby, custom database setup using, 483–487, 484 , 486	enterprise resource planning (ERP), Portlet Factory and, 216
Designer screen, in Portlet Factory, 220–221, 220	Enterprise Service Bus (ESB), 208 enterprise services, 207, 208
Designer, Workplace Forms. See Workplace Forms; Workplace Forms Designer directory structure of WAR file/portlet, 26, 27, 28, 28 distributed code patterns, 96–103, 96 distributed computing principles, 192 DistributedMap cache, 197, 198–199, 198, 199 viewing, 203–206, 203–204, 205, 206 WAS setup of, 200–202, 200–202 DistributedObjectCache, 197 Document Object Model (DOM), 102, 103 Ajax and, 434, 435, 445, 454, 459, 459 Workplace Forms and, 415 Dojo toolkit, 460–461, 461 Domino, 190, 215 doView method, 203–204, 203–204 inter-portlet communication and, 338–339, 339 dynamic cache service, in WAS, 197 dynamic forms, 383 dynamic HTML (DHTML), 461 Ajax and, 440	entities, portlets, 58. See also customization error handling, 21 Portlet Factory and, 221, 273 RAD and, 47–48, 48, 49 escape codes, XML, 69 Event Declaration builder, in Portlet Factory, 276, 277, 281 Event Handler builder, in Portlet Factory, 281, 282, 282 Event Handling builder, in Portlet Factory and, 276, 277, 278, 278 events, event handling, 466–467 evolution of portals, 185–186, 186 exceptions, 107 Excite, 183 execution stacks, Portlet Factory and, 214 expression language (EL), 68 Extensible Application Markup Language (XMAL), 442 Extensible Forms Definition Language (XFDL), 379 Workplace Forms and, 385–386, 407 Extensible Markup Language. See XML Extensible Stylesheet Language Transformation. See XSLT
Eclipse toolkit for Ajax, 462 Eclipse.org, 172, 173 Edit mode JSP (Calendar Portlet), 82–83, 82–83 Edit mode, 54–55 Edit_defaults mode, 55 encapsulation, 207 encodeURL, 106 encryption, 463 Enterprise JavaBeans (EJBs), 14, 14, 93	factory portals, 184–185 feature-based modeling, 212 feeds, ATOM and RSS, Ajax and, 446 fetching data, Portlet Factory and builder code, 231–234, 232 fields, Workplace Forms and, 393, 393 file structure, in Portlet Factory, 220–221, 221 filters, portlet, 471–472

Firefox, 407 Flash Player, 441 Flex, 439, 441–442 flow logic and builder mapping, in Portlet Factory, 265, 265 flow of data/information through portal, 10 flush method, 107 flyweight pattern, 56, 57, 59 FORM, JavaServer Faces (JSFs) and, 167–169 Form builder, in Portlet Factory, 245 Form Layout builder, in Portlet Factory, 265–266 formatting data, in Portlet Factory, 243, 244 forms using Portlet Factory, 259, 260–274, 268 . <i>See also</i> Workplace Forms Action List builder in, 268, 268 adding a new record in, 271, 272 , 272–274, 273 Button builder in, 273, 274	validation in, 270 WebApp view in, 264 Fowler, Martin, 192 frameworks, 93–96, 104, 470 Ajax and, 460–462 G Gadepalli, Venkata, 33 Garrett, Jesse James, 433–434 GenericPortlet class, 22 GET, 63, 83, 107 getCustomer, Portlet Factory and example, 252 getCustomerList, Portlet Factory and, 252 getCustomerList builder, Portlet Factory and, 231 getter and setter methods, JavaServer Faces (JSFs) and, 147–148, 148, 153 Global Settings administrative portlet, 119
Data Field Modifier (DFM) builder in, 266–267, 269, 269 Data Hierarchy Modifier builder in, 265–266, 266 , 271 Data Page builder and inputs for, 260–274, 260 , 272–274, 273 deploying, 275	Google, 183, 434, 441 granularity of services, SOA and, 180 graphics, 28 guard variables, in inter-portlet communication, 337
error handling in, 273 flow logic and builder mapping in, 265, 265 form submission entries in, 272–274, 273 form creation entries for, 262–264, 262 Form Layout builder in, 265–266 Imported Page builder in, 261, 261 Portlet Adapter builder in, 275 Rich Data Definition builder in, 266, 267, 267, 270 Service Consumer builder in, 261 Submit form and database transaction in, 264–272 unique customer number generation for, 270–271, 271	Hello World form and portlet example using Workplace Forms. <i>See</i> Workplace Forms Hello World portlet, 25–50 Help mode, 54–55 Hibernate, 473 hidden frame technique vs. Ajax, 435 HTML, 16, 74, 133, 215 Ajax and, 440, 442, 446, 457, 459 Dojo toolkit for, 460–461, 461 dynamic HTML (DHTML) and, 440 JSF Widget Library (JWL) and, 138 tag libraries for, 109 Workplace Forms and, 400

HTTP and secure HTTP (sHTTP), 22, 350, 369–374, 463	building portlets for, using RAD, 320–326
GET, 63, 83, 107	
POST, 63, 107, 417	Button builder in, 278–280, 280 , 281
Web services and, 98	buttons in, 278, 279, 280, 281
HttpBasicAuth active credential example,	caption attributes in, 332 CityListPortlet example of, 306–308,
369–374, 371–372 , 373	306 , 321–326
HttpSession, 12, 167	click-to-action (C2A) in, 276, 305
hypertext references (HREFs), in	commitment control in, 278-279
inter-portlet communication, 340	connections or persistent channels in, 313
I	cooperative portlet concept in, 306–308, 306 , 307 , 315–320, 317
iBATIS, 473–474, 487	Cooperative Source builder in, 276
IBM Global Services, 178–179	deployment descriptors for, 320
IBM Patterns for eBusiness, 182	Event Declaration builder in, 276, 277, 281
IBM Portlet API and, 18	Event Handler builder in, 281, 282, 282
IBM Portlet Services. See Portlet	Event Handling builder in, 276, 277,
IBM WebSphere Portal Primer, 33	278, 278
IBM Workplace Forms. See Workplace	guard variables and, 337
Forms	hypertext references (HREFs) in, 340
IBM's SOA Foundation, 179	Java Naming and Directory Interface
IDs and passwords, 349, 354	(JNDI) lookups in, 337–338
IFrames, 109	JavaServer Pages (JSPs) in, 320,
ij tool, 485–487	341–347, 341–343 , 345–346 , 347
Imported Page builder, in Portlet Factory,	JSR 168 and, 309
261, 261	messaging and, 308
inheritance, customization and, 56, 57	page aggregation in, 310
init method, source portlet, inter-portlet communication and, 337–338, 338	parameters, actions, and properties in, 311–312, 311 , 330–333
instance variables, 104	Portlet Wiring Tool for, 313–315, 314
integrated development environment (IDE),	portType in, 324–325, 328, 328
25	properties in, input and output, 309-312,
Ajax and, 440	311
Portlet Factory and, 218, 220, 221	Property Broker for, 308, 312, 315, 317,
inter-portlet communication, 275–283, 275,	318–320, 338, 339
305–348	render phase in, 310
Action List builder in, 279, 279	ShowTemperaturePortlet example of,
action phase in, 310–312, 311	306–308, 307 , 321–326
binding information in, 311, 329–333, 329 , 330 , 333	source portlet code for, 336–337, 336–337

source portlet doView method in, 338–339, 339 source portlet init method for, 337–338, 338 source portlet JSP for, 341–344, 341–343 source portlet processAction method in, 340–341, 340–341	language selection in, defining, 119 locale selection for, 114, 123–124, 124 Navigational State SPI and Portal URL for dynamic changes to, 132, 132 portlet language support definition in, 119–121
source portlet WSDL for, 326–337, 326 , 327–330 , 332 target and source portlets in, 314–315, 320–326 Target builder in, 276	preference data references in, 113–114 properties files in, 125, 130–131 Rational Application Developer (RAD) and, 123–131 resource bundles for, 113, 120–121, 12 1
target portlet JSP for, 344–347, 345–346 , 347	122–123, 124–125, 124 , 126 , 129–130 , 161, 161
target portlet WSDL in, 334–335, 334–335 WAR files and, 318–320 Web Service Description Language (WSDL) files in, 312, 317, 318, 320, 321–337, 322, 323–324, 326 WebSphere Portal Core in, 316–320, 317 WebSphere Portal Datastore in, 317–320, 317 Workplace Forms and, 420–430 wiring in, 305, 308, 310, 312–315, 314 Interaction Services, in SOA, 180 interactive Java (ij) tool, 485–487 interface, portlet and methods, 53–54, 54	specifying portlet support for, 123 WebSphere Portal support for, 118–119 Internet Explorer, 407, 434 Internet Form Extension (IFX), 410 Internet portals, 183 intranets, 182–183 inversion of control (IoC), 94, 473 ISO 639 Codes for languages, 119 Iyengar, Ashok, 33 J J2EE, 12, 191, 194, 217, 465 JavaServer Faces (JSFs) and, 93,
internationalization, 113–114, 117, 118, 121. <i>See also</i> languages and markup, 118 bidirectional language support and, 133 Calendar Portlet example of, 123–131 deployment descriptors for, 119–121, 120 dynamic language changes in, 131–132, 131	135–169. See also JavaServer Faces Portlet Factory and vs., 214, 234 portlets and, 12–14, 13, 14 roles in, use of, 105–106 Web Services for Remote Portlets (WSRP) and, 99–101
Global Settings administrative portlet for, 119	J2EE expression language (EL), 68 JAR files, 28, 30, 30 , 175
ISO 639 Codes for languages in, 119	Java, 191, 214, 381
Java Standard Tag Library (JSTL) and,	Web services and, 98
123, 125, 126	Java Architecture for XML Binding
JavaServer Faces (JSFs) and, 161, 161 JavaServer Pages (JSPs) example of,	(JAXB), 467 Java bean code (Calendar Portlet), 77, 78
121, 122, 121, 125–130, 126–130	Java Community Process (JCP), 123
, , ,,	

Java Database Connectivity (JDBC), 175,	JavaScript
474	Ajax and, 102–103, 103 , 434, 435, 437,
Java Development Kit (JDK), 30	440, 445, 453–460, 463
Java Naming and Directory Interface	AJAX Toolkit Framework (ATF) for, 462
(JNDI)	Dojo toolkit for, 460–461, 461
cache access through, 198	JSF Widget Library (JWL) in, 138
inter-portlet communication and lookups	Kabuki toolkit for, 461–462
in, 337–338	security considerations for, 463
Portlet Factory and, 234	JavaScript function, Ajax and, 457–460,
Java Portlet API, 171, 190	458–459
code patterns used in, 90–103	JavaScript Object Notation (JSON), 443, 459
Java Portlet Spec v1.0, 8–9, 16, 51–87	JavaServer Faces (JSFs), 3, 15, 89, 93, 94,
Calendar Portlet application using. See	135–169, 190–191, 470
Calendar Portlet	action events in, 135, 152–156, 152–156
customization and, 51, 56-59	action phase and, 138, 164–165
data models for portlets and, 59–62, 60	bookmarking in, 162
deploying portlets and, 85–86, 85 , 86	developing a portlet using, 139–151
interaction of portlets and containers in,	features of, 135
53	FORM use in, 167–169
JavaServer Faces (JSFs) and, 138	getters and setters in, 153
life cycle of portlet and, 51, 52–54	integration with portlet development in,
modes and, 51, 54–55	162
packaging portlets and, 83, 84	Java Portlet Specification and, 138
persistent state and, 59, 60–61	JSF Widget Library (JWL) in, 138
portlet interface using, 53–54, 54	Model View Controller (MVC) pattern
preferences and, 60–61	and, 135
running a portlet and, 85–86, 85 , 86	MyFaces open source (Apache)
states and, 51, 55–56, 55, 59–60, 60	download for, 135
transient state and, 59, 61-62	namespace and, 163–164, 164
URLs and, 63-64	navigation in, 135, 156-161, 156-161, 162
Java source code for portlet, 29, 29	navigational state in, 167
Java Standard Tag Library (JSTL), 65,	pagination in, 151-152, 151 , 152
68–69, 68 , 81, 109	phases of life cycle in, 137
internationalization and, 123, 125, 126	portlet concepts in, 163–169
Java Virtual Machine (JVM), 247	Portlet Factory vs., 190–191
caching's effect on, 197	portlet window handling in, 163-164
instance variables and, 104	PortletPreferences and, 166, 166
JavaBeans, 93, 217	prebuilt components in, 135
managed beans and, 141	Rapid Application Development (RAD)
scope of, 147	and, 135, 162

reference implementation of, download	JSR 186, 18, 465
for, 135	Composite Capabilities/Preference
render phase and, 135, 138, 164-165	Profiles (CC/PP), 134
request/response life cycle in, 136–138,	inter-portlet communication and, 305, 309
136, 137	vendor-specific portal extensions in, 107
scope in, 163	Web Services for Remote Portlets
singletons used in, 197	(WSRP) and, 101
standards for, 162	WebSphere Portal Core in, 316–320, 317
states in, 135, 163, 167–169	Workplace Forms and, 383
Struts vs., 162	JSR 286, 171, 465–472
URLs and, 162, 166–167, 166 , 167	Ajax and, 446, 465
user interface in, 162, 165	caching in, 470–471
validation in, 135, 162, 165	client-capabilities access in, 470
JavaServer Pages (JSPs), 12, 13, 22, 27, 65,	coordination concepts in, 466–468
93, 214, 215, 465	events, event handling in, 466–467
Ajax and, 453–456, 455–447	J2EE and, 465
best practices for, 89	Java Architecture for XML Binding
Calendar Porlet using, 79–81, 80	(JAXB) and, 467
coding of, 108	Java Community Process (JCP) and, 465
inter-portlet communication and, 320,	JavaServer Pages (JSPs) and, 465
341–347, 341–343 , 345–346 , 347	JSR 186 and, 465
internationalization of, 121, 122,	portlet filters in, 471–472
125–130, 126–130	_
Java Standard Tag Library (JSTL) tags	portlet windows in, 471
in, 65, 68–69, 68 , 81	resource rendering in, 468–469
JavaServer Faces (JSFs) and, editing of,	shared render parameters in, 467
148–150, 149 , 150	shared session state in, 467–468
MVC code pattern and, 92	Web framework support and, 470
Rapid Application Development (RAD)	Web Services for Remote Portlets (WSRP)
editing of, 148–150, 149 , 150	and, 465
resource bundles for, 122–123	
scriptlets and, 65, 68–69, 68	K
session state and, 111	Kernighan, Brian, 25
source portlet, 341–344, 341–343	
target portlet, 344–347, 345–346 , 347	L
Workplace Forms and, 396–398, 396 ,	_
396 <i>t</i> , 397 , 400, 409, 416	languages and markups, 117–134
JNDI lookup, JavaServer Faces (JSFs) and,	bidirectional language support and, 133
145, 146	Calendar Portlet example, 123–131
JSF Widget Library (JWL), JavaServer	Composite Capabilities/Preference
Faces (JSFs) and, 138	Profiles (CC/PP) and, 134

languages and markups, continued	Lock Box (Tivoli Access Manager for
deployment descriptors for, 119–121, 120	eBusiness; TAM), 354
dynamic changes to, 131–132, 131	logical model of SOA, 179–181, 180
Global Settings administrative portlet for, 119	Lotus Domino, 215. See also Domino
internationalization and, 117, 118, 121	M
ISO 639 Codes for languages in, 119	macro portals, 183
Java Standard Tag Library (JSTL) and, 123, 125, 126	Macromedia Flash vs. Ajax, 441
JavaServer Pages (JSPs) example of, 125–130, 126–130	Managed Beans, 141–148, 142–148 singletons and, 197
language selection in, defining, 119	markup language support for Ajax, 442
locale selection for, 117, 123–124, 124 localization and, 117, 118	markup restrictions, portlet-specific, 108 markup selection, 21
multiple device support and, 133–134	mashups using Ajax, 441–442
Navigational State SPI and Portal URL	maximized window state, 55
for dynamic changes to, 132, 132	mediation, 208
portlet language support definition in,	micro portals, 183
119–121	Microsoft, 190, 434
properties files in, 125, 130–131 Rational Application Developer (RAD)	migrating features to portlets/portals, 19–20, 20
and, 123–131	MIME types, 52–53, 53
resource bundles for, 120–125, 121 , 124 ,	minimized window state, 55
126, 129–130	Model View Controller (MVC), 21, 65, 89,
specifying portlet support for, 123	90–92, 91 , 104, 470
WebSphere Portal support for, 118–119	JavaServer Faces (JSFs) and, 135
layered model, 194	modeling
library creation, JSF and RAD, 143, 143	parametric feature-based, 212
library setup for data, 475–480, 476–480 life cycle of portlet, 51, 52–54	Service Oriented Modeling and Analysis (SOMA) and, 179
Lightweight Third-Party Authentication	models, in Portlet Factory, 217, 218–219,
(LTPA), Ajax and, 462	218 , 219 , 231–234, 246–248
line of business (LOB) systems/workflow, 406	mode of portlet, 15, 51, 54–55
local service layer with cache, 192–193, 193	About, 55
local service layer, 192–193, 192 , 193 , 192	Config, 55, 58, 112–113, 112
locales, 114, 117	containers and, 54
Navigational State SPI and Portal URL	Edit, 54–55
for dynamic changes to, 132, 132	Edit_defaults, 55
selection of, 123–124, 124	Help, 54–55
localization, 117, 118. See also languages	optional custom type, 55
and markup	Preview, 55

Print, 55 required, 54–55	opaque identifiers, Credential Vault and, 359
vendor-specific, 55	Open Ajax, 439, 441, 461–462. See also Ajax
View, 54–55, 66	Open Ajax Alliance, 461
Mozilla, 434	Oracle, 195
multiple device support, 133–134	
mutators, Workplace Forms and, 415	P
MyFaces open source (Apache), 135	packaging a portlet, 83, 84 , 114–115
	grouping portlets for, 114–115
N	library patterns for, 114
namespace, 108-109	page aggregation
Ajax and, 457	Ajax and, 446
JavaServer Faces (JSFs) and, 163–164,	inter-portlet communication and, 310
164	Page builder, in Portlet Factory, 221–223,
naming conventions, 108	222 , 223 , 224 , 234–235
nano portals, 184	pages, portal, 5–9, 6 , 11, 15–16, 15
navigation, JavaServer Faces (JSFs) and,	pagination
135, 156–161, 156–161	JavaServer Faces (JSFs) and, 151–152,
Struts, 162	151, 152
Navigation and Model Services, 171	Portlet Factory and, 240, 241–243, 242 , 243
navigation handlers, 160–161, 161	span tags for, in Portal Factory, 242, 242
navigational state, 61–62, 110–115	Paging Buttons builder, in Portlet Factory,
JavaServer Faces (JSFs) and, 167	242–243, 243
Navigational State SPI and Portal URL for	parallel rendering, 106–107
dynamic language changes, 132, 132	parameters, actions, and properties in
.NET	inter-portlet communication, 311–312,
Portlet Factory and, 214	311 , 330–333
Web services and, 98	parametric feature-based modeling, 212
Web Services for Remote Portlets	Parametric Technology Corporation (PTC),
(WSRP) and, 99–101	211
normal window state, 55	passive credentials, 364–367
notarization, Workplace Forms and,	passwords. See IDs and passwords
425–426, 426	patterns, 89–116
,	Ajax in, 96, 96 , 102–103, 103
0	Apache Struts Bridges Framework as, 94
OBJECT element, in Workplace Forms,	Asynchronous JavaScript and HTML
396–397, 396 , 396 <i>t</i> , 419	(AJAH) in, 96, 96 , 101–102, 101
Odyssey Browser Framework (OBF), 138	asynchronous, 96–103, 96
Olson, Bruce, 33	choosing, criteria for, 95–96
Olson, Diuce, 33	Choosing, Chicha 101, 73-70

patterns, <i>continued</i> combining vs. separating logic and markup in, 90–92, 90 , 91	Action List builder in, 221, 224–225, 224 , 225 , 237–238, 238 , 268, 268 , 279, 279
customization and, 56	Active Server Pages (ASPs) and, 214
distributed, 96–103, 96	adding services in, 252–256
flyweight, 56, 57, 59	advanced concepts in, 259–304
frameworks, Web frameworks as, 93–96, 104, 470	background on and development of, 211–215
Java Portlet API, 90–103	Builder Editor for, 220, 220
JavaServer Faces (JSF) and, 89, 93	builders in, 213, 215–217, 231
Model View Controller (MVC) as, 65,	Button builder in, 273, 274 , 278–279,
89, 90–92, 91 , 104, 135, 470	280 , 280, 281
PortalPatterns.org and, 209, 209	buttons in, 241, 273
Spring as, 94	change propagation through code using,
Struts and, 89, 93–94	256
Web Services for Remote Portlets	changes to main (Action List builder) in,
(WSRP) in, 96, 96 , 99–101	250, 250
Web Services in, 96, 96, 97–101, 97	Chart builder in, 245, 259
WebWork as, 95	Click-to-Action feature in, 276
PeopleSoft, 216	code generated by, 228, 228, 233-234
PERL, Portlet Factory and, 214	code generator status of, 213-214
persistence layer, 195	commitment control in, 278-279
persistent channels or connections, in	computer-aided design (CAD) software
inter-portlet communication, 313	as basis for, 211–215, 213
persistent data, 110	configuration of, using Portal Unit Test
persistent state, 59, 60–61, 111–113	Environment (UTE), 218, 221
action phase and, 113	Cooperative Source builder in, 276
Config mode and, 112–113, 112	Dashboard Framework builder in, 245, 259
read-only data in, 111-112	Data Column Modifier (DCM) builder
String arrays and, 113	in, 239–241, 240 , 241 , 245
personalization/customization. See	Data Field Modifier (DFM) builder in,
customization	243, 244 , 266–267, 269, 269
perspectives, RAD, 39, 39	Data Hierarchy Modifier builder in,
Platform for Privacy Preferences (P3P), 106	265–266, 266 , 271
portals, 5–9, 6	Data Integration builders in, 245
Portal Extension API, 20, 20	data model creation in, 246-248
PortalPatterns.org, 209, 209	Data Page builder in, 234–237, 236, 237,
Portlet Adapter builder, in Portlet Factory,	245, 251, 251 , 259, 272–274, 273
221, 225–226, 226 , 238, 275, 251–252	Data View builder in, 245
Portlet Factory, 22, 175, 190–191,	deploying portlets from, 275
211–257, 259–304	Designer screen in, 220–221, 220

	Daniel at A. daniel and Invitation in 221, 225, 226
enterprise resource planning (ERP) and, 216	Portlet Adapter builder in, 221, 225–226, 226 , 238, 251–252, 275
error messages in, 221, 273	profiling in, 259, 283–288
Event Declaration builder in, 276, 277, 281	programming language selection for, 214
Event Handler builder in, 281, 282, 282	Rational Application Developer (RAD) and, 218
Event Handling builder in, 276, 277, 278, 278	regeneration engine (regen) in, 212-214,
execution stacks in, 214	232–234, 233 , 256
file structure in, 220–221, 221	Rich Data Definition builder in, 266,
flow logic and builder mapping in, 265,	267, 267 , 270
265	running a model in standalone mode in,
Form builder in, 245	226–229, 227
Form Layout builder in, 265–266	running the model as a portlet in,
	229–230, 230
formatting data in, 243, 244	SAP Framework builder in, 259
forms using, 259, 260–274, 263 , 268	Service Call builders in, 245
Imported Page builder in, 261, 261	Service Consumer builder in, 249, 249,
integrated development environment	251, 261
(IDE) of, 218, 220, 221	Service Definition builder in, 246–247,
inter-portlet communication and,	247
275–283, 275	Service Operation builder in, 247–248,
J2EE and, 214, 234	248 , 253, 254–255 , 256
Java Naming and Directory Interface	Service Oriented Architecture (SOA)
(JNDI) and, 234	and, 211, 245–252, 246
JavaServer Faces (JSFs) vs. 190–191	span tags in, 235, 235 , 242, 242
model and builder interactions in a SOA	SQL builder in, 245
using, 252, 252	SQL Call builder in, 231, 232–234, 232 ,
model creation in, 231–234, 246–248	246, 253, 253
models in, 217, 218–219, 218 , 219	SQL Call example using, 213–214
modifying Factory-generated code in,	SQL DataSource builder in, 253, 253
228–229	Submit form and database transaction in,
.NET and, 214	264–272
Page builder in, 221, 222–223, 222 , 223 ,	Summary and Chart builder in, 245
224 , 234–235	Summary and Drill Down builder in, 245
pagination in, 240, 241–243, 242 , 243	Target builder in, 276
Paging Buttons builder in, 242–243, 243	template files in, changing or modifying,
parametric feature-based modeling used	263
in, 212	testing operations in, 253, 273, 280
PERL and, 214	
	Two-Layer Data (SOA) portlet in, 252–254
personalization and customization using,	validation in, 270
259	View builder in, 245

Portlet Factory, continued

View portlet creation using, 230–245 WAR file rebuild in, 229–230, 229 , 238–239, 252, 275, 276 Web Services Description Language (WSDL) generation in, 247, 253, 276 WebApp elements added to builder in, 223, 224 WebApp elements in, 233 , 233–234 WebApp view in, 220, 220 , 228, 228 , 264 writing a portlet using, 217–230 Portlet Messaging, 171 Portlet Services. <i>See</i> IBM Portlet Services	Service Oriented Architecture (SOA) and, 187–189 Workplace Forms and, 430–431 process portals, 184 process-driven portals, 185–186, 186 processAction, 164, 204–205, 205 inter-portlet communication and, 340–341, 340–341 profiling, in Portlet Factory, 259, 283–288 properties, inter-portlet communication and, input and output, 309–312, 311 properties files, 125, 130–131
Portlet Wiring Tool, 313–315, 314 portlet.xml deployment descriptor, 28, 31–32, 31 , 32 . <i>See also</i> deployment descriptors	Property Broker, in inter-portlet communication, 308, 312, 315, 317 , 318–320, 338, 339
PortletAdaptor class, 22	proprietary vs. standard APIs in creation of
PortletPreferences, JavaServer Faces (JSFs) and, 166, 166 PortletRequest/Response, 166	portlets/portals, 19, 19 protocol handling, 21 proxy servers, authentication, 350
portlets, 9, 10–15, 11–12	publishing settings using RAD, 44, 44
PortletURLs, 63	publishing the portlet, 44, 45
portType, 324–325, 328, 328	Puma Services, JavaServer Faces (JSFs)
POST, 63, 107, 417	and, 145, 146 Pura Edga Solutions, 381, 382, Saa also
pre-populating Workplace Forms, 408–417. <i>See also</i> Workplace Forms	PureEdge Solutions, 381–382. <i>See also</i> Workplace Forms
preference data, internationalization and,	D
113–114	R
preferences, 60–61 persistent data and, 60–61 user-dependent, 61 user-independent (administrative), 60–61 validator for, 61	Rational Application Developer (RAD), 22, 33–47, 34 , 13547, 34 , 481–482, 482 action events in, 152–156, 152–156 Actions and Prefernces in, 38, 39 adding/removing projects in, 44, 45
presentation layer, 194	Ajax and, 450–454
SOA. See also user interface (UI), 180, 181	attribute retrieval in, 145, 145
Preview mode, 55	Backing Beans and, 141
Print mode, 55	bean becoming a Managed Bean in,
privacy issues, 106	146–148, 146–148
private slots, Credential Vault and, 357	bean scope selection in, 147
process choreography, 208	Cancel button in, 158–159, 158 , 159

process integration

class creation/selection for, 142–143,	validation in, 161
142, 143	viewing the portlet in, 46, 47
Console view in, 46, 46	WebSphere Portal and, 34
creating portlet project in, 139–140, 139–141	WebSphere settings in, 42–43, 42 , 43 wizard for, 36
error management in, 47–48, 48 , 49	Workplace Forms and, 398
getter and setter methods assignment in,	read-only data, 111–112
147–148, 148 , 153	regeneration engine (regen), in Portlet
inter-portlet communication and,	Factory, 212–214, 232–234, 235, 256
building portlets for, using, 320–326	render calls, 52–53, 53
internationalization and localization	render parameters, 65, 69–71, 70–71
using, 123–131, 161, 161	render phase
JavaServer Faces (JSFs) and, 162	inter-portlet communication and, 310
JavaServer Pages (JSPs) editing in,	JavaServer Faces (JSFs) and, 138,
148–150, 149 , 150	164–165
JNDI lookup in, 145, 146	rendering, 52–53, 53
library creation for, 143, 143	JavaServer Faces (JSFs) and, 135
managed beans creation in, 141–148,	parallel, 106–107
142 –148	render parameters and, 65, 69–71, 70–71
method creation and assignment to beans	renderURLs in, 63, 80, 166–167
in, 144, 144	resource, 468–469
naming the project in, 36	shared render parameters in, 467
navigation handlers in, 160–161, 161	RenderRequest/Response, 164, 165
navigation in, 156–161, 156–161	renderURLs, 63, 69-71, 80, 166-167
new project in, 34–35, 35 , 36	repositories, 208
pagination in, 151–152, 151 , 152	Representational State Transfer (REST)
parameter selection in, 36–37, 37	services, Ajax and, 446
perspectives in, 39, 39	request/response, JavaServer Faces (JSFs)
Portlet Factory and, 218	and, 136–138, 136 , 137
publishing settings using, 44, 44	request-response paradigm, 17
publishing the portlet using, 44, 45	requestRowAction, 167
Puma Services and, 145, 146	resource bundles, 113, 120–121, 121 ,
running the portlet in, 40–47, 40 , 150,	124–125, 124 , 126 , 129–130
150, 151	JavaServer Faces (JSFs) and, 161, 161
Security Alert in, 46, 46	resource name of slots, Credential Vault
server creation for, 41, 41	and, 357, 359
Servers view in, 44, 45	resource rendering, 468–469
settings in, 38, 38	resource URLs, 64
Struts, 162	reuse of code, 180, 188–189, 207, 208
Submit button in, 158–159, 158 , 159	Rich Data Definition builder, in Portlet
testing in, 34, 46	Factory, 266, 267, 267 , 270

Ritchie, Dennis, 25 roadmap for SOA use in portals, 206–208, 207	authentication proxy servers in, 350 authorization and, 349 Content Access Services, 171
Roberts, Andy, 211	Credential Vault and, 171, 349. See
RSS feeds, Ajax and, 446	Credential Vault, 349
running a portlet, 85–86, 85 , 86 , 150, 150 ,	cross-site scripting and, 109-110
151	Data Access Service example and, porlet
Portlet Factory and, 226-230, 227, 230	access and, 195
on RAD, 40–47, 40 , 40	encryption and Ajax, 463
	HTTP and secure HTTP (sHTTPS) in,
S	350, 369–374, 463
Safari, 434	IDs and passwords in, 349
sample portlets, databases, 172. See also	JavaScript and, 463
book scenarios	Lock Box (Tivoli Access Manager for
data component setup for, 473–487. See	eBusiness; TAM), 354
also data component setup for sample	Navigation and Model Services, 171
apps	portlet-based approaches to, 352-353
website code source for, 2	single sign on and, 349–351, 351
SAP, 215, 216, 217	Uniform Resource Identifiers (URIs)
SAP Framework builder, in Portlet Factory,	and, 350
259	WebSphere Portal and, 349, 352
schema, sample applications, 173–174, 174	Security Alert in RAD, 46, 46
scope, 62	segments, in Credential Vault, 354,
JavaBean, selecting, 147	355–356, 359, 360
JavaServer Faces (JSFs) and, 163	server creation in RAD, 41, 41
scriplets, Java Standard Tag Library (JSTL)	Server, Workplace Forms. See Workplace
tags and, 65, 68–69, 68 , 81	Forms; Workplace Forms Server
SCRIPT element, in Workplace Forms,	Servers view in RAD, 44, 45
397–398, 397 , 397	Service Call builders, in Portlet Factory,
scrolling or paging through displayed data,	245
JavaServer Faces (JSFs) and, 151–152,	Service Consumer builder, in Portlet
151, 152	Factory, 249, 249 , 251, 261 Service Definition builder, in Portlet
secrets, Credential Vault and, 352–353,	
354, 361	Factory, 246–247, 247 service layers, 191–195
secure HTTP (sHTTPS), 350 secure sockets connections, 463. <i>See also</i>	local service layer with cache and,
HTTP and secure HTTP (sHTTPS)	192–193, 193
security, 171	local, 192–193, 192 , 193 , 192
Ajax and, 440, 448, 462–463	persistence layer and, 195
authentication and, 349	

separation of concerns within, 194–195,	SOA portals in, 184
194	technology considerations and, 189-191
Service Operation builder, in Portlet	types of portals and use of, 181–186,
Factory, 247–248, 248 , 253, 254–255 ,	182, 186
256	WebSphere Portal and, 177–178, 189,
Service Oriented Architecture (SOA),	208–209
177–209. See also Data Access Service	Workplace Forms and, 380
example	Service Oriented Modeling and Analysis
back-end considerations and, 191	(SOMA), 179
composite applications and, 181,	service repositories, 208
187–189, 188	Service Stub builder, in Portlet Factory, 253
Data Access Service example using,	Service Test builder, in Portlet Factory, 253
195–206	services, 171
definition of, 178–181	granularity of, 180
distributed computing principles and, 192	Service Oriented Architecture (SOA)
evolution of portals and, 185–186, 186	and, 178
goals of, 178–181	ServletResponse, 165
granularity of services in, 180	servlets, 13
IBM Global Services and, 178–179	
Interaction Services segment in, 180	Ajax and, 447
JavaServer Faces(JSFs) and, 190–191	naming, 108
local service layer and, 192–193, 192,	portlets vs., 11–12 , 18
193 , 192	session state, 61–62, 111
local service layer with cache and,	shared, 467–468
192–193, 193	shared render parameters, 467
logical view of, 179–181, 180	shared session state, 467–468
persistence layer and, 195	shared slots, Credential Vault and, 356
portals as on-rampquote to, 181–186	sharing data. See data sharing
Portlet Factory and, 190–191, 211,	ShowTemperaturePortlet example,
245–252, 246 , 252, 252	306–308, 307 , 321–326
presentation layer and, 180, 181	Siebel, 215
process integration in, 187–189	signatures, Workplace Forms and, 383
reuse issues and, 180, 188–189	Simple API for XML (SAX), Workplace
roadmap for, in use with portals,	Forms and, 415
206–208, 207	Simple Object Access Protocol (SOAP),
service layers and, 191-195	42, 98
Service Oriented Modeling and Analysis	single sign on, 349–351, 351
(SOMA) and, 179	singleton
services in, 178	data access using, 474–475
services within portals and,	for Data Access Service, 195-197, 196
considerations for, 194–195, 194	skills and training, 190-191

slotID, Credential Vault and, 359, 359 , 361–363	state change, 21 states, 51, 55–56, 59–60, 60
slots, Credential Vault and, 354, 356–364, 360 , 361 <i>t</i>	Ajax and, in client/server, 448 Ajax and, in portlets, 447
SOA portals, 184	JavaServer Faces (JSFs) and, 163, 167–169
source code, website downloads for, 2	JavaServer Faces (JSFs) and,
source portlet code, for inter-portlet	preservation of, 135
communication, 336–337, 336–337	maximized/minimized, 55
source portlet doView method, for interportlet communication, 338–339, 339	navigational, 61-62, 110-115, 167
source portlet init method, for inter-portlet	normal, 55
communication, 337–338, 338	persistent, 59, 60–61, 111–113
source portlet JSP, for inter-portlet	scope and, 62
communication, 341–344, 341–343	session, 61–62, 111
source portlet processAction method, for	shared session, 467–468
inter-portlet communication, 340–341,	transient, 59, 61–62
340–341	String arrays, persistent data and, 113
source portlet WSDL, for inter-portlet	Strings, Workplace Forms and, 381
communication and, 326–337, 326 ,	Struts, 89, 93–94, 190, 470
327–330, 332	bookmarking in, 162
span tags, Portlet Factory and, 235, 235 , 242, 242	integration with portlet development in, 162
spawning threads from portlets, 106	JavaServer Faces (JSFs) and vs., 162
specification for portals (Java Portlet Spec	navigation in, 162
v1.0), 8–9, 16. <i>See also</i> Java Portlet Spec v1.0,	Rapid Application Development (RAD) and, 162
Spring, 94, 470, 474	standards for, 162
SQL, 123, 175	URLs and, 162
Call, using Portlet Factory, 213–214	user interface in, 162
SQL builder, in Portlet Factory, 245	validation in, 162
SQL Call builder, in Portlet Factory, 231,	WebSphere Portal support for, 93–94
232–234, 232 , 246, 253, 253	Submit button, 158–159, 158 , 159
SQL DataSource builder, in Portlet Factory, 253, 253	Workplace Forms and, 393–395, 394 , 422–426, 422
SQL Maps, 474	Submit form and database transaction,
SQL operations and their corresponding	Portlet Factory and, 264–272
services, Portlet Factory and, 253,	Summary and Chart builder, in Portlet
254–255	Factory, 245
standards	Summary and Drill Down builder, in
JavaServer Faces (JSFs) and, 162	Portlet Factory, 245
Struts, 162	Supply Chain Management (SCM), 182

system slots, in Credential Vault, 356, 374–377 SystemOut.Log, 202	getCustomerList in, 252 Java Virtual Machine (JVM) and, 247 Portlet Adapter builder in, 251–252 Service Consumer builder in, 249, 249, 251
Tag libraries, 109 JSF Widget Library (JWL) and, 138 TAM Lock Box, 354 target and source portlets, in inter-portlet communication, 314–315, 320–326 Target builder, in Portlet Factory, 276 target portlet JSP, for inter-portlet communication, 344–347, 345–346, 347 target portlet WSDL, for inter-portlet communication, 334–335, 334–335 testing the portlet, 34, 46 text editor to create portlet, 25 threads, spawned from portlets, 106 Tivoli Access Manager for eBusiness (TAM), 354 Tivoli Directory Server, 8 ToDo portlet code (Calendar Portlet), 75–77, 75–77, 79, 79 Tomcat, 214 tools for portlets/portals, 18, 22 training, 190–191 transaction portals, 185, 186 transient data, 110 transient state, 59, 61–62 Two-Layer Data (SOA) portlet using Portlet Factory, 245–252 addCustomer in, 252 adding services in, 252–256 changes to main (Action List builder) in,	Service Consumer builder in, 249, 249, 251 Service Definition builder in, 246–247, 247 Service Operation builder in, 247–248, 248, 253, 254–255, 256 Service Stub builder in, 253 Service Test builder in, 253 SQL Call builder in, 246, 253, 253 SQL DataSource builder in, 253, 253 SQL operations and their corresponding services in, 253, 254–255 testing operations in, 253 updateCustomer in, 252 View model for, 249–252 Web Services Description Language (WSDL) generation in, 247, 253 types of portals, 7–8, 181–186, 182, 186 aggregate, 186 business-to-business (B2B), 182 business-to-consumer (B2C), 182 business-to-employee (B2E), 182–183 collaborative, 186, 185 contextual, 184 factory, 184–185 Internet, 183 macro, 183 micro, 183 micro, 183 micro, 183 nano, 184 process, 184 process-driven, 185–186, 186 SOA, 184 transaction, 186
250, 250 CustomerData model in, 252, 256, 256	U
CustomerListView model in, 249	Uniform Resource Identifiers (URIs), 350
data model creation in, 246–248	namespaces and, 108–109
Data Page builder in, 251, 251	Workplace Forms and, form submission,
getCustomer in, 252	418, 418
G	

'C 1 4 G IIDI	111
uniform resource locators. See URLs	validator, preferences, 61
Unit Test Environment (UTE), in Portlet	variables, guard, 337
Factory, 218, 221	vault adapters, Credential Vault and, 354
Universal Description, Discovery and	VaultSlotName parameter, 357, 357–358
Integration (UDDI) directory, 97	Veloticy, 93
updateCustomer, Portlet Factory and,	vendor-specific modes, 55
example, 252	vendor-specific portal extensions, 107
URLs, 63–64, 106	versioning information, 104–108
ActionURLs as, 63	view beans, 27
Ajax and, 434–435, 447, 449	View builder, in Portlet Factory, 245
HTTP POST and GET in, 63, 83	View mode, 54–55, 66
JavaServer Faces (JSFs) and, 162,	View mode JSP (Calendar Portlet), 81–83,
166–167, 166 , 167	81, 82–83
navigational state and, 110–115	View portlet created with Portlet Factory,
PortletURLs as, 63	230–245
RenderURLs as, 63	Action List builder in, 237–238, 238
resource type, 64	buttons in, 241
Struts, 162	columns in, 239–241, 240 , 241
Workplace Forms and, form submission,	CustomerList portlet creation in,
418, 418	238–239, 239
use cases, 173	Data Column Modifier (DCM) builder
User Agent Profile (UAProf), 470	in, 239–241, 240 , 241
user interface, 17	Data Field Modifier (DFM) builder in,
Ajax and, 438–439, 447	243, 244
JavaServer Faces (JSFs) and, 162, 165	Data Page builder in, 234–237, 236 , 237
Service Oriented Architecture (SOA)	Factory-generated code in, 233–234
and, 180, 181	fetching data code in, 231–234, 232
Struts, 162	formatting data in, 243, 244
Workplace Forms and, 388–390, 389 ,	getCustomerList builder in, 231
390	model creation for, 231-234
user-dependent preferences, 61	Page builder in, 234–235
user-independent preferences, 60-61	pagination in, 240, 241–243, 242 , 243
	Paging Buttons builder in, 242–243, 243
V	Portlet Adapter builder in, 238
validation	regeneration engine at work in, 232–234,
JavaServer Faces (JSFs) and, 135, 161,	233
162, 165	span tags in, 235, 235 , 242, 242
Portlet Factory and, 270	WAR file rebuild for, 238–239
Struts, 162	WebApp elements in, 233 , 233–234
Workplace Forms and, 425–426, 426	viewDate JSP code (Calendar Portlet),79, 80

Viewer, Workplace Forms. <i>See</i> Workplace Forms; Workplace Forms Viewer viewing the portlet in RAD, 46, 47 views, application view in, 85, 85 virtualization, 208	Workplace Forms and, support in, 408 Web Services Description Language (WSDL), 97–98 Portlet Factory and, 247, 253, 276 Workplace Forms and, 406 Web Services for Remote Portlets (WSRP), 96, 96, 99–101, 456, 465
WAR files, 12, 26, 32–33, 33 , 106 inter-portlet communication and, 318–320 Portlet Factory and, rebuilding of, 229–230, 229 , 238–239, 252, 275, 276 Web applications cross-site scripting and, 109–110 error management in, 21 markup selection, 21 naming conventions in, portlet vs. servlet, 108 portlets/portals vs., 17, 21 protocol handling in, 21	web.xml deployment descriptor, 27, 31–32, 31, 32 WebApp elements, Portlet Factory and, 223, 224, 233, 233–234 WebApp view, in Portlet Factory and, 220, 220, 228, 228, 264 Webform Server, 380–381, 401–403, 402, 403 WebSphere, 214 WebSphere Application Server (WAS), 8, 30 admin console of, 200, 200 Ajax and, 462 as data source, 487 caching and, 197, 200
protocol handling in, 21 scope in, 62 state change in, 21 Web frameworks, 93–96, 93, 104, 470 Web Service Description Language (WSDL) files, in inter-portlet communication, 312, 317, 318, 320, 321–337, 322, 323–324 Web services, 96, 96, 97–101, 97 data-oriented vs. presentation-oriented, 99–100, 100 HTTP and, 98 Java and, 98 .NET and, 98 portlet use of, 98 Simple Object Access Protocol (SOAP) and, 98 Universal Description, Discovery and Integration (UDDI) directory for, 97 Web Services Description Language (WSDL) in, 97–98 Web Services for Remote Portlets (WSRP), 99–101	caching and, 197, 200 DistributedMap cache in, 197, 200–202, 200–202 Workplace Forms and, 381, 407 WebSphere Portal, 1, 2, 3, 7–8, 8, 22, 171, 191 Ajax and, 444–445 click-to-action (C2A) in, 305 inter-portlet communication and, 305, 309 language support in, 118–119 multiple device support and, 133–134 RAD and, 34, 42–43, 42, 43 security and, 349. See also Credential Vault Service Oriented Architecture (SOA) and, 177, 189, 208–209. See also Service Oriented Architecture (SOA) Struts support in, 93–94 WebSphere Portal Core, 316–320, 317 WebSphere Portal Datastore, 317–320, 317 WebSphere Portal Framework, 171 WebSphere Portal, 7–8, 8, 7 WebWork, 95, 470

window states. See states Internet Form Extension (IFX) in, 410 window, portlet, 15, 15, 58–59, 163–164, JavaServer Pages (JSPs) in, 396–398, 471. See also customization **396**, 396*t*, **397**, 400, 409, 416 Wireless Markup Language (WML), 16, JSR 168 and, 383 133–134, 385 key features and uses of, 383 wiring, in inter-portlet communication, mutators in, 415 305, 308, 310, 312–315, **314** OBJECT element in, 396–397, **396**, Workplace Dashboard Framework, 217 396t, 419 Workplace Forms, 22, 379–432 offline or disconnected operation and, 408 accessors in, 415 pre-populating forms in, 408–417 ACORD 111 XML messages in, 415 process integration models for, 430–431 API code library for, 427–428, 427, 428 processing forms in, 425-429, 426-428 architectures for, 405–408, 406, 407 RAD preveiw of, 398–399, **399** background and development of, 381-382 Rational Application Developer (RAD) benefits of, 379–380 and, 398 SCRIPT element in, 397-398, 397, 409 browser use with, 407 creating a form in, 386–388, **387**, **388** server-side processing performance and, data extration from forms in, 427–428, 427, 428 Service Oriented Architecture (SOA) data integration from forms in, 428–429 and, 380 signature validation/notarization in, data used in, 408-409 displaying a form in a portlet from, 425–426, **426** signatures in, 383 395–403, **395** document model in, 384-386, 384 Simple API for XML (SAX) and, 415 Document Object Model (DOM) and, 415 string parsing data extraction in, 428 documentation (online) for, 395 Strings and, 381 dynamic forms in, 383 submitting forms in, within context of portal application, 417–425 enterprise architecture and, 383 extending portlet framework for, to template storage in, 400–401 display, 401–403, **402**, **403** terminology of, 382, 382t extensibility of, 383 testing and deploying a portlet for, Extensible Forms Definition Language 398–403, **400** (XFDL), 385–386, 407 testing form submission in, 423–425, **424** fields inserted in, 393, 393 three-tier deployment of, 405–408, 406 file size constraints in, 383 user interface layout in, 388-390, 389, 390 Hello World form and portlet example, Web service support in, 408 386–398 Web Services Description Language HTML and, 400 (WSDL) in, 406 integration of applications within, Webform Server in, 401–403, 402, 403 405–408, **406**, **407** WebSphere Application Server (WAS) inter-portlet communication and, 420–430 and, 381, 407

Wireless Markup Language (WML) and, X 385 XForms, 379, 381, 382, 385–386, 390–393, Workplace Forms Designer in, 380, 391, 392, 393, 407. See also Workplace 405–408, **406**, **407**, 420–425 Forms Workplace Forms Portlet Framework in, Workplace Forms and, 420–421, **421**, 407 429 Workplace Forms Server in, 380–381, XFormsXML, 22, 214, 215, 216 405–408, **406**, **407** Ajax and, 440, 442, 445, 451–452, **451**, Workplace Forms Viewer, 380, **452**, 459 405–408, **406**, **407** escaped output from, 69 XForms and, 381, 382, 385–386, Workplace Forms and, 381, 382, 401, 390–393, **391**, **392**, **393**, 407, 406, 414–415, **414**, **415**, 429 420–421, **421**, 429 XML User Interface Language (XUL), 442 XML in, 381, 382, 401, 406, 414–415, XSLT, 22, 93 **414**, **415**, 429 XMLHttpRequest, 102, 103 XML data extraction in, 428 Ajax and, 434, 436, 436, 444, 458–460, XPath references in, 413–414, 413, 414 **458**, 469 zero-footprint support using Webform XPath references, Workplace Forms and, Server for, 407–408, **407** 413–414, **413**, **414** Workplace Forms Designer, 380, 405–408, **406**, **407**, 420–425 Y Workplace Forms Server, 380–381, Yahoo, 183 405–408, **406**, **407** Workplace Forms Viewer, 380, 405–408, Ζ 406, 407 Zimbra Inc., 461 World Wide Web Consortium (W3C), 379