Index

acceptance testing, 222
activity
definition, 249
key concept in RUP 40
Actor artifact
as used in the Find Actors and Use Cases activity, 73
definition, 250
analysis
and iterative development, 98
described, 97–136
in the J2EE developer roadmap, 97
overview, 99
Analysis Class artifact
as used in the Architectural Analysis activity, 102
as used in the Identify Design Elements activity, 146
as used in the Use-Case Analysis activity, 124
definition, 250
in analysis, 97–99
in design, 137
analysis mechanism, 108
Analyze Behavior workflow detail, 110
applet, 10, 14, 19
application client, 10, 14, 20
application component provider
definition, 250
application concurrency
definition, 250
architecture
definition, 229
Architectural Analysis activity, 102
Architecture Reviewer role
definition, 250
artifact
definition, 250
key concept in RUP 38
assembly
and deployment, 30
asset, 168
auction application
Actors, 74
analysis mechanisms, 108
described, 61–66
design and implementation mechanisms, 143
enterprise components, 155
functional features and constraints, 64
key abstractions, 106
other requirements and properties, 65
overview, 61
problem statement, 62
stakeholders and users, 63
Supplementary Specification, 79
Use Cases, 77
Use-Case Priority List, 82
bean class, 26
Bean-Managed Persistence entity bean. See BMP entity bean.
Index

BMP (Bean-Managed Persistence) entity bean, 29
boundary class, 127
business modeling, 221
business tier, 8, 15

Capture a Common Vocabulary activity, 72
Change Request artifact
  as used in the Review the Analysis activity, 135
  as used in the Review the Architecture activity, 174
  as used in the Review the Design activity, 192
  as used in the Review the Implementation activity, 205, 218
  as used in the Review the Initial Architecture activity, 109
  as used in the Review the Requirements activity, 83, 93
  as used in the Review the User Experience activity, 103
  definition, 250
Class Design activity, 187
CMP (Container-Managed Persistence) entity bean, 29
  component
    definition, 250
Component Design activity, 186
configuration
  definition, 250
configuration and change management, 223
configuration item
  definition, 250
construction phase, 48
container
  and servers, 12
  applet container, 12
  application client container, 12
  EJB container, 12
  web container, 12
overview, 12
Container-Managed Persistence entity bean.
  See CMP entity bean.
control class, 127

Data Model artifact
  as used in the Database Design activity, 190
  as used in the Implement Design Elements activity, 207
  definition, 250
  in the J2EE developer roadmap, 54
Database Design activity, 190
Database Designer role
  definition, 250
Define an Initial Architecture workflow detail, 100
Define the System workflow detail, 70
deployment
  and J2EE, 30
  and RUP, 222
deployment configuration
  standalone, 15
  EJB-centric, 16
  web-centric, 17
multitier, 18
Deployment Model artifact
  as used in the Architectural Analysis activity, 102
  as used in the Describe Distribution and Concurrency activity, 170
  as used in the Structure the Implementation Model activity, 200
  definition, 251
  in design, 138
  in the J2EE developer roadmap, 55
deployment view, 231
Describe Distribution and Concurrency activity, 170
design
  and iterative development, 138
described, 137–193
in the J2EE developer roadmap, 137
overview, 139
Design Class artifact
  as used in the Class Design activity, 187
  as used in the Component Design activity, 186
  as used in the Identify Design Elements activity, 146
  as used in the Identify Design Mechanisms activity, 141
  as used in the Implement Design Elements activity, 207
  as used in the Incorporate Existing Design Elements activity, 167
  as used in the Subsystem Design activity, 180
  as used in the Use-Case Design activity, 177
  definition, 251
  in design, 138
  in implementation, 195
Design Guidelines artifact
  as used in the Architectural Analysis activity, 102
  as used in the Class Design activity, 187
  as used in the Database Design activity, 190
  as used in the Identify Design Elements activity, 146
  as used in the Identify Design Mechanisms activity, 141
  as used in the Incorporate Existing Design Elements activity, 167
as used in the **Subsystem Design** activity, 180
as used in the **Use-Case Analysis** activity, 124
as used in the **Use-Case Design** activity, 177
definition, 251
design mechanism, 143
**Design Model** artifact
as used in the **Architectural Analysis** activity, 102
as used in the **Class Design** activity, 187
as used in the **Component Design** activity, 186
as used in the **Database Design** activity, 190
as used in the **Describe Distribution and Concurrency** activity, 170
as used in the **Identify Design Elements** activity, 146
as used in the **Identify Design Mechanisms** activity, 141
as used in the **Implement Design Elements** activity, 207
as used in the **Incorporate Existing Design Elements** activity, 167
as used in the **Perform Unit Tests** activity, 216
as used in the **Structure the Implementation Model** activity, 200
as used in the **Subsystem Design** activity, 180
as used in the **Use-Case Analysis** activity, 124
as used in the **Use-Case Design** activity, 177
definition, 251
in analysis, 97
in design, 137
in implementation, 194
in the J2EE developer roadmap, 54
**Design Package** artifact
as used in the **Architectural Analysis** activity, 102
as used in the **Identify Design Elements** activity, 146
as used in the **Identify Design Mechanisms** activity, 141
as used in the **Incorporate Existing Design Elements** activity, 167
as used in the **Structure the Implementation Model** activity, 200
definition, 251
design patterns, 147
**Design Reviewer** role
definition, 251
**Design Subsystem** artifact
as used in the **Identify Design Elements** activity, 146
as used in the **Identify Design Mechanisms** activity, 141
as used in the **Implement Design Elements** activity, 207
as used in the **Incorporate Existing Design Elements** activity, 167
as used in the **Structure the Implementation Model** activity, 200
as used in the **Subsystem Design** activity, 180
as used in the **Use-Case Design** activity, 177
definition, 251
in design, 138
in implementation, 195
**Designer** role
definition, 251
**Detail a Use Case** activity, 86
**Detail the Design** workflow detail, 175
developer roadmap. See J2EE developer roadmap.
discipline
definition, 251
key concept in RUP, 41
EJB (Enterprise JavaBeans), 11, 15, 23
elaboration phase, 47
enterprise component, 147–149
Enterprise JavaBeans. See EJB.
etity bean, 28
entity class, 127
environment, 225
**Find Actors and Use Cases** activity, 73
**Framework Component** artifact
as used in the **Component Design** activity, 186
as used in the **Identify Design Elements** activity, 146
as used in the **Identify Design Mechanisms** activity, 141
as used in the **Implement Design Elements** activity, 207
as used in the **Incorporate Existing Design Elements** activity, 167
as used in the **Subsystem Design** activity, 180
as used in the **Use-Case Design** activity, 177
definition, 251
in design, 138
in implementation, 195
**Glossary** artifact
as used in the **Architectural Analysis** activity, 102
as used in the **Capture a Common Vocabulary** activity, 72
as used in the **Detail a Use Case** activity, 86
as used in the **Find Actors and Use Cases** activity, 73
as used in the **Structure the Use-Case Model** activity, 91
Glossary artifact  continued
as used in the Use-Case Analysis activity, 124
definition, 251
in requirements, 68

home interface, 23–24
HTTP (HyperText Transfer Protocol), 12
HTTPS API, 12
HyperText Transfer Protocol API. See HTTP API.

Identify Design Elements activity, 146
Identify Design Mechanisms activity, 141
Implement Design Elements activity, 206
Implement Design Elements workflow detail, 206
implementation
and iterative development, 197
described, 195–219
in the J2EE developer roadmap, 195
overview, 197
Implementation Directory artifact
as used in the Implement Design Elements activity, 207
as used in the Structure the Implementation Model activity, 200
definition, 252
in implementation, 195
Implementation File artifact
as used in the Implement Design Elements activity, 207
as used in the Perform Unit Tests activity, 216
definition, 252
in implementation, 195
Implementation Guidelines artifact
as used in the Implement Design Elements activity, 207
as used in the Perform Unit Tests activity, 216
as used in the Structure the Implementation Model activity, 200
definition, 252
implementation mechanism, 143
Implementation Model artifact
as used in the Database Design activity, 190
as used in the Describe Distribution and Concurrency activity, 170
as used in the Implement Design Elements activity, 207
as used in the Perform Unit Tests activity, 216
as used in the Structure the Implementation Model activity, 200
definition, 252
in implementation, 195
in the J2EE developer roadmap, 54
implementation optimizations, 212
Implementation Reviewer role
definition, 252
implementation view, 233
Implementer role
definition, 252
Incorporate Existing Design Elements activity, 167
inception phase, 47
input form, 115
integration testing, 222
integration tier, 8, 15
Interface artifact
as used in the Component Design activity, 186
as used in the Identify Design Elements activity, 146
as used in the Identify Design Mechanisms activity, 141
as used in the Implement Design Elements activity, 207
as used in the Incorporate Existing Design Elements activity, 167
as used in the Subsystem Design activity, 180
as used in the Use-Case Design activity, 177
definition, 252
in implementation, 195
iteration
definition, 252
key concept in RUP 44
Iteration Plan artifact
definition, 252

J2EE (Java 2 Platform, Enterprise Edition)
component technologies, 19
described, 5–33
services, 11
software platform, 10
J2EE Connector Architecture. See JCA.
J2EE design patterns. See design patterns.
J2EE developer roadmap
activities and artifacts, 56
described, 51–59
introduction, 51
models, 54
roles, 53
scope and rationale, 52
J2EE-specific content, 57
J2EE modules, 30
J2SE (Java 2 Platform, Standard Edition)
services, 12
JAAS (Java Authentication and Authorization Service), 11
Java 2 Platform, Enterprise Edition. See J2EE.
Java 2 Platform, Standard Edition. See J2SE.
Java API for XML Parsing. See JAXP.
Java Authentication and Authorization Service. See JAAS.
Java Database Connectivity. See JDBC.
Java Message Service. See JMS.
Java Naming and Directory Interface. See JNDI.
Java servlet. See servlet.
Java Transaction API. See JTA.
JavaMail. See JSP.
JCA (J2EE Connector Architecture). See JCA.
JDBC (Java Database Connectivity). See JDBC.
JNDI (Java Naming and Directory Interface). See JNDI.
JTA (Java Transaction API). See JTA.
JSP (JavaServer Pages). See JSP.
JAXP (Java API for XML Parsing). See JAXP.
JCA (J2EE Connector Architecture). See JCA.

key abstraction, 106
local home interface, 23, 26
local interface, 23, 26
modeling conventions. See UML modeling conventions.
multitier architectures, 7

Navigation Map artifact
as used in the Review the Analysis activity, 135
definition, 252
in analysis, 98

Perform Unit Tests activity, 216
phase
definition, 252
key concept in RUP, 46

Prioritize Use Cases activity, 81
presentation tier, 7, 14

Programming Guidelines artifact
as used in the Implement Design Elements activity, 207
as used in the Perform Unit Tests activity, 216
definition, 252

process view, 231
project management, 224

Rational Unified Process (RUP). See RUP.
Reference Architecture artifact
as used in the Architectural Analysis activity, 102
definition, 253
Refine the Architecture workflow detail, 139
Refine the System Definition workflow detail, 84
remote interface, 23, 25
Remote Method Invocation over Internet Inter-Orb Protocol. See RMI-IIOP.
requirement
definition, 253
requirements, and iterative development, 69
described, 67–95
in the J2EE developer roadmap, 67
overview, 69
Requirements Reviewer role
definition, 253
Requirements Specifier role
definition, 253
requirements view, 230
Review the Analysis activity, 135
Review the Architecture activity, 174
Review the Design activity, 192
Review the Implementation activity, 205, 218
Review the Initial Architecture activity, 109
Review the Requirements activity, 83, 93
Review the User Experience activity, 123
Review Record artifact
as used in the Review the Analysis activity, 135
as used in the Review the Architecture activity, 174
as used in the Review the Design activity, 192
as used in the Review the Implementation activity, 205, 218
as used in the Review the Initial Architecture activity, 109
as used in the Review the Requirements activity, 83, 93
as used in the Review the User Experience activity, 103
definition, 253

Risk List artifact
as used in the Prioritize Use Cases activity, 81
definition, 253
RMI-IIOP, 12
roadmap
definition, 253
role
  definition, 253
  in the J2EE developer roadmap, 52
  key concept in RUP, 39
round-trip engineering, 213
RUP (Rational Unified Process)
  best practices, 35
  described, 35–49
  introduction, 35
  key concepts, 37–38
  roadmap, 51
sample application. See auction application.
Screen artifact
  as used in the Identify Design Elements activity, 146
  as used in the Model the User Experience activity, 112
definition, 253
  in analysis, 97
  in design, 138
session bean, 27
servlet, 10, 14, 20
Software Architect role
  definition, 253
  software architecture describing, 229
Software Architecture Document artifact
  as used in the Architectural Analysis activity, 102
  as used in the Describe Distribution and Concurrency activity, 170
  as used in the Identify Design Elements activity, 146
  as used in the Identify Design Mechanisms activity, 141
  as used in the Incorporate Existing Design Elements activity, 167
  as used in the Prioritize Use Cases activity, 81
  as used in the Structure the Implementation Model activity, 200
  as used in the Use-Case Design activity, 177
content, 232
definition, 253
described, 229–234
in analysis, 98
stateful session bean, 28
stateless session bean, 28
Structure the Implementation Model activity, 200
Structure the Implementation Model workflow
  detail, 198
Structure the Use-Case Model activity, 91
Subsystem Design activity, 180
Supplementary Specification artifact
  as used in the Architectural Analysis activity, 102
  as used in the Class Design activity, 187
  as used in the Database Design activity, 190
  as used in the Describe Distribution and Concurrency activity, 170
  as used in the Detail a Use Case activity, 86
  as used in the Find Actors and Use Cases activity, 73
  as used in the Identify Design Elements activity, 146
  as used in the Identify Design Mechanisms activity, 142
  as used in the Model the User Experience activity, 112
  as used in the Structure the Use-Case Model activity, 91
  as used in the Use-Case Design activity, 177
  in requirements, 68
System Analyst role
  definition, 254
  system testing, 222
Test Guidelines artifact
  as used in the Perform Unit Tests activity, 216
definition, 254
test results, 222
testing, 222
transition phase, 48
UML modeling conventions, 235
unit testing, 216
Use Case artifact
  as used in the Capture a Common Vocabulary activity, 72
  as used in the Detail a Use Case activity, 86
  as used in the Find Actors and Use Cases activity, 73
  as used in the Model the User Experience activity, 112
as used in the **Structure the Use-Case Model** activity, 91
as used in the **Use-Case Analysis** activity, 124
as used in the **Use-Case Design** activity, 177
definition, 254
flow of events, 88
in requirements, 67–68
**Use-Case Analysis** activity, 124
**Use-Case Design** activity, 177
**Use-Case Model** artifact
as used in the **Architectural Analysis** activity, 102
as used in the **Capture a Common Vocabulary** activity, 72
as used in the **Detail a Use Case** activity, 86
as used in the **Find Actors and Use Cases** activity, 73
as used in the **Model the User Experience** activity, 112
as used in the **Prioritize Use Cases** activity, 81
as used in the **Structure the Use-Case Model** activity, 91
as used in the **Use-Case Analysis** activity, 124
definition, 254
in requirements, 68
in the J2EE developer roadmap, 53
**Use-Case Modeling Guidelines** artifact
as used in the **Detail a Use Case** activity, 86
as used in the **Find Actors and Use Cases** activity, 73
as used in the **Structure the Use-Case Model** activity, 91
definition, 254
**Use-Case Package** artifact
as used in the **Structure the Use-Case Model** activity, 91
as used in the **Find Actors and Use Cases** activity, 73
definition, 254
**Use-Case Priority List** artifact
as used in the **Prioritize Use Cases** activity, 81
definition, 254
**Use-Case Realization** artifact
as used in the **Use-Case Analysis** activity, 124
as used in the **Use-Case Design** activity, 177
definition, 255
in analysis, 97
in design, 137
use-case specification, 87

**Use-Case Storyboard** artifact
as used in the **Model the User Experience** activity, 112
definition, 255
in analysis, 97
in design, 138
**User-Experience Designer** role
definition, 255
**User-Experience Guidelines** artifact
as used in the **Identify Design Elements** activity, 146
as used in the **Model the User Experience** activity, 112
definition, 255
**User-Experience Model** artifact
as used in the **Identify Design Elements** activity, 146
as used in the **Identify Design Mechanisms** activity, 141
as used in the **Model the User Experience** activity, 112
as used in the **Use-Case Analysis** activity, 124
definition, 255
in analysis, 98
in design, 137
in the J2EE developer roadmap, 54
**User-Experience Reviewer** role
definition, 255
virtual directory
definition, 255
**Vision** artifact
in requirements, 68
as used in the **Architectural Analysis** activity, 102
as used in the **Capture a Common Vocabulary** activity, 72
as used in the **Detail a Use Case** activity, 86
as used in the **Find Actors and Use Cases** activity, 73
as used in the **Prioritize Use Cases** activity, 81
definition, 255
workflow detail
definition, 255
key concept in RUP, 43
workspace
definition, 255