

Rational Application Developer 7 Bootcamp

Length:

1 week

Description:

This course is an intensive weeklong course on developing Java and J2EE applications using Rational Application Developer. It covers the introductory product features, terms, essential visual development techniques, coding and API method writing skills, and modeling steps necessary to ensure the success of RAD software development.

IBM Rational Application Developer V7.0 is the full function Eclipse 3.2 based development platform for developing Java Version 5 and Java 2 Platform Enterprise Edition (J2EE) applications with a focus on applications to be deployed to IBM WebSphere Application Server and IBM WebSphere Portal. Rational Application Developer provides integrated development tools for all development roles, including Web developers, Java developers, business analysts, architects, and enterprise programmers.

Course Objectives:

- Introduction to Rational Application Developer
- Develop applications
- Test and debug applications
- Deploy and profile applications
- Team development

Audience:

This course is intended for practicing and aspiring Java software developers and Java architects.

Prerequisites:

To benefit from this course, students should:

Have practical experience with software development processes.

Be familiar with visual modeling (UML preferred).

Have at least an entry-level familiarity with Java programming.

Course Content:**Chapter 1 - About the Course**

- Course Contents
- Overview
- Audience
- Course Objectives

Chapter 2 - Product Overview

- Topics
- Introduction
- Rational Software Development Platform
- Summary of New Features and Benefits

Chapter 3 - Getting Started with RAD

- Topics
- Workspace
- Log Files
- Workbench Preferences

- IDE
- Quick Tour
- Perspectives
- Views
- Editors
- Switching Perspectives
- Available Perspectives
- Projects
- Types of Projects
- Creating a New Project
- Project Properties

Chapter 4 - Java Development with RAD

- Topics
- Creating Projects
- Creating Packages
- Creating Classes
- Generating Getter and Setter Methods
- Code Assist
- Running Applications
- Miscellaneous Features
- Source Features
- Line Numbers
- Refactor
- Search
- Maximize/Restore
- Creating Applets
- Creating HTML Files
- Using the Visual Editor
- Setting JFrame Properties
- Adding Events
- Launch Configurations

Chapter 5 - JSP and Servlet Development

- Topics
- Servlets Review
- Creating Dynamic Web Projects
- Test the Servlet
- Java Server Pages Review
- Creating JavaServer Pages
- Custom Tag Review
- Custom JSP Tag Library
- Create a Basic TLD File
- The Tag Handler
- Creating a Basic Tag Handler Class
- The JSP File
- Creating a Simple JSP file Using Tags

Chapter 6 - Struts Development

- Topics
- Struts Review
- Struts Architecture
- Getting Started with Struts

- Creating Dynamic Web Projects for Struts

Chapter 7 - JSF Development

- Topics
- JSF Review
- JSF Lifecycle
- JSF Components and the View Tree
- Creating JSF Projects
- Designing a Page with JSF Components
- Using JSF Components
- Using the Palette
- Using the Properties Editor
- Building Navigation
- Behind the Scenes
- Event Handling in a Backing Bean
- Use Managed Beans to Share Data
- Adding a Managed Bean Entry
- Using the Managed Model Bean
- Running the Application

Chapter 8 - JDBC and Derby

- Topics
- Overview
- Creating Dynamic Web Projects
- Create the Derby Database
- Create a JSP for Direct JDBC Access
- Create a Connection Pool
- Create a JSP for Connection Pool

Chapter 9 - Log4j

- Topics
- Overview
- Creating a Classpath Variable for the LOG4J JAR File
- Create a New Project and Add the Classpath Variable
- Create Properties File
- Create a New Package
- Create a Class to use log4j
- Use a Log File

Chapter 10 - JUnit

- Topics
- Overview
- Create a new Project and add the Classpath Variable
- Create a new Package
- Create a Class to Test
- Create a new TestCase

Chapter 11 - EJB Development

- Topics
- EJB Review
- Session Beans
- Entity Beans
- Message Beans

- The EJB Container
- Developing Enterprise Beans
- Remote and Home Interfaces
- Business Methods
- Session Beans
- Entity Beans
- Life Cycle Methods
- Enterprise Beans as Distributed Objects
- Session Type Enterprise Beans
- Stateless Session Beans
- Create a new Enterprise Application Project
- Stateful Session Beans
- Creating a Stateful Session Bean
- Entity Type Enterprise Beans
- Container-Managed Persistence
- Home Interface
- Remote Interface
- Callback Methods
- Container-Managed Persistence in EJB 2.0
- CMP and CMR Fields
- Entity Bean Relationships
- Bean Interfaces and Implementation
- Query Language
- Creating a Database
- Creating a CMP Entity Bean
- Bean-Managed Persistence
- Creating a BMP Entity Bean

Chapter 12 - Performance Tips

- Topics
- Build Automatically and Refresh Workspace
- Closing Editors
- Quick Diff
- Links Builder
- Validation
- Close Projects
- Defragmenting
- Fresh Workspace
- Task Manager
- Shutting Down RAD
- Swapping
- JVM Tuning
- Test Server Tips
- Restart the Project instead of the Server
- Server Startup Options
- Options from Admin Console

Chapter 13 - RUP and UML

- Topics
- What is RUP?
- The RUP Process Platform
- Who Should Use RUP?
- Configuring RUP for your Project

- Why Should I use RUP?
- When Should I use RUP?
- Process Advisor
- Process Preferences
- Process Browser
- Process Views in the Process Browser
- Creating a New Process View
- Inserting Custom Nodes
- Deleting Process Views
- Visualize applications with UML
- Unified Modeling Language (UML)
- Browse diagram
- Topic Diagram
- Sequence Diagram
- J2EE visualization

Chapter 14 - Web Services

- Topics
- Overview of Web Services
- Categories of Web Services
- Service roles and interactions
- Web service standards
- Web Services Tools in RAD
- Developing Web Services in RAD
- Service-oriented architecture (SOA)
- Creating a Web Service from a JavaBean
- Creating a Simple JSP to use the Web Service