



J2EE Development with WebSphere Studio Application Developer

- Description:** This class covers how to develop J2EE server-side applications using IBM's WebSphere Studio Application Developer (WSAD).
- Audience:** Experienced Java developers that wish to learn how to use WSAD to create Web and EJB-based applications.
- Prerequisites:** Prior Java programming experience is required.
- Length:** 5 days
- Format:** Lecture with hands-on lab exercises.

Topics Covered:

Chapter 0: Introduction to the Workshop

Chapter 1: J2EE Overview

- What is J2EE?
- J2EE Specifications
- J2EE Vendors
- J2EE Packaging

Chapter 2: WebSphere and WSAD Overview

- WebSphere Application Server (WAS) Versions
- WAS Architectures and Topologies
- Introduction to WSAD
- WSAD Perspectives
- Development and Test Cycle

Chapter 3: Introduction to Servlets

- What is a Servlet?
- Servlets vs CGI

Chapter 4: Programming Servlets

- Servlet Lifecycle
- Servlet API

Chapter 5: Introduction to JSP

- What is a JSP?
- JSPs versus Servlets

Chapter 6: JSP Syntax

- Actions and Directives
- Writing Scripting Elements

Chapter 7: JSPs and JavaBeans

- JavaBeans Review
- JavaBean and JSP Scopes

Chapter 8: Web Applications

- Deployment Descriptor
- WAR and EAR Files

Chapter 9: Combining JSPs and Servlets and MVC

- Forwarding versus Redirecting
- Using Hidden Form Fields

Chapter 10: Introduction to Struts

- Struts Overview
- Actions and ActionForms
- Struts-config.xml
- Deploying a Simple Struts Application

Chapter 11: The Java Naming and Directory Interface (JNDI) API

- Introduction to Naming and Directory Services
- JNDI Contexts
- Binding and Looking Up Objects

Chapter 12: The JDBC API

- JDBC Overview
- Data Sources and Connection Pooling
- JDBC Interfaces
- Queries, Inserts, Updates and Deletes
- Prepared Statements

Chapter 13: The Java Message Service (JMS) API

- Messaging Overview
- Point to Point Messaging
- Publish and Subscribe Messaging
- JMS Message Types
- JMS Message Headers

Chapter 14: Introduction to Distributed Objects

- Overview of CORBA, COM, RMI
- Stubs and Skeletons

Chapter 15: EJB Architectures

- Types of EJBs
- Development Process Overview

Chapter 16: Stateless Session EJBs

- Stateless Session EJB Lifecycle
- Instance Pooling

Chapter 18: Entity EJB Architectures

- Primary Keys
- Container Managed Persistence and Bean Managed Persistence

Chapter 19: Container Managed Persistence EJBs

- Finders and Collections
- Local Interfaces
- Container Managed Relationships

Chapter 20: Introduction to XML

- XML Overview
- Introduction to XML Namespaces
- Introduction to XML Schema
- Introduction to XML Programming (DOM and SAX)

Chapter 21: Message Driven EJBs

- JMS Review
- Asynchronous Processing
- Developing an MDB

Chapter 22: J2EE Design Patterns

- Why Patterns?
- Session Façade
- Data Transfer Object
- Data Access Object

Chapter 23: Introduction to Web Services

- Service Oriented Architectures
- Introduction to SOAP
- Introduction to WSDL
- Introduction to UDDI

Chapter 24: SOAP Fundamentals

- SOAP Messages

- Message Exchange Patterns
- SOAP Faults

Chapter 25: The JAX-RPC API

- RPC versus Document Exchange Message Style
- JAX-RPC Architecture
- JAX-RPC Types
- Serialization