

CIW Enterprise Specialist Series – Course 2: Enterprise JavaBeans (March 2003)

Enterprise JavaBeans is a course that teaches the fundamentals of Enterprise JavaBeans (EJB). Students learn about the Java 2 Platform, Enterprise Edition (2JEE) technologies; EJB concepts, methodology, and development; EJB-compliant servers, and how Enterprise JavaBeans are used by remote client applications. Students also learn about database connectivity and transactions. The course teaches them to develop session beans and entity beans, and offers hands-on experience working with Enterprise JavaBeans.

Topics

Introduction to Server-side Component Software

Client-Server and Multi-Tiered
Architectures
Software Components
Component Architectures
J2EE Technologies
Enterprise JavaBeans

Enterprise JavaBeans Overview

EJB Architecture
Client Interaction with Enterprise
JavaBeans
EJB Container Services
The EJB Home Object
The EJB Object
Types of Enterprise JavaBeans
Deployment Descriptors
The EJB-JAR File

Enterprise JavaBeans Clients

Introduction to EJB Clients
Using JNDI
Creating an EJB Instance
Removing the Enterprise Bean
Client Sample

Creating Session Beans

Creating the Enterprise Bean Class
Stateless and Stateful Session Beans
Writing Business Methods for an
Enterprise Bean
The Home Interface
The EJB Object
Exceptions in EJB
Example: A Session Bean
The Library Application
Introduction to EJB Deployment
The Deployment Descriptor
Environment Data
Using Bean References
Using Resource Factories
Assembler/Deployer Roles with the
Deployment Descriptor
EJB Deployment in an EJB Server

Entity Beans

What Is an Entity Bean?
Primary Keys
Entity Bean Architecture
Bean-Managed Persistence
Entity Bean Methods
Using Finder Methods
The Remote Interface
The Home Interface

Container-Managed Persistence

Introduction to Container-Managed
Persistence
The Primary Key
EJB Methods and CMP
The Deployment Descriptor and CMP
Example: A CMP Entity Bean

Transactions in Enterprise JavaBeans

What Are Transactions?
Participants in Transactions
Properties of Transactions
EJB Transactional Model
Distributed Transactions
Isolation Levels
Transactions in EJB
Container-Managed Transactions
Bean-Managed Transactions

Enterprise JavaBeans Security

Introduction to EJB Security
Defining Users, Principals and Roles
Security and the Deployment
Descriptor

Target Audience

Database developers and administrators, Internet application developers, middleware programmers, Java developers, and client/server developers.

Job Responsibilities

Develop n-tier database and legacy connectivity solutions for Web applications using Java, Java APIs, Java Database Connectivity solutions, middleware tools, and distributed object models.

Prerequisites

Students must have CIW Foundations certification or equivalent experience, and have completed *Java Programming Fundamentals* or have a working knowledge of Java and client and server programming.

Duration

18 hours