

Overview of Java EE Development v5.0

Course Summary

Description

This course provides a coherent, high-level explanation of the Java Platform, Enterprise Edition (Java EE): what sorts of software are created with Java EE; how software is developed for this platform; how it is deployed and put into production; how it can be administered.

Objectives

At the end of this course, students will be able to:

- Understand the role of Java EE in the development of enterprise software in the Java language.
- Understand how Java EE facilitates integration of Java components with non-Java systems including relational databases, the World Wide Web, message queues, CORBA objects, and web services.
- Appreciate the importance of the container/component architecture, which gives Java EE servers the ability to take a great deal of grunt-work off of the shoulders of the application.
- Describe how containers are able to provide enterprise features to compliant application components, such as remote connectivity, scalability, availability, security, and transaction support.
- Explain the use of source-code annotations and XML deployment descriptors as a way of reducing programming workload and communicating with the Java EE application server.
- Understand the deployment process and know the general structure of web, EJB, and enterprise archive files.

Topics

- History and Overview
- Concepts
- Technology
- Tools, Standards, and Portability
- Development and Administration

Audience

The course is designed specifically for non-programmers analysts, managers, technical writers, and anyone who desires a good conceptual understanding of Java EE while not needing to drill down into the details of particular APIs or runtime specifications. Developers may also find this course quite useful as a starting point for one or more of our courses in specific Java EE technology it gives a great sense of the big picture before one dives into the details of Servlets, JSP, JSF, EJB, or Java web services.

Prerequisites

Students should have some prior experience with business software, but there are no formal prerequisites for this course.

Duration

One day

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Course Outline

I. History and Overview

- A. Structured Programming
- B. Object-Oriented Programming
- C. 4GLs and RAD
- D. Java
- E. Java EE and the Outside World
- F. Versions upon Versions

II. Concepts

- A. The Virtual Machine and Runtime
- B. How Does It Work?
- C. Containers and Components
- D. Three Containers
- E. Aspect-Oriented Programming
- F. Java EE as an AOP Platform
- G. Annotations
- H. Deployment Descriptors
- I. Remote Connectivity
- J. Scalability
- K. Availability
- L. Security
- M. Transactionality

III. Technology

- A. JDBC
- B. Servlets
- C. JavaServer Pages
- D. Java Naming and Director Interface
- E. The Component Environment
- F. Multi-Tier Applications
- G. JavaServer Faces
- H. Enterprise JavaBeans
- I. Java Persistence API
- J. Ajax
- K. Java Message Service
- L. APIs for Web Services

IV. Tools, Standards, and Portability

- A. Java IDEs
- B. Web Servers and Containers
- C. Application Servers
- D. Standards and Portability
- E. What Is and Isn't Standardized
- F. Beyond Java EE

V. Development and Administration

- A. Development Process
- B. Assembling WARs and EJB JARs
- C. Assembling EARs
- D. Verifiers
- E. External Resources
- F. Administrative Tools
- G. Administrative Tasks
- H. Remote Administration and Domains