



Java Web Services
A Part of the *Java: Under the Hood* Series

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Course Description

Web Services is a term used to describe a mechanism for the creation and deployment of B2B (business-to-business) applications. Web Services comprises several technologies: XML is the foundation of Web Services, SOAP provides the mechanism for remote procedural calls, the Web Services Definition Language (WSDL) provides a way to define services, and Universal Description, Discovery, and Integration (UDDI) provides a mechanism for Web Services to be discovered. This course discusses each of these technologies and how they are implemented in Java.

Course Length:

4 days

Audience:

This course is intended for intermediate Java programmers who want to learn about Web Services and how they are implemented using Java. Students should be knowledgeable in the writing and compiling of Java classes. Helpful prerequisites include knowledge of RMI and an understanding of distributed computing, serialization and Java interfaces.

Prerequisites:

Attend the Java: Under the Hood - Advanced Java Programming course, or possess the equivalent knowledge of Java programming, serialization, RMI and JDBC.

Objectives:

- Understand the goals and purpose of the Web Services architecture.
 - Learn the various technologies that comprise Web Services.
 - Understand how XML makes Web Services possible.
 - Learn about the various Web Services vendors and products available for development and deployment of Web Services applications.
 - Understand the SOAP architecture and how to implement SOAP in Java.
 - Understand and learn how to use the Web Services Definition Language (WSDL).
 - Learn about the various Java Web Services APIs, like JAX-RPC, JAXM, SAAJ, and JAXP.
 - Design, develop and deploy a Web Services application using Java.
 - Understand the UDDI architecture and how to implement UDDI in Java.
 - Learn how Web Services relate to J2EE applications.
 - Access a Web Service using various types of clients, including stand-alone client applications and J2EE component clients.
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Weekly Schedule

The following is a tentative schedule for the pacing of the course. The actual flow of the course may vary.

Day One

- Chapter 1, *Overview of Web Services*
- Chapter 2, *XML*
- Chapter 3, *JAXP*

Day Two

- Chapter 4, *SOAP*
- Chapter 5, *SAAJ*

Day Three

- Chapter 6, *WSDL*
- Chapter 7, *JAX-RPC*

Day Four

- Chapter 8, *UDDI*
- Chapter 9, *Web Services and B2B*

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