

Creating Web Services Using Java Technology (DWS-3111-EE5)

Days: 3

The Creating Web Services Using Java Technology course provides business component and client developers with the information they need to create, implement, and deploy web services and web service clients using Java technology components and the Java Platform, Enterprise Edition 5 SDK (Java EE 5 SDK). The students perform the course lab exercises using the NetBeans 5.5 Integrated Development Environment (IDE) and Sun Java System Application Server Platform Edition 9.0.

Languages

English

Who Can Benefit

Students who can benefit from this course are business component and client developers who are interested in incorporating web service technology in Java and Java EE 5 platform applications.

Prerequisites

To succeed fully in this course, students should be able to:
Implement and deploy a Java EE platform application containing web-tier and Enterprise JavaBeans (EJB) components
Assemble, deploy, and test a distributed Java platform technology application
Use the Ant build environment (or other tool sets required by the labs)

Skills Gained

Upon completion of this course, students should be able to:
Identify the building blocks of web services
Analyze the Java web services technology and platform
Implement XML processing APIs
Explain and monitor SOAP messages
Apply SOAP With Attachments API for Java (SAAJ) in web services
Explain the Web Services Description Language (WSDL) and create a WSDL file
Recognize the role of a Service Registry
Implement Java API for XML Web Services (JAX-WS) technology
Develop web service clients

Related Courses

Before:

Developing Applications for the Java EE Platform (FJ-310-EE5)
Object-Oriented Analysis and Design Using UML (OO-226)
Overview of XML (WJO-1115)
Web Services Infrastructure and Organizations (WJO-1114)
Web Services Enabling Technologies (WJO-1118)

After:

Designing Java Web Services (DWS-4112-EE5)

Developing Secure Java Web Services (DWS-4120-EE5)

Course Content

Module 1 - Identifying the Building Blocks of Web Services

Define a web service

Explore the need for web services

Identify the characteristics of a web service

List the primary web service initiatives, specifications, and Application Programming Interfaces (APIs)

Recognize the Web Services Interoperability Organization (WS-I) Basic Profile and its importance to the web services community

Examine the sample application

Recognize the various example and demonstration scenarios used in this course

Deploy and test the sample application

Module 2 - Analyzing the Java Web Services Technology and Platform

Deploy and test a web service as a servlet endpoint

Deploy and test a web service as an Enterprise JavaBeans? (EJB?) component endpoint

Run client applications that consume a web service

Module 3 - Applying XML Processing APIs

Apply Java Architecture for XML Binding (JAXB) in a REST-based web service

Apply Simple API for XML (SAX) to format the output of a REST-based web service

Module 4 - Examining SOAP Messages

Examine various SOAP messages

Monitor SOAP messages being transmitted from a web service to a client and review SOAP fault messages

Module 5 - Developing Web Services Using the SOAP With Attachments API for Java (SAAJ)

Create a web service using SOAP with Attachments API for Java (SAAJ)

Consume a SAAJ-based web service

Module 6 - Explaining the Web Services Description Language (WSDL)

Identify the abstract model and concrete model of a WSDL file

Create a WSDL file to describe a web service

Module 7 - Recognizing the Role of Service Registry

Describe the purpose of a service registry

Describe Universal Description, Discovery, and Integration (UDDI)

Describe electronic business XML (ebXML)

Identify the features of the ebXML registry

Use the Java API for XML Registries (JAXR) to access an ebXML registry

Describe the JAXR API

Module 8 - Implementing Web Services Using Java API for XML Web Services (JAX-WS) Technology

Create a web service from a WSDL file

Create a JAX-WS web service as a servlet endpoint

Create a JAX-WS web service as an EJB component endpoint

Module 9 - Developing Web Service Clients

Create a JAX-WS web-service client using a Dynamic Proxy
Enable a web application to consume a JAX-WS-based web service