



Advanced XML and XSLT

Course ISI-1137B 2 Days Instructor-led, Hands-on

Course Description

In this two-day course students will learn advanced features of XML. Through lecture and hands-on lab exercises, they will extend their capabilities in XML Schema, XPath, and XSLT. In addition, new topics such as XQuery and features of XSLT 2.0 will be discussed.

Audience

XML developers who need to use some of the advanced features of XML

At Course Completion

Upon successful completion of this course, students learn:

- XML Schema advanced features
- XPath and XSLT advanced features
- XQuery
- Features of XSLT 2.0

Prerequisites

Students should attend Course ISI-1136B, Introduction to XML and XSLT or have equivalent experience. Some XML development experience is helpful.

Course Outline

Module 1: Defining New Types Using Schemas

- Substitution Groups
- All and Choice Elements
- Simple Type Restrictions
- Pattern and Enumeration Facets
- Complex Types and Extensions
- Complex Types and Restrictions
- The Final Attribute

Module 2: Additional Schema Elements

- Uniqueness
- Keys and Keyref
- Groups
- Attribute Groups

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- redefine
- Allowing Any Content
- Mixed Content
- Documentation Schemas

Module 3: Using XML Schema with Namespaces

- Qualified and Unqualified XML with a Schema
- Associating a Schema with a Namespace
- Controlling Element and Attribute Qualification
- Merging Schema with the Same Namespace
- Merging Schemas with Different Namespaces

Module 4: Generating Output with XSLT

- Output Methods
- HTML Output
- Plain Text Output
- XML Output
- `xsl:element` and `xsl:attribute`
- Attribute Value Templates
- `xsl:attribute-set`
- Text, Processing-Instructions, and Comments
- Working with Namespaces

Module 5: Using XPath and XSLT Functions

- XPath Datatypes and Functions
- Node Test Functions
- Node Set Functions
- Boolean Functions
- String Functions
- Number Functions
- XSLT Functions
- The `document()` Function
- `xsl:key` and the `key()` Function

Module 6: Advanced XSLT

- Copying Elements
- Numbering
- Variables
- Parameters
- Using Other Stylesheets
- Apply-imports
- Template Rule Conflicts



- Extensions

Module 7: XSLT and XPath 2.0 New Features

- XSLT 2.0 Grouping Elements and Functions
- User-Defined XSLT Functions
- Multiple Output and XHTML Documents
- Temporary Trees
- Sequences
- Types
- Stylesheets That Are Schema-Aware
- Character Mapping
- Regular Expressions