XML200: XSLT Stylesheets

Code: XML200 Duration: 3 days

Audience:

Application developers, Web developers and project managers who want to learn XSLT to apply XML formatting and transformation.

Prerequisites

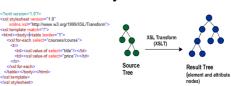
Knowledge of HTML and XML syntax is required. Knowledge of the basic aspects of programming is beneficial.

Realization:

The theory is discussed on the basis of presentation slides. The theory is clarified using demos and interspersed with exercises. The course material is in English.

XSL Transform (XSLT) Source Tree (element and attribute nodes) Result Tree (alement and attribute nodes)

XSLT Stylesheets



Contents:

In the course it is discussed how the XSLT language can be used for formatting and transforming XML documents. The widely spread XSLT version 1.0 as well as the more recent XSLT version 2.0 are addressed. Both transformations from XML to HTML and XML to XML are part of the subject matter. Attention is paid to navigating XML documents through XPath axes and the use of XPath expressions. A main focus point in the course is the principle of template matching using XSLT. The XSLT elements dealing with flow control are discussed as well as those for copying elements. Also the use of generic templates and applying these templates and the use of named templates and calling them is on the course schedule. Further attention is paid to the transformation of attributes to elements and vice versa. The difference in applying an XSLT transformation on the client side versus on the server side of applications is also part of the subject matter. Finally the transformation to various other formats is addressed and in this respect a separate module is devoted to the transformation language XSL-FO and transformations to PDF.

Module 1: XSL Intro

The XSL Family
What is XSLT?
What is XPath?
XSL's position
XSLT Stylesheets
XSLT Processing
StyleSheet Blueprint
The XSLT Vocabulary
Template Rules
xsl:apply-templates
XSLT Document Structure
Results
xsl:output
XSLT Processors
Processors Implementations
XSLT Extensions

Module 4: XSLT variables

xsl:variable
xsl:variable with subtree
Scope and working of xsl:variable
Global Variables
Changing Variables
Tracing output
xsl:param
Passing Parameters to templates
Named templates
Call by reference

Module 7: XPath 2.0

XPath 2.0 Changes XPath 2.0 Data Model Sequences For Expressions Conditional Expressions

Module 2: XML to HTML Transformation

Transformation to HTML
Adding a stylesheet
HTML in XSL Stylesheet
Extracting values from XML
Navigating the XML document
Using Predicates
Iterating through XML elements
Creating a HTML Table
Absolute and relative path
Conditional Processing
Accessing other document parts
Using the ..// operator
Other ways to access XML data
Access XML data with Nodelists
Internal hyperlinking
Numbering
Sorting
XHTML

Module 5: XSLT and XPath Functions

concat function
contains function
substring function
starts-with function
translate function
arithmetic functions
document function
id generation
XSLT 2.0 and XPath 2.0 functions
Using curly braces

Module 8: XSLT 2.0

XPath 2.0 Typing Temporary Trees Sequences User-Defined Functions Grouping Multiple Result Trees Text Processing Stylesheet Structure

Module 3: XPath 1.0

XPath Expressions
XPath Node Types
XPath Context
XPath Location Steps
Peer Axis Types
Descendent Axis Types
Ancestor Axis Types
Location Path Syntax
Predicates
Functions
XPath 1.0 Operators
XPath 1.0 Functions
Node Tests in XPath
XPath 1.0 Data Types
Namespace Nodes

Module 6: XML to XML transformation

Transformation language
Example Filtering
xsl:element
XML Document Structure
Losing Attributes
Selecting all elements and attributes
Using the name function
xsl:attribute
Document copy
Generalization
Default template rules
Multiple applicable rules
xsl:import
White space handling

Module 9 : XSL-FO

What is XSL-FO? XSL-FO Documents Layout Master set and page masters Basic XSL-FO Document structure XSL-FO Areas XSL-FO Pages Static content and flows Page Sequences Tree for pagination