

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.

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

Category :



XML

```
<?xml version="1.0"?>
<xsl:stylesheet version="1.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:template match="/">
<html><body><table border="1">
<xsl:for-each select="courses/course">
<tr>
<td><xsl:value-of select="title"/></td>
<td><xsl:value-of select="price"/></td>
</tr>
</xsl:for-each>
</table></body></html>
</xsl:template>
</xsl:stylesheet>
```

XSLT Stylesheets

This section contains two examples of XSLT stylesheets. The first is a complete stylesheet that transforms an XML document into an HTML table. The second is a partial stylesheet snippet showing a template rule for a table row. Both examples include the XSL Transform (XSLT) diagram.

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