

Course duration

- 5 days

Course Benefits

- Learn to use XPath to access XML elements and attributes
- Learn to loop through XML elements
- Learn to use conditionals in XSLT
- Learn to create and call templates
- Learn to work with multiple XSLTs
- Learn to reference external XML documents
- Learn how the Formatting Objects (FO) language works
- Learn to auto-generate FO documents from XML with XSLT
- Learn to use a Formatting Objects Engine to generate PDF documents from XML

Course Outline

1. XSLT Basics
 1. eXtensible Stylesheet Language
 2. An XSLT Stylesheet
 1. `xsl:template`
 2. `xsl:value-of`
 3. Whitespace and `xsl:text`
 3. Output Types
 1. Text
 2. XML
 3. HTML and XHTML
 4. XSLT Elements and Attributes
 1. `xsl:element`
 2. `xsl:attribute`
 3. Attributes and Curly Brackets
2. XPath Path Expressions
 1. XPath in XSLT
 2. XPath Expression
 3. XPath Terminology
 1. Context Node
 2. Current Node
 3. Context Size
 4. Proximity Position
 4. Location Paths
 5. Axis

6. Node Test
7. Predicate
8. Accessing Nodes
9. Abbreviated Syntax
3. XPath Language Basics
 1. XPath Functions
 2. XPath Operators
 3. XPath Data Types
 4. XPath Expressions
 1. for Expressions
 2. if-then-else Expressions
4. Flow Control in XSLT
 1. Looping in XSLT
 2. Sorting with XSLT
 3. Looping and Sorting
 4. Conditions with XSLT
5. XSLT Templates, Parameters and Variables
 1. `xsl:apply-templates`
 2. `xsl:call-template`
 3. Passing Parameters
 4. Removing Content
 5. Template Modes
 6. Template Priority
 1. Default Priorities
 2. Assigning Priorities
 7. XSLT Variables
6. Multiple XML and XSLT Documents
 1. Including XSLTs
 2. Importing XSLTs
 3. Conflict resolution
 4. The `document()` Function
 5. The `collection()` Function
 6. Multiple Result Documents
7. Grouping
 1. The `xsl:group` Element
 2. Grouping by Value
 3. Grouping Adjacent Elements
 4. Grouping by Starting and Ending Elements
8. Regular Expressions
 1. Regular Expression Syntax in XSLT
 2. The `xsl:analyze-string` Element
 3. Built-in Functions that Use Regular Expressions
9. User-Defined Functions
 1. The `xsl:function` Element
 2. Function Names and Parameters
 3. Calling User-Defined Functions
10. Advanced XSLT Techniques

1. Working with Namespaces
 1. What Are Namespaces?
 2. Declaring Namespaces in XSLT
 3. Namespace Declarations and XPath Expressions
 2. Working with Keys
 1. Key Basics
 1. <xsl:key/>
 2. The key() Function
 3. Improving Performance with Keys
 1. Cross References
 2. The Key Way
 2. The generate-id() Function
 3. Working with Numbered Lists
 1. The position() function
 2. xsl:number
 4. Outputting Processing Instructions
 5. Copying Nodes
 1. xsl:copy
 2. xsl:copy-of
11. Tying It All Together
1. Workshop: Sharing data and transforming it for the Web
-
1. Formatting Objects Basics
 1. The purpose of XSL-FO
 2. How XSL-FO Works
 1. XSL-FO Document Parts
 2. An XSL-FO Example
 3. The Root Element: root
 4. layout-master-set and simple-page-master
 5. Regions
 6. page-sequence
 7. flow and static-content
 8. block
 3. Static Content
 1. region-before and region-after
 2. static-content
 2. Blocks and Inlines
 1. Formatting Blocks
 1. Box Model
 2. Border
 3. Space, Indent and Padding
 4. Background
 5. A Formatting Example
 6. Formatting Text
 2. Inline Elements
 3. Inheritance
 1. wrapper

- 4. Creating Lists
 - 1. list-block
 - 2. list-item
 - 3. list-item-label
 - 4. list-item-body
- 5. Whitespace
- 3. Page Layout
 - 1. Page Masters
 - 2. Simple Layout
 - 1. fo:simple-page-master
 - 2. fo:region-body
 - 3. fo:region-before, fo:region-after, fo:region-start, and fo:region-end
 - 3. page-sequence-master
 - 1. Creating a Cover Page
 - 2. Odd and Even Pages
 - 4. Blank Pages
 - 1. break-before and break-after
 - 5. Columns
- 4. Links and Graphics
 - 1. External Links
 - 2. Graphics
 - 3. Internal Links
- 5. Tying It All Together: XSL-FO
 - 1. Tying it all Together
- 6. Keeps, Orphans, and Widows
 - 1. Keep Constraints
 - 1. keep-with-previous and keep-with-next
 - 2. keep-together
 - 2. Orphans and Widows
- 7. Leaders, Markers and Page Numbers
 - 1. The Output
 - 2. Table of Contents
 - 1. Page Numbering
 - 3. Leaders
 - 4. Markers
- 8. Tables
 - 1. Creating Tables
 - 1. fo:table
 - 2. fo:table-column
 - 3. fo:table-header, fo:table-body, fo:table-footer
 - 4. fo:table-row
 - 5. fo:table-cell
- 9. Footnotes and Floats
 - 1. Footnotes
 - 1. xsl-footnote-separator
 - 2. Floats

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

Experience in the following *is required* for this XML class:

- Basic XML

Prerequisite Courses

Courses that can help you meet these prerequisites:

Follow-on Courses

- [Introduction to XML Schema](#)