

Introduction to XML

Duration:	2 days
Type:	beginner

Description

This is a fast paced introductory course designed for experienced developers who will be using XML to build and configure their applications. By the end of the course delegates will be able to edit XML documents, read XML Schemas and XSLT Stylesheets and write XPath expressions and XQuery database queries.

In examples where coding is required Java is used by default, however the course can also be delivered using C# if required.

Prerequisites

Delegates should be experienced at writing HTML pages. Knowledge of Java and/or C# is required for some parts of the course.

List of Modules

History and Uses of XML

- The Evolution of XML from SGML
- Using XML in software development
- XML and the Semantic Web
- How XML enables Web Services

Creating Well Formed XML

- The basic rules of XML syntax
- Thinking in terms of elements and not tags
- Why there is a single document element
- The tree structure created by XML docs
- Choosing between the four content models
- When to use attributes rather than elements
- How namespaces allow multiple languages to be used in the same XML document
- Tips for creating readable XML documents

Introducing XML Schema

- The structure of an XML Schema
- Referencing a single schema in an instance
- Referencing multiple schemas in an instance
- The XML Schema data types

Writing XML Schemas

- Declaring simple content models
- Declaring complex content models
- Building elements using nested types
- Creating and referencing global elements
- Creating and referencing complex types

Understanding XPath

- Nodes and axes of the XPath data model
- The structure of an XPath expression
- Writing complex XPath expressions

Creating XSLT Stylesheets

- The push and pull approaches
- Calculating result text
- Template rule selection
- Built in template rules
- Resolving conflicting templates
- The XSLT transformation environment
- Serializing the XSLT result tree

Advanced XSLT Stylesheets

- Modularizing stylesheets
- Calling named templates
- Variables and parameters
- Including external stylesheets
- Importing external stylesheets
- Source tree numbering
- Deep and shallow copying
- Sorting and grouping elements

Introduction to XQuery

- The evolution of XQuery
- Comparing XQuery with XSLT
- The FLWOR structure of a query
- Writing simple and complex queries

Manipulating XML in Java

- Using JAXP to find XML Parsers
- Using JAXP to find XSLT Engines
- Manipulating DOM trees in Java
- Reading documents using SAX
- Java specific API's No1: JDOM
- Java specific API's No2: StAX