

XML in 4 modules

Course description

This course in 4 modules of 1 half day introduces you to XML as an important new Internet standard. It provides an overview of the uses of XML, discusses the related XML standards and demonstrates some of the commercial XML tools you can buy and use. The course also includes an overview of the DTD syntax that you need to know to define XML documents, compares DTDs to XML Schemas, introduces you to the XSL programming you need to know to style XML documents, and will teach you just enough about SAX, DOM and XQL to start processing XML in your programs. At the end of the 4 modules, you will have gained a practical understanding of XML and all the related standards, and you will clearly understand where XML technology could be successfully used in your own IT projects.

Who should attend

- IT project managers who want to know where and when XML can be successfully used
- Software developers who need to understand the technical possibilities and limitations of XML
- Web developers who are familiar with HTML, but want to learn what XML and XSL have to offer

What you will learn

- What XML is and what you can do with it
- What other XML standards you need to know
- What XML can be used for (and shouldn't be used for)
- How you can define and edit XML documents
- How you can style and display XML documents
- How you can process and query XML documents
- What tools are already available for developing XML

Topics discussed

MODULE 1: UNDERSTANDING XML

- **An introduction to XML**
 - The key concepts behind XML
 - The differences between XML and SGML
 - Examples of the use of XML as a document/data format
 - § as a document format: XHTML, XFDL, ...
 - § as a data format: WML, SOAP, ...
- **An overview of XML standards**

○ syntax: namespaces	defining: DTD, XML Schema
○ querying: XPath, XQL, XQuery	rendering: XSLT, XSLFO
○ linking: XLink, XPointer	accessing: SAX, DOM, JDOM

MODULE 2: CREATING XML

- **XML fundamentals**
 - What's inside an XML document?
 - Well-formed/valid XML documents
 - Why do we need validation anyway?
- **Designing and defining XML**
 - Understanding basic DTD syntax
 - How to design, develop and use an XML DTD?
 - Examples using Near & Far *Designer*
 - Why DTDs aren't enough: XML Schemas

- An overview of DTD / Schema editors
- **Creating and validating XML documents**
 - Editing well-formed/valid XML documents
 - Examples using SoftQuad *XMetaL*
 - An overview of XML editors / XML parsers

MODULE 3: STYLING XML

- **Transforming XML**
 - Understanding XSL
 - § What's the difference with CSS?
 - § The XPath syntax and data model
 - § The XSLT syntax and processing model
 - Developing XSL
 - § Push vs. pull XSL stylesheets
 - § Tips on XSL stylesheet development
 - § Examples using eXcelon Corp. *Stylus*
- **Displaying XML**
 - Using XSL in the browser
 - § How to display XML in a browser: CSS or XSL?
 - § Transforming XML into HTML: client-side or server-side?
 - § Examples using Microsoft *Internet Explorer* and Netscape *Navigator*
 - An overview of XML viewers / XSLT processors / XSL editors

MODULE 4: WORKING WITH XML

- **Processing and programming XML**
 - Understanding SAX
 - § The concepts behind SAX
 - § SAX fundamentals
 - Understanding the DOM
 - § The concepts behind the DOM
 - § DOM fundamentals
 - Using the DOM in the browser
 - § Manipulating XML documents using the DOM
 - § Examples using Microsoft *Internet Explorer*
 - An overview of XML parsers
 - § On the Microsoft (.NET) platform
 - § On the Java platform
 - § Parser generators
- **Storing and querying XML**
 - Storing XML
 - § XML document repositories
 - § What's special about XML dataservers?
 - § XML and (object-)relational databases
 - Querying XML
 - § XQuery: the new XML Query language
 - § What came before: XPath and XQL
 - § Examples using eXcelon Corp. *eXcelon*
 - § An alternative to XML querying: indexing & search

Course presenter

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