

XML Course Overview

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Motivation for XML

- Increased semantics
 - Author in <author> not <center>
- Robust decentralized data interchange
 - Adequate abstract data type (ADT) language
 - Capability for meta-information
- Increased processing efficiency
 - Author is child 2 of element 2 of root
 - Authoritative source with multiple derivative transformations
 - Rendering as a transformation to a style standard
- Linking improvements
 - Extended and external links
 - Non-intrusive pointers

Course Overview

- An introduction to structured documents
- An overview of XML
- XML
 - XPath and XSLT
 - XSLT and Rendering (formatting objects)
 - Schema and Document Definition
 - Namespaces
 - Datatypes
 - XPointer and XLink
- Programmatic Processing of XML
 - DOM and SAX

What is not covered

- Metadata models for XML
 - Models
 - RDF
 - Topicmaps
 - Implementations
 - Dublin Core/Warwick Framework
 - PICS
- Analysis and Design using XML
 - Document Content Models
 - Transformation and Specialized Applications (WAP)
 - Business Processes and Object Access
 - Simple Object Access Protocol (SOAP)
 - Universal Description, Discovery, and Integration (UDDI)

Resources

- Books
 - XML Bible, Elliotte Harold, (2001) ISBN: 0764547607
 - Professional XML, (2000) Wrox Press; ISBN: 1861003110
 - Beginning XML, (2000) Wrox Press; ISBN: 1861003412
- Tools
 - LT XML version 1.2 (a development tool set)
<http://www.ltg.ed.ac.uk/software/xml/>
 - The Apache XML Project (Xerces & Crimson - XML parsers ; Xalan - XSLT processor; FOP - XSL formatting objects; SOAP - Simple Object Access Protocol)
<http://xml.apache.org/>

A Word of Preparation

- XML is a set of specifications or standards
- While most have achieved some level of stability,
 - There are still competing approaches
 - Some evolution of the specification is normal
 - The standards are defined with an eye to extensibility
- Even with stable standards, tools need to implement the specification and it is likely:
 - Some tools will be non- or minimally compliant
 - Some tools will implement supersets of functionality