

IS 621 Web Content Management

Course Overview

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Course Aims

- Introduce XML (Extensible Markup Language) and related XML technologies and their application in representing and transforming of data and text
- Understand content management concepts and practices
- Create a CMS using Joomla!
- Understand XML concepts and its merits and limitations in content management
- Understand the syntax and structure of DTDs/schemas and XML documents
- Model and specify XML vocabularies and structures based on analysis of application domains
- Create XML transformation and stylesheet programs to render XML documents in HTML
- Design and implement simple XML applications by using XML tools and joomla!.

Outcomes

■ Assessable outcomes:

- The use of XML to represent data and provide information:
 - XML Schema, and also an understanding of the transformation of XML documents using the transformation language XSLT,
 - DOM (Document Object Model) or SAX (Simple API for XML),
 - The use of tools for querying (XQuery) and navigating (XPath) through XML documents.
- What a CMS is, how to design the XML schemas, and how to create and manipulate XML documents.
- The manipulation of XML data: the standards, namespaces and schemas, XML Transformation Language, and mapping between XML and relational databases.

■ Additional outcomes:

- Installing, setting up, and using Open Source CMS: Joomla!

Grade Distribution and Important Dates

■ Assessment:

- Assignments and presentation of research papers 15%

- **date :**

- **Given week 4**

- **Presentation Week 11**

- Mid-Term Exams 25%

- **date : Week 8**

- Project (Report and Presentation) 20%

- **date :**

- **Given week 3**

- **Report: Week 13**

- **Presentation: Week 15**

- Final Exam 40%

- **date : To be determined**

Total 100%

Summary of Methods

- Lectures
- Directed Reading – a vast reservoir available on the Web!
- Discussion sessions – happy to talk after lecture
- Coursework
- Examination

Course Policies

- No late project will be accepted
- Students are encouraged to discuss project problems but not copy
- Copying project or home assignments results in zero grading
- All exams are closed book

Course Outline (proposition)

- Introduction to the course
- Introduction to content management system
 - Content modeling
 - XML basics
- Interoperability & XML
 - DTD attributes and entities
 - XML schemas
 - retrieve XML data
- CSS and XSL Transformation
- XML and CMS
- Creating an XML-based CMS

Reference Material

■ Required:

- ☐ Boiko, Bob. (2004) Content Management Bible, 2nd Edition. New York: Wiley.
- ☐ Harold, Elliotte Rusty. (2004). XML 1.1 Bible, 3rd Edition. New York: Wiley.

■ Optional:

- ☐ Patrick Carey, Carey Associates, Inc. (2007) New Perspectives on XML, Second Edition, Comprehensive 2e. South Western. Cengage.

XML & W3C

■ <http://www.w3.org/XML/>



about XML . [XML Activity Statement](#)

Extensible Markup Language (XML)

1. [Introduction](#)
2. [Working Groups](#)
3. [Events](#)
4. [Other Resources](#)
5. [Contact](#)

Recent: [Balisage Conference](#) [\[details\]](#)

Nearby: [XML Specifications](#) and [Translations](#) of them.

Introduction

Extensible Markup Language (XML) is a simple, very flexible text format derived from SGML (ISO 8879). Originally designed to meet the challenges of large-scale electronic publishing, XML is also playing an increasingly important role in the exchange of a wide variety of data on the Web and elsewhere.

This page describes the work being done at W3C within the XML Activity, and how it is structured. Work at W3C takes place in *Working Groups*. The Working Groups within the XML Activity are listed below, together with links to their individual web pages.

You can find and download formal technical specifications here, because we publish them. This is **not** a place to find tutorials, products, courses, books or other XML-related information. There are some links below that may help you find such resources.

You will find links to W3C Recommendations, Proposed Recommendations, Working Drafts, conformance test suites and other documents on the pages for each Working Group. Each document also contains email addresses you can use to send comments or questions, for example if you have been writing software to implement them and have found problems or errors.


Please do **not** send us email asking us to help you learn a language or specification; there are plenty of resources online, and the people editing and developing the specifications are very busy. We **are** interested in technical comments and errata.

If your organization would like to join the W3C, or if you would like to participate formally in a working group (and have the necessary resources to attend meetings), you can read more [about the Consortium](#).

XML & W3C

■ <http://www.w3.org/TR/xmlschema-0/>

W3C Recommendation



XML Schema Part 0: Primer Second Edition

W3C Recommendation 28 October 2004

This version:

<http://www.w3.org/TR/2004/REC-xmlschema-0-20041028/>

Latest version:

<http://www.w3.org/TR/xmlschema-0/>

Previous version:

<http://www.w3.org/TR/2004/PER-xmlschema-0-20040318/>

Editors:

David C. Fallside, IBM <fallside@us.ibm.com>
Priscilla Walmsley <pwalmsley@datypic.com> - Second Edition

Please refer to the [errata](#) for this document, which may include some normative corrections.

This document is also available in these non-normative formats: [XML](#) and [XHTML with visible change markup](#). See also [translations](#).

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Abstract

XML Schema Part 0: Primer is a non-normative document intended to provide an easily readable description of the XML Schema facilities, and is oriented towards quickly understanding how to create schemas using the XML Schema language. [XML Schema Part 1: Structures](#) and [XML Schema Part 2: Datatypes](#) provide the complete normative description of the XML Schema language. This primer describes the language features through numerous examples which are complemented by extensive references to the normative texts.

CMS & Joomla!

■ <http://www.joomla.org/>



The image shows the Joomla! Administration interface. On the left is the 'Administration' sidebar with options like Site, Users, Menu, Content, Components, Extensions, and Help. The main area is titled 'Category Manager: Articles' and displays a table of articles with columns for Title, Status, Ordering, Access, and Language. A 'Batch process the selected categories' section is visible at the bottom of the main area. To the right of the interface is the Joomla! logo and a text block describing Joomla! as one of the world's most popular open source CMS (content management system). Below this text are two buttons: 'Download' and 'Demo'.

Joomla! is one of the world's most popular open source CMS (content management system). With 2.7 percent of the Web running on Joomla, the software is used by individuals, small & medium-sized businesses, and large organizations worldwide to easily create & build a variety of websites & web-enabled applications.

[Learn more about 1.7...](#)

[Download](#) [Demo](#)

JOOMLA! IS EXACTLY WHAT YOU NEED IT TO BE



Infinite Possibilities

Dreaming of building a website you can edit yourself? Want an easier solution to rapidly deploy client sites? Looking for an intranet that will empower your employees. Look no further.

Joomla gives you the tools and power to build standard sites, directories, intranets, social networks, shopping carts, and so much more...

[READ MORE](#)

JOOMLA ANNOUNCEMENTS

Joomla 2.5.0 RC1 Released

The Joomla Project is pleased to announce the availability of Joomla 2.5 RC 1 for download. Version 2.5 is the second release made within the new six-month release cycle that started with the delivery of...

Joomla! Joins Protests Against SOPA

The Joomla! project joins the ranks of US and international internet and technology organizations like Free Software Foundation (FSF), Free Software Foundation Europe (FSFE), Mozilla, Google, Wikipedia, Open Source Initiative, WordPress, and Human Rights organizations...