

This document tracks the time I spent to learn the Online Course "Intermediate to XML", course number X102.21 taken at <http://www.eclasses.org/> from reading the text book, reading online resources, software installations, programming and debugging.

These online classes are primarily conducted via the web board interface - called Web Crossing. You can take a Virtual Tour of an Online Classroom at <http://www.eclasses.org/Demo/> (note: the ".21" in X102.21 refers to the number of times the course has been given).

Total number of hours I spent (details below) = 86.5 hrs

*******Course Description*******

Intermediate XML - course number X102.21

Start Date: 7-January-2007; **Duration:** 6 weeks; **CEUs:** 3.0; **Course Number:** X102.21; **Instructor:** Zarina Vakhitova

- XML is for structuring data
- XML is a Markup Language much like HTML
- XML is extensible. XML tags are not predefined in XML. You must define your own tags
- XML uses a DTD (Document Type Definition) to describe the data
- XML with a DTD is designed to be self-descriptive
- XML is modular
- XML is license-free, platform-independent and well-supported
- XML is going to be everywhere.
- XML is already everywhere.

Programming systems these days are working on many different machines and using many different technologies and programming languages. XML is a modern effort employed to allow communication between all these different systems.

In Introduction to XML course we will cover XML syntax and the most important XML concepts: well-formed and valid XML, DTD, displaying XML with CSS, Namespaces.

How eClasses Work

The classroom environment is based on Lundeen & Associates Web Crossing technology, a threaded messaging system. Instructors post lectures, reading selections, and hands-on assignments once a week in the online classroom. Students can discuss the assignments with the instructor and amongst themselves in the classroom area. **This format has no set meeting time**, which allows students to attend class at a time most convenient to them, yet still provides logically organized communication between class participants. Students can apply for the completion certificate after finishing the class. Web Study certificate is also available. Click on the Certificates link on the top navigation bar for more information.

About eClasses.Org - Affordable Web Technology Learning

Since 1998 eClasses.Org has provided the very best in online training to 45,000 Web developers and other professionals.

It offers a catalog of 40 online courses covering the breadth of Web work, from HTML to Flash; from CSS to XML. All classes are taught by fellow experts and working professionals in the field.

- Online, instructor-led web technology classes
- Affordable and flexible learning solution
- 4 Web certificate programs

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Course Outline:

Week 1: Review of Basic Rules of XML

- Well-formed XML
- Valid XML
- Displaying XML
- Namespaces

Week 2: XML Schema

- What is XML Schema
- XML Schema - Why?
- XML Schema - How to?
- XML Schema Simple Types
 - XML Schema Simple Elements
 - XML Schema Simple Attributes
 - XML Schema Restrictions/Facets
- XML Schema Complex Types

Week 3: XPath

- Axes
- Functions
- Predicates
- Expressions

Week 4: XSLT

- What is XSL?

- XSLT syntax
- Inside XSLT stylesheet
- Some XSLT elements and what they do
- XSLT Functions
- XSL on the client side
- XSL in the server side

Week 5: Integrating XML and Database

- Tools to use with XML and Database
- Storing XML in Database
- Creating XML docs from database

Week 6: Document Object Model (DOM) and XML

- W3C's DOM specification
- How to Modify a document using the DOM
- Add Nodes
- Delete Nodes
- Alter Nodes
- Create a new XML Document with DOM on the server
- Update an XML Document with DOM on the server
- Saving an XML Document on the server

•**Prerequisites:** Students should have good understanding of such concepts as well-formed XML, valid XML, DTD, CSS1, Namespaces, and be proficient in HTML. Good prerequisite would be 'X101 Introduction to XML' course. Although many of the concepts of XML are disjoint from programming it is assumed that the students have had a small amount of programming experience, and have a good understanding of computers. A good pre-requisite would be some Java, C or VB programming. If you have not had any programming experience we would recommend to take 'P010 Introduction to Programming Concepts' course. All development tools used in this course are freely downloadable from the Internet.

Requirements: IE5+ browser installed and running on your computer. MAC users must have OSX or newer or access to an XML enabled server.

Required Book: Beginning XML - Fourth Edition , by David Hunter, et. al, (1039 pp), ISBN:0470114878, Wrox, May 2007.

Instructor: Zarina Vakhitova has great organizational, and technical skills that come from completing a PhD and has worked successfully in the computer industry. She has taken her extensive knowledge in the IT field and started her own company Petrocom Computer School passing on her knowledge to the next generation of IT professionals. Zarina keeps her skills up-to-date by regularly taking on web programming contracts.

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Table of Contents:

Text Book: Beginning XML - Fourth Edition, by David Hunter, et. al, (1039 pp), ISBN:0470114878, Wrox Press, May 2007.

Part I: Introduction.

Chapter 1: What Is XML?

Chapter 2: Well-Formed XML.

Chapter 3: XML Namespaces.

Part II: Validation.

Chapter 4: Document Type Definitions.

Chapter 5: XML Schemas.

Chapter 6: RELAX NG.

Part III: Processing.

Chapter 7: XPath.

Chapter 8: XSLT.

Part IV: Databases.

Chapter 9: XQuery, the XML Query Language.

Chapter 10: XML and Databases.

Part V: Programming.

Chapter 11: The XML Document Object Model (DOM).

Chapter 12: Simple API for XML (SAX).

Part VI: Communication.

Chapter 13: RSS, Atom, and Content Syndication.

Chapter 14: Web Services.

Chapter 15: SOAP and WSDL.

Chapter 16: Ajax.

Part VII: Display.

Chapter 17: Cascading Style Sheets (CSS).

Chapter 18: XHTML.

Chapter 19: Scalable Vector Graphics (SVG).

Chapter 20: XForms.

Part VIII: Case Study.

Chapter 21: Case Study: Payment Calculator.

Chapter 22: Case Study: Payment Calculator—Ruby on Rails.

Appendix A. Exercise Solutions.

Appendix B. XPath Reference.

Appendix C. XSLT Reference.

Appendix D. The XML Document Object Model.

Appendix E. XML Schema Element and Attribute Reference.

Appendix F. XML Schema Data Types Reference.

Appendix G. SAX 2.0.2 Reference.

Index.

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Documentations: The documents - file names - that I wrote/created are:

1. TimeSpentToLearnIntermediateXML.rtf
2. IntermediateXML_X102.21_Reading and Programming Assignments.rtf
3. IntermediateXML_X102.21_QuestionsandAnswers.rtf

Date	Time Spent (hrs)	Description (mainly)
Wednesday December 19, 2007	2.0	Start of Intermediate XML -course number X102.21 Course Officially starts on January 7, 2008. Reading and Documenting course materials at eClasses. org at http://www.eclasses.org/ Documents created are located at: C:\Users\boutros\Documents\My Programs\eClasses.Org\Course_IntermediateXML_X102.21
Tuesday January 1, 2008	2.5	Review Week1 Online Lectures of Introduction To XML class - <i>Well-Formed XML Document</i> - at http://www.eclasses.org/
Wednesday January 2, 2008	3.0	Review Week2 Online Lectures of Introduction To XML class- <i>Valid XML Document</i> - at http://www.eclasses.org/ Review Week3 Online Lectures of Introduction To XML class- <i>XML Attributes</i> - at http://www.eclasses.org/
Thursday January 3, 2008	0.75	Review Week4 Online Lecture of Introduction To XML class - <i>XML Entities</i> - at http://www.eclasses.org/
Friday January 4, 2008	1.0	Review Week5 Online Lectures of Introduction To XML class - <i>Displaying XML Documents</i> - at http://www.eclasses.org
Saturday January 5, 2008	1.75	Review Week6 Online Lectures of Introduction To XML class - <i>XML Namespaces</i> - at http://www.eclasses.org/
Monday January 7, 2008	1.75	Official Start of Intermediate XML -course number X102.21 Documented Week1 Online Lectures of Intermediate XML class - Review

of Basic Rules of XML- at <http://www.eclasses.org/>
Documents are located at: C:\Users\boutros\Documents\My
Programs\Classes.Org\Course_IntermediateXML_X102.21\Lectures\Week4

Read Intermediate XML class -Week1- Online references at:
<http://xml.silmaril.ie/>
<http://www.angelcities.com/>

Tuesday January 8, 2008	2.0	Read Week1 Online Lectures of Intermediate XML class - Review of Basic Rules of XML- at http://www.eclasses.org/ Working on First week Homework for Intermediate XML class.
Wednesday January 9, 2008	4.5	Finished First week Homework for Intermediate XML class. Posted it online at: http://mysite.verizon.net/boutros/XML/Wk1HwRequired.xml http://mysite.verizon.net/boutros/XML/Wk1Hw.css http://mysite.verizon.net/boutros/XML/Wk1Review.rtf
Thursday January 10, 2008	3.25	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 7: [pages 249 -254] Read Intermediate XML class -Week2- Online references at: http://w3schools.com/xpath/default.asp http://www.w3.org/TR/xpath20/ http://en.wikipedia.org/wiki/XPath
Friday January 11, 2008	2.0	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 7: [pages 255 -267]
Saturday January 12, 2008	2.25	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 7: [pages 268 -282] Read Intermediate XML class -Week2- Online references at: http://www.w3.org/TR/xpath-datamodel/ http://www.w3.org/TR/xpath-functions/
Monday January 14, 2008	1.25	Documented Week2 Online Lectures of Intermediate XML class - XPath - at http://www.eclasses.org/ Documents are located at: C:\Documents and Settings\boutros\My Documents \My Programs\Classes.Org\Course_IntermediateXML_X102.\Lectures\Week2
Tuesday January 15, 2008	4.5	Read Week2 Online Lectures of Intermediate XML class - XPath - at http://www.eclasses.org/ C:\Users\boutros\Documents\My Programs\Classes.Org\Course_IntermediateXML_X102.21\Lectures\Week2 Installed freeware XML Copy Editor from: http://xml-copy-editor.sourceforge.net/ Working on Second week Homework for Intermediate XML class.
Wednesday January 16, 2008	2.75	Finished Second week Homework for Intermediate XML class. Posted it online at: http://mysite.verizon.net/boutros/XML/Wk2Hw.rtf
Thursday January 17, 2008	2.25	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 8: [pages 287 -297] Read Intermediate XML class -Week3- Online references at: http://en.wikipedia.org/wiki/XSL_Transformations

Friday January 18, 2008	0.5	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 8: [pages 298 -3]
Saturday January 19, 2008	2.0	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 8: [pages 298 -314]
Sunday January 20, 2008	4.0	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 8: [pages 315 -335] Read Intermediate XML class -Week3- Online references at: http://www.w3.org/TR/xslt Documented Week3 Online Lectures of Intermediate XML class - XSLT - at http://www.eclasses.org/ Documents are located at: C:\Users\boutros\Documents\My Programs\Classes.Org\Course_IntermediateXML_X102.21\Lectures\Week3
Thursday January 24, 2008	2.25	Read Week3 Online Lectures of Intermediate XML class - XSLT - at http://www.eclasses.org/
Saturday January 26, 2008	1.75	Continue-Reading Week3 Online Lectures of Intermediate XML class XSLT - at http://www.eclasses.org/ Read Intermediate XML class -Week3- Online references at: http://en.wikipedia.org/wiki/Internet_Information_Services http://en.wikipedia.org/wiki/Windows_Vista http://en.wikipedia.org/wiki/Active_Server_Pages http://w3schools.com/php/php_install.asp http://en.wikipedia.org/wiki/ASP.NET
Sunday January 27, 2008	4.5	Read Week3 Online Lectures of Intermediate XML class XSLT - at http://www.eclasses.org/ Read Intermediate XML class -Week3- Online references at: http://www.zvon.org/xxl/XSLTutorial/Output/index.html
Monday January 28, 2008	2.75	Finished Third week home works for Intermediate XML class. Posted it online at: http://mysite.verizon.net/boutros/XML/Wk3HW.zip Documented Week4 Online Lectures of Intermediate XML class XML Schema- at http://www.eclasses.org/ Documents are located at: C:\Users\boutros\Documents\My Programs\Classes.Org\Course_IntermediateXML_X102.21\Lectures\Week4\
Wednesday January 30, 2008	0.75	Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 5: [pages 145 -210] !IMPORTANT Read Intermediate XML class -Week3- Online reference at: http://www.perfectxml.com/Quiz/XSLTQuiz.asp
Thursday January 31, 2008	5.25	Read Intermediate XML class -Week4- Online reference at: http://w3schools.com/schema/default.asp Read Week4 Online Lectures of Intermediate XML class - XML Schema- at http://www.eclasses.org/
Friday February 1, 2008,	2.5	Finished Fourth week home works for Intermediate XML class. Posted it online at: http://mysite.verizon.net/boutros/XML/Wk4HW.zip
Monday February 4, 2008	1.5	Read Intermediate XML class -Week5- Online reference at: http://www.w3.org/DOM/ Documented Week5 Online Lectures of Intermediate XML class XML DOM- at http://www.eclasses.org/

Documents are located at: C:\Users\boutros\Documents\My Programs\Classes.Org\Course_IntermediateXML_X102.21\Lectures\Week5\
Read Week5 Online Lectures of Intermediate XML class - XML DOM - at <http://www.eclasses.org/>

Book: Beginning XML: Fourth edition, by David Hunter et. al.
Chapter 11: [pages 443 - 482] !IMPORTANT

Tuesday February 5, 2008	1.5	Reading Intermediate XML class -Week5- Online reference at: http://w3schools.com/dom/default.asp
Wednesday February 6, 2008	4.25	Continue-Reading Intermediate XML class -Week5- Online reference at: http://w3schools.com/dom/default.asp
Thursday February 7, 2008	3.0	Read Intermediate XML class -Week5- Online reference at: http://w3schools.com/dom/default.asp Working on Fifth week homework for Intermediate XML class.
Friday February 8, 2008	3.75	Finished Fifth week homework for Intermediate XML class. Posted it online at: http://mysite.verizon.net/boutros/XML/Wk5HW.zip
Monday February 11, 2008	1.25	Documented Week6 Online Lectures of Intermediate XML class XML and Databases- at http://www.eclasses.org/ Documents are located at: C:\Users\boutros\Documents\My Programs\Classes.Org\Course_IntermediateXML_X102.21\Lectures\Week6\
Wednesday February 13, 2008	2.0	Reading Week6 Online Lectures of Intermediate XML class - XML and Databases- at http://www.eclasses.org/ Read Intermediate XML class -Week5- Online reference at http://msdn2.microsoft.com/en-us/library/ms531386.aspx
Thursday February 14, 2008	5.5	Read Week6 Online Lectures of Intermediate XML class - XML and Databases- at http://www.eclasses.org/ Read Intermediate XML class -Week5- Online reference at http://www.topxml.com/conference/wrox/1999_dc/text/alex.xml.asp?printerversion=true http://www.rpbouret.com/xml/XMLAndDatabases.htm#datatypesetc Book: Beginning XML: Fourth edition, by David Hunter et. al. Chapter 10: [pages 375 - 439] !IMPORTANT

Total = 86.5 hrs

******End of Intermediate XML******
