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This document tracks the time I spent to learn the Online Course "Introduction to XML", course number X101.46 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 ".46" in X101.46 refers to the number of times the course has been given).

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*Total number of hours I spent (details below) = 80.0 hrs*

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\*\*\*\*\**Course Description*\*\*\*\*\*

## **Introduction to XML - course number X101.46**

**Start Date:** 17-September-2007; **Duration:** 6 weeks; **CEUs:** 3.0; **Course Number:** X101.46; **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: What is XML?

- Introduction to XML
- Short history of markup languages
- How does XML differ from HTML?
- How XML can be used?
- Getting your tools ready: XML browsers
- Well-formed XML document
- What is a well-formed XML document?
- XML declaration
- XML elements
- XML attributes
- General XML syntax

#### Week 2: Valid XML document

- Introduction to DTD - Document Type Definition.
- What is a valid XML document?
- Document Type Declaration
- Element declarations
- The internal DTD

- The external DTD

### **Week 3: XML Attributes**

- What is an attribute?
- Attribute declaration
- Attribute types
- Attribute defaults
- Enumerated attributes
- Attributes and CSS

### **Week 4: XML Entities**

- General entities
- Parameter entities
- Character entities
- Entity declaration
- Entity reference
- Escaping data chunks

### **Week 5: Displaying XML documents**

- HTML versus XML
- Introduction to CSS - Cascading Style Sheets
- CSS 1, CSS 2

### **Week 6: XML Namespaces**

- What is an XML namespace?
- Namespace syntax
- Declaring namespaces
- Attributes and namespaces

**Prerequisites:** This course is designed for students proficient in HTML. No previous programming experience is required.

**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. TimeSpentToLearnXML.rtf
2. IntroToXML\_X101.46\_Syllabus\_Reading.rtf
3. IntroToXML\_X101.46\_Reading and Programming Assignments.rtf
4. IntroToXML\_X101.46\_CourseInformation.rtf
5. IntroToXML\_X101.46\_QuestionsandAnswers.rtf

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<b>Date</b>	<b>Time Spent (hrs)</b>	<b>Description (mainly)</b>
Wednesday September 12, 2007	1.75	<b>Start of Introduction to XML</b> -course number <b>X101.46</b> <b>Reading and Documenting</b> course materials at eClasses.org at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a> Documents <b>created</b> are located at: C:\Documents and Settings\boutros\My Documents\My Programs\eClasses.Org\Course_IntroductionToXML_X101.46\
Sunday September 16, 2007	2.25	<b>Continue-Reading and Documenting XML (X101.46)</b> course materials at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a>

Monday September 17, 2007	4.75	<p><b>Read and Documented Week1 Online Lectures</b> of Introduction To XML class - <i>Well-Formed XML Document</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a></p> <p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al.</p> <p><b>Read</b> Introduction; Chapter 1: [pp 1 - 22]; Chapter 2: [pages 23 - 53].</p>
Tuesday September 18, 2007	5.50	<p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. Chapter 2: [pages 54 - 66]</p> <p><b>Read</b> XML class -Week1- Online references at:  <a href="http://www.infoworld.com/articles/ec/xml/00/01/26/000126ecw3c.html">http://www.infoworld.com/articles/ec/xml/00/01/26/000126ecw3c.html</a>  <a href="http://www.javaworld.com/javaworld/jw-01-2000/jw-01-dbxml.html?page=1">http://www.javaworld.com/javaworld/jw-01-2000/jw-01-dbxml.html?page=1</a>  <a href="http://www.topxml.com/stylesheetcentral/default.asp?DataType=SSC1TOMM">http://www.topxml.com/stylesheetcentral/default.asp?DataType=SSC1TOMM</a>  <a href="http://www.biglist.com/lists/xsl-list/archives/200103/msg00543.html">http://www.biglist.com/lists/xsl-list/archives/200103/msg00543.html</a>  <a href="http://www.topxml.com/xml/articles/buildingxml/">http://www.topxml.com/xml/articles/buildingxml/</a></p>
Wednesday September 19, 2007	4.25	<p><b>Finished First</b> week Homework for Introduction To XML class. Posted it online at:  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk1Hw1.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk1Hw1.xml</a>  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk1Hw2.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk1Hw2.xml</a>  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk1Review.rtf">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk1Review.rtf</a></p>
Sunday September 23, 2007	2.25	<p><b>Read and Documented Week2 Online Lectures</b> of Introduction To XML class- <i>Valid XML Document</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a></p> <p><b>Installed</b> Schematron XML validator from:  <a href="http://www.topologi.com/products/validator/download.php">http://www.topologi.com/products/validator/download.php</a></p> <p><b>Installed</b> Internet Explorer Tool (plug-in) for Validating XML and Viewing XSLT Output from:  <a href="http://www.microsoft.com/downloads/details.aspx?FamilyId=D23C1D2C-1571-4D61-BDA8-ADF9F6849DF9&amp;displaylang=en">http://www.microsoft.com/downloads/details.aspx?FamilyId=D23C1D2C-1571-4D61-BDA8-ADF9F6849DF9&amp;displaylang=en</a></p>
Monday September 24, 2007	3.25	<p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. Chapter 4: [pages 93 - 102]</p>
Tuesday September 25, 2007	3.0	<p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. Chapter 4: [pages 103 - 119]</p> <p><b>Installed</b> XML Developer Toolbar for Mozilla/Firefox ver 2.0</p>
Wednesday September 26, 2007	3.75	<p><b>Finished Second</b> week Homework for Introduction To XML class. Posted it online at:  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw1.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw1.xml</a>  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw1_external.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw1_external.xml</a>  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw2.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw2.xml</a>  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw3.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Hw3.xml</a>  <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Review.rtf">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk2Review.rtf</a></p>
Saturday September 29, 2007	0.5	<p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. Chapter 4: [pages 120 - 123]</p>
Sunday September 30, 2007	3.25	<p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. Chapter 4: [pages 124 - 139]</p>
Monday October 1, 2007	2.75	<p><b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. Chapter 4: [pages 140 - 144]</p>

		<b>Documented</b> Week3 <b>Online Lectures</b> of Introduction To XML class- <i>XML Attributes</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a>
Tuesday October 2, 2007 <i>XML</i>	6.0	<b>Read</b> Week3 <b>Online Lectures</b> of Introduction To XML class- <i>Attributes</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a> <b>Finished Third</b> week Homework for Introduction To XML class. Posted it online at: <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk3Required.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk3Required.xml</a> <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk3Optional.xml">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk3Optional.xml</a> <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk3Review.rtf">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk3Review.rtf</a>
Monday October 8, 2007	1.0	<b>Documented</b> Week4 <b>Online Lecture</b> of Introduction To XML class - <i>XML Entities</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a>
Tuesday October 9, 2007	0.75	<b>Read</b> XML class -Week4- Online references at: <a href="http://www.xml.com/pub/a/98/08/xmlqna0.html">http://www.xml.com/pub/a/98/08/xmlqna0.html</a>
Wednesday October 10, 2007	3.75	<b>Read</b> Week4 <b>Online Lecture</b> of Introduction To XML class - <i>XML Entities</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a> <b>Read</b> XML class -Week4- Online references at: <a href="http://www.irt.org/articles/js212/index.htm">http://www.irt.org/articles/js212/index.htm</a>
Thursday October 11, 2007	7.75	<b>Book:</b> Beginning XML: Fourth edition, by David Hunter et. al. <b>Review</b> - Chapter 4: [pages 131 - 141]. <b>Finished Fourth</b> week Homework for Introduction To XML class. Posted it online, as a zipped folder, at: <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk4Homeworks.zip">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk4Homeworks.zip</a>
Monday October 15, 2007	1.0	<b>Documented</b> Week5 <b>Online Lectures</b> of Introduction To XML class - <i>Displaying XML Documents</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a>
Tuesday October 16, 2007	8.75	<b>Read</b> Week5 <b>Online Lectures</b> of Introduction To XML class - <i>Displaying XML Documents</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a> <b>Read</b> XML class -Week5- Online references at: <a href="http://www.xml.com/pub/a/2000/03/29/tutorial/index.html">http://www.xml.com/pub/a/2000/03/29/tutorial/index.html</a> <a href="http://msdn2.microsoft.com/en-us/library/Aa752011.aspx">http://msdn2.microsoft.com/en-us/library/Aa752011.aspx</a> <a href="http://msdn2.microsoft.com/en-us/library/ms537497.aspx">http://msdn2.microsoft.com/en-us/library/ms537497.aspx</a> <a href="http://www.xml.com/pub/a/2000/05/03/msie">http://www.xml.com/pub/a/2000/05/03/msie</a> <b>Finished Fifth</b> week Homework for Introduction To XML class. Posted it online, as a zipped folder, at: <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk5Homeworks.zip">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk5Homeworks.zip</a>
Thursday October 18, 2007	0.5	<b>Finished Fifth</b> week Review Questions for Introduction To XML class. Posted it online at: <a href="http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk5Review.rtf">http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk5Review.rtf</a>
Monday October 22, 2007	3.25	<b>Read and Documented</b> Week6 <b>Online Lectures</b> of Introduction To XML class - <i>XML Namespaces</i> - at <a href="http://www.eclasses.org/">http://www.eclasses.org/</a> <b>Read</b> XML class -Week6- Online references at: <a href="http://lists.xml.org/archives/xmldev/199902/msg00404.html">http://lists.xml.org/archives/xmldev/199902/msg00404.html</a>

Tuesday October 23, 2007

4.5

**Book:** Beginning XML: Fourth edition, by David Hunter et. al.  
Chapter 17: [pages 691 - 721] ; Chapter 3: [pp 67 - 87].  
**Read** XML class -Week6- Online references at:  
<http://www.rpbouret.com/xml/NamespacesFAQ.htm>  
<http://www.jclark.com/xml/xmlns.htm>  
<http://www.xml.com/pub/a/1999/01/namespaces.html>  
<http://www.informit.com/articles/article.aspx?p=31837&rl=1>

Wednesday October 24, 2007

5.5

**Finished Sixth** week Homework for Introduction To XML class. Posted it online at:  
<http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk6Required.html>  
<http://mysite.verizon.net/vzep5yt1/IntroXMLHomework/Wk6Review.rtf>

**End Of Introduction To XML course.**

***Total = 80.0 hrs***

\*\*\*\*\****End Of Introduction To XML***\*\*\*\*\*  
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