Z603: XML Workshop (SU15: 5638)

Time: 5:30 – 8:30 Wednesdays

Location: LI002

Instructor: Tamy Chambers  tischt@indiana.edu
Office Hours: by appointment

Course Description & Objectives

Extensible Markup Language (XML) is a markup language to describe the content and structure of documents. XML allows users to define their own tags and attributes that can be easily processed and displayed across platforms. It incorporates new ways of handling styles (Extensible StyleSheet Language, XSL), schemas (DTD or XML Schema), and search (XQuery & XPath). It has become one of the most widely adopted W3C standards and has been applied in various domains in academia and industry.

This 1.5 credit workshop will provide you with an intensive, hands-on introduction to the use of XML to represent documents on the Web. You should also gain a conceptual understanding of the structure, strengths, and weaknesses of XML. The content of this workshop covers XML, DTD, XML Schema, XPath, XQuery, and XSLT. Upon completion of this course, students will:

- Be familiar with the use and limitation of XML validation schemas, transformation tools, and query methods.
- Be able to query XML documents using XPath and XQuery
- Be able to map XML documents using DTD or XML Schema validation
- Be able to transform an XML document into HTML using XSLT
- Be able to develop your own XML database

Course Organization & Schedule

This course is made up of six sessions over three days. Sessions will include lecture, step-by-step demonstrations, and lab time for assignment completion. The following table is an overview schedule for this course.

<table>
<thead>
<tr>
<th>Session</th>
<th>Topics</th>
<th>Dates</th>
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</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>XML Syntax/ DTD Validation</td>
<td>6/24/15</td>
</tr>
<tr>
<td>Session 2</td>
<td>XML Schema Validation</td>
<td>7/1/15</td>
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<tr>
<td>Session 3</td>
<td>Querying XML: XPath and XQuery</td>
<td>7/8/15</td>
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<tr>
<td>Session 4</td>
<td>Transforming XML: XSLT and CSS</td>
<td>7/15/15</td>
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<tr>
<td>Session 5</td>
<td>NO CLASS</td>
<td>7/22/15</td>
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<tr>
<td>Session 6</td>
<td>Final Presentations</td>
<td>7/29/15</td>
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Textbooks & Software

This course does not require a textbook. Sections from various XML textbooks and online videos are available as reference on the course canvas site according to the session. To create, edit, and query XML documents we will use the software Oxygen XML Editor. This software is already available on the computers in LI 002. It can be downloaded for out-of-class use thru IUWare.

Assignments & Grading

Course assignments will include the following:

<table>
<thead>
<tr>
<th>Grade Source</th>
<th>Percentage of Grade</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments 1: DTD Validation</td>
<td>10%</td>
<td>June 27, 2015</td>
</tr>
<tr>
<td>Assignments 3: XML Schema</td>
<td>10%</td>
<td>July 4, 2015</td>
</tr>
<tr>
<td>Assignments 4: XPath/XQuery</td>
<td>10%</td>
<td>July 11, 2015</td>
</tr>
<tr>
<td>Assignments 5: XSLT</td>
<td>10%</td>
<td>July 18, 2015</td>
</tr>
<tr>
<td>Final Project</td>
<td>40%</td>
<td>July 29, 2015</td>
</tr>
<tr>
<td>Final Project Presentation</td>
<td>10%</td>
<td>July 29, 2015</td>
</tr>
<tr>
<td>Participation</td>
<td>10%</td>
<td></td>
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</tbody>
</table>

The final grade for this course will be made up of in-class/take home exercises (40%), a final project/presentation (50%), and class participation (10%). Grades will be posted via the CANVAS Gradebook Section.

Lab Exercises will be given out during lab session and will be completed in class. They will be turned in via the CANVAS assignment section. All lab exercises should be submitted via CANVAS at the end of class; however the assignment will remain open until Saturday following class if students require extra time. Work turned after that time will be penalized.

Final Project will be a partner assignment. You will be asked to identify your partner for this assignment during the first session. The assignment is composed of both a written report and a presentation. Basic requirements of the project include the following:

- Create an XML schema for desired data set,
- Model at least 10 data items in xml using your schema,
- Demonstrate at least 5 queries of the data (including at least 3 in XQuery), and
- Transform your data using XSLT for presentation on the web.

The project will be graded based on the completeness of the schema, variety of data, difficulty and usefulness of queries, and readability and interest of presentation. Your final report should a written introduction to your data, description of you schema, and screen shots of your queries and XSLT depiction. Your presentation should include a power point (or similar) presentation describing your data and schema, demonstration of your queries, and presentation of your data via XSLT. Your final submission will be submitted as a zip file containing your report, data in XML format, schema file, XSLT file (and any CSS files needed to properly display it). The Zip file should be submitted via the CANVAS assignment section.
To receive a passing grade in this course, you must turn in all lab exercises and complete the final project including the presentation. You cannot pass this course without doing all of the assigned work (which includes the final presentation) however, turning in all of the work is not a guarantee that you will pass the course.

Incompletes:
Each student is expected to complete all coursework by the end of the course. A grade of incomplete will be assigned only when exceptional circumstances warrant.

Academic Dishonesty:
There is extensive documentation and discussion of this issue of academic dishonesty in the Indiana University Code of Student Ethics (http://studentcode.iu.edu/). Assignments for this course are designed to help you gain practical experience. They are to be completed with a partner and you are encouraged to help each other throughout this course. However, the work you submit must be your own. Any student who submits work completed by someone else will receive no score for that assignment and may receive an F for the course.

SLIS Grading Policy:
The following definitions of letter grades have been defined by student and faculty members of the Curriculum Steering Committee and have been approved by the faculty as an aid in evaluation of academic performance and to assist students by giving them an understanding of the grading standards of the School of Library and Information Science.

Course Policies

Attendance:
Given that there are only six sessions in this course, it is expected you will attend all class sessions. If you cannot attend class, you must notify the instructor in advance. Please notify the instructor at the beginning of the course if you know you will not be able to attend a given session because of prior commitments or religious observation. Unexcused absence will factor into the participation part of your final grade and make-up assignments will granted only in extreme circumstances.

Personal Technologies:
You are welcome to bring laptops to class and use them instead of the computers in the lab if that is more comfortable for you. However, it is not appropriate to surf the web, check-email, or otherwise perform non-course related activities during class on either your own computer or lab computers. This also applies to the use of cell phones, tablets or other personal technologies. Students engaged in either email or texting will be asked to either stop or leave the class session.

Student with Disabilities
Students who believe they have a disability that requires an accommodation for full participation in this course are encouraged to talk with the instructor and/or contact IU Disability Services for Students (http://studentaffairs.iub.edu/dss/)

The instructor reserves the right to change, omit, or append the course syllabus whenever she deems it appropriate.

Syllabus last updated: May 2015
Comment: tischt@indana.edu