XML Basics

lab #lab07

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Lab Goals

The purpose of this lab is to help you explore and practice XML document constraining and construction.

Suggestion: you may want to skim the slideshow first, before working your way through it.

The Barker Bob tutorial would be helpful, but isn't necessary. I suggest at least reading it. If you do complete it, nothing has to be handed in for that.

Lab Submission

This lab is expressly for a team of two or three. Singletons are welcome, with a 20% penalty. In any case, signup for a lab07 group. You will be using the same group and repository for the next lab too.

There is no starter repo; you will need to create one for this lab. If you want to include the CodeIgniter starter in it, in preparation for next week (hint, hint), that is fine. The only repository components I will be looking at in this lab are the DTD and XML files in your `data` folder.

Submit a readme or comment to the lab dropbox, with. a link to your github repository.

Due: Five days after your lab, at 17:30

Lab Marking Guideline

- 4 marks for the DTD, described later in this writeup
- 1 mark for properly completing each of the 3 XML documents or fragments prescribed
- 1 mark for validation of the properly bound XML single document or master document
- 2 marks for reasonable gitflow workflow

Source Data

Each set has a timetable, spanning multiple days, class periods, courses, rooms and instructors. An example is shown to the right.

For this lab, use your set's winter2016 timetable.

Source Data Interpreted

We are interested in three of the perspectives: day of week, class period, and course. The first two of those are highlighted right.

Referring to the sample timetable, the "friday" day of week perspective includes a single row, with 3 scheduled classed. The "10:30" class period perspective includes a single column, with 4 scheduled classes. Some of the scheduled periods are colour-coded ... we are only interested in those after spring break, i.e. those with no background or those with a tan background.

Model Your Data

With the other members of your team, choose a modeling strategy for your timetable data.

I suggest looking at the different strategies reflected in the example-xml repository, and choosing one.

Your data can be modeled all in one file, with separate child elements for each facet (perspective), or you could use three separate XML documents, one per facet, and pull them together in a master XML document with external entities.

Whatever strategy you choose, your DTD will need to accommodate it.

Build Your DTD

Build your DTD, to suit the strategy you chose. This DTD should handle the timetable data for an entire week, not just the portions of data you will be providing.

You will need to agree on conventions and codes to use across the different data perspectives.

Provide for all the timetable data relevant to a class period: course, day, period/hour, instructor, and room. These will be used next week :)

The DTD should go inside your `data` folder.

Build Your XML

Each of the three facets should be built by a separate team member, either as a stand-alone XML document or as part of a master XML document, discussed earlier.

Eligible candidates for each facet would be a column, row or course with at least three class periods scheduled.

You are welcome to provide more than one element for a facet, for instance two days worth, or even the entire week.

Ensure Validation

Your XML document, or master document if using external entities, must validate.

Test this inside your IDE, or use an external service, like http://www.xmlvalidation.com/

Congratulations!

You have completed lab #lab07: XML Basics

If you would take a minute to provide some feedback, we would appreciate it!

The next activity in sequence is: xml-xml01 XML - Basics & Constraints (optional)

You can use your browser's back button to return to the page you were on before starting this activity, or you can jump directly to the course homepage, organizer, or reference page.