

Texas A&M University Central Texas  
CIS545.120  
Extensible Markup Language (XML/XSL (T))

Team Project

Your XML class stressed the idea that an XML document is in fact a hierarchical database. Furthermore, the class constructed a sample XML document. In fact the exercise was carried forward to the point of displaying the data as an HTML document. This effort extends what was discussed in class.

Part One:

You are to prepare an XML document that describes the inventory of a small business. The XML document needs to satisfy these minimal needs of the business:

- determine what items are known to the business
- determine the names of available suppliers
- determine the suppliers of an item with a particular description
- determine items a supplier can provide
- determine the number of items on hand
- determine the cost of an item
- determine the cost of the items on hand
- Others as determined by team

Creating the XML document manually to satisfy these needs is difficult to accomplish using a simple notepad style interface. The small business needs a program that will read an existing XML document and present the operator with a simple interface to review and update the document.

1. You are to write a valid, well-formed XML document. Demonstrate validity through validity checker
2. You are to have a set of XSLT documents that will assist the queries listed above.
  - a. Two XSL stylesheets
    - i. Chicago Manual
    - ii. Another style – according to the journal intended (APA or MLA)

Here is a sample DTD that may start your effort:

```
<!DOCTYPE inventory [
  <!ELEMENT inventory (itemsonhand,items,suppliers)>
  <!ELEMENT itemsonhand (itemonhand*)>
  <!ELEMENT itemonhand EMPTY>
  <!ATTLIST itemonhand itemsid IDREF #REQUIRED
    suppliersid IDREF #REQUIRED
    count CDATA #REQUIRED
    cost CDATA #REQUIRED>
  <!ELEMENT items (item*)>
  <!ELEMENT suppliers (supplier*)>
  <!ELEMENT item (#PCDATA)>
  <!ATTLIST item itemid ID #REQUIRED>
  <!ELEMENT supplier (#PCDATA)>
  <!ATTLIST supplier supplierid ID #REQUIRED>
]>
```

## Part Two:

You are to prepare a paper presenting the results of your effort. The paper shall address at a minimum:

- The rationale and descriptions of the XML elements.
- Additional requirements and their implementation to make the XML valid and well-formed.

The paper is expected to be of acceptable quality for publishing in a technical journal (e.g. IEEE Software, ACM Proceedings). The technical journal you pick as a publisher must be approved by the instructor. The paper you prepare will be an XML document. The printed version of your XML file will use the manuscript style described in The Chicago Manual of Style. You are to prepare an XSLT to achieve the required formatting to satisfy the Chicago Manual of Style.

In conjunction with this explanatory paper, the team will present a PowerPoint presentation

### Deliverables:

- XML Document describing the functions of a small business.
- Two XSL documents (Chicago & another (MLA or APA))
- A simple interface to review and update the XML document.
- Paper – detailing the process of preparing the XML and XSL documents.
- The XML, XSL, and DTD files.
- A PowerPoint presentation summarizing your paper.
- The entire collection of printed material organized as a book.

Due: 05/08/2010