

Assignment 2

XPath/XSL

Due date: 11:30am Friday 20th October 2006 -- Worth 15%

[Late submission will be penalized, 10% per working day for at most 5 working days]

1 Assignment Description

The main task of this assignment is to build

- two style sheets (3.2, 3.3) that transform some of the contents of the online purchase database (the XML document developed for Assignment 1) into HTML documents.
- one style sheet (3.4) that transforms some of the contents of the online purchase database into a PDF file.

This is a group assignment. *Please form a group of up to 3 using ESP.*

2 Aims

The aim of this assignment is to develop a better understanding of transforming data represented as XML using XPath & XSL.

3 Assignment Tasks

The various tasks that must be completed for this assignment are specified in the sub-sections below.

3.1 Update the XML Document for Online Purchase Database

You **must** update your XML document for online purchase database according to the following requirements.

- The document contains information for 10 or more products that belong to at least 2 categories (e.g., software, hardware, etc.), 5 or more customers, and 6 or more purchase orders. At least 2 purchase orders are made by same customer and at least 4 purchase orders each contains a list of 2 or more products.
- Make sure that you must have different elements for products and purchase orders. The *price* for a product must be recorded under the element for products (not under the element for purchase orders).
- Your XML document (and XML schema files if necessary) may be changed to accommodate the feedbacks from Assignment 1.

3.2 Product home page (product.xsl)

Develop a style sheet that can be used to generate the home page for products. The home page must contain the following product information *group by* the category:

- The name of the category.
- For each category, generate a table that contains the following information: product number, name, description, unit price, and manufacturer. Data shown in this table must be *sorted* according to manufacturer then product number.
- The total number of products in the category.

3.3 Tax invoice generation (invoice.xsl)

Develop a style sheet that can be used to generate an invoice for each purchase order. The information that needs to appear on the invoice includes:

1. The title, surname, first name (e.g., Mr. Bond, James), and correspondence address of the customer at the top left corner.
2. Invoice date (i.e., the date you generate this invoice), Invoice number (must be unique, can be generated based on the purchase order number), and payment due date at the top right corner.
3. A table with each row containing information for each product ordered: product number, product name, description of up to 25 characters, quantity, unit price (GST inclusive), and amount (unit price multiplied by quantity). The table heading information is required.
4. Summarized information
 - GST inclusive total amount (sum of the amount of all ordered products)
 - The total amount after taking off membership discount (10% for platinum, 8% for gold, 5% for silver, 3% for bronze, and 0% for no membership), this is the amount to be paid by the customer
 - GST exclusive total amount, this amount will be counted to the revenue of the company
 - GST amount (Note: 10% of the GST exclusive total)

3.4 Customer Listing PDF (customer.xsl)

Develop a style sheet that can be used to generate PDF document for a list of customers in the online purchase database.

The PDF file must contain the following information:

- A table containing all information about customers. Information in this table should be sorted by surname then firstName then customer number.
- Total number of customers in the online purchase database.
- Total number of customers for each of the 5 groups grouped by membership.

4 Tool used to generate HTML/PDF Files

You are provided with the Apache *Xerces transform* tool to generate the HTML/PDF files. The invocations are

transform purchase.xml product.xsl product.html HTML

transform purchase.xml invoice.xsl invoice.html HTML

transform purchase.xml customer.xsl customer.pdf PDF

5 Submission Requirements

All files required by the assignment description must be submitted as **one single ZIP file** by using the electronic submission system (ESP). In this assignment, you must develop and submit the following files (**exact file names must be followed**). Do not submit generated files.

File name	Description
purchase.xml	Updated XML file that contains online purchase database.

product.xsl	Style sheet that can be used to generate the home page for products.
invoice.xsl	Style sheet that can be used to generate tax invoices for all purchase orders.
customer.xsl	Style sheet and formatting objects used for customer list PDF generation.

You must meet the following requirements. Failure to meet **any** of these requirements will affect the result for this assignment.

- The online purchase database must be revised as specified in Section 3.1.
- Generated HTML documents can be viewed by IE.
- Generated PDF files can be viewed by Acrobat 6.0 (or) above.
- Comments must be provided on top of each of the XSL files. At a minimum the purpose of the file, author, creation/modification dates must be provided.

6 Marking Scheme

Your submission shall be marked on Quality of XSL, Presentation & use of various features provided within XSL.

Assessment item	Marks
3.1	1
3.2	4
3.3	6
3.4	4