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Assignment 8-2
SQL Lab 5: XML (25 points)

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PURPOSE

The purpose of this lab is to give you some experience in creating eXtensible Markup Language(XML) documents and Document Type Declaration (DTD) files.

Resources:

- XML link: (XML stands for EXtensible Markup Language)

  http://www.w3schools.com/xml/default.asp

- DTD link:

  http://www.w3schools.com/xml/xml_dtd_intro.asp

1- In this Lab, you are only creating the XML and DTD documents. There is no requirement to execute them.
2- Turn in 4 files: *Part1.xml*, *Part2.dtd*, *Part3.xml* & *Part3.dtd*.[1] Zip all files into a single submission and turn your zipped file into the drop box.

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Part 1: Create a well-formed XML document that adheres to the following XML DTD called *customer.dtd*. You should include at least 3 customers in your XML document (you will create the specific data associated with each customer). Use Notepad or WordPad and save your document as Part1.xml. [2]

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[1] All of these files need to have the proper extension. Do not turn in files with a .rtf or .txt extension (only .xml and .dtd are accepted). Points will be deducted if you do so … to save a file from wordpad, for example, simply sdo a save as, then select the plain test document option, and enter part2.dtd, etc. in the textbox.
[2] No files submitted should contain comments.

```
<!ELEMENT Customerdata (Customer+)>
<!ELEMENT Customer (CUS_ID,CUS_DATEIN,CUS_LNAME,CUS_FNAME,CUS_ADDR1,CUS_ADDR2?,
CUS_CITY,CUS_STATE,CUS_ZIP,CUS_CNTRY?,CUS_PHONE,CUS_EMAIL,CUS_TAXID,CUS_MBRTYPE?)>
<!ELEMENT CUS_ID          (#PCDATA )>
<!ELEMENT CUS_DATEIN      (#PCDATA )>
<!ELEMENT CUS_LNAME       (#PCDATA )>
<!ELEMENT CUS_FNAME       (#PCDATA )>
<!ELEMENT CUS_ADDR1       (#PCDATA )>
<!ELEMENT CUS_ADDR2       (#PCDATA )>
<!ELEMENT CUS_CITY        (#PCDATA )>
<!ELEMENT CUS_STATE       (#PCDATA )>
<!ELEMENT CUS_ZIP         (#PCDATA )>
<!ELEMENT CUS_CNTRY       (#PCDATA )>
<!ELEMENT CUS_PHONE       (#PCDATA )>
<!ELEMENT CUS_EMAIL       (#PCDATA )>
<!ELEMENT CUS_TAXID       (#PCDATA )>
<!ELEMENT CUS_MBRTYPE     (#PCDATA )>
```

- **CUS_ID** is a 4-digit number
- **CUS_DATEIN** is the effective membership date of the customer in the company in <day> <Month> <2-digit year> format
- **CUS_STATE** is a 2-character state abbreviation (all caps)
- **CUS_ZIP** is a 5-digit zip code
- **CUS_PHONE** is in the format xxx-xxx-xxxx
- **CUS_TAXID** is a 9-digit number similar to a social security number (numbers only)
- **CUS_MBRTYPE** can be any of these: DIAMOND, GOLD or SILVER

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Part 2: Create the corresponding XML DTD document to which the following partial well-formed XML document adheres (first lines are missing) for Orders. Make sure to include the proper "+", "*", and "?" signs when needed in your DTD. Use Notepad or WordPad and save your document as Part2.dtd.

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```xml
<Orders>
    <Order>
        <Order_ID>34523</Order_ID>
        <Order_Date>12/08/02</Order_Date>
        <Customer_ID>1010</Customer_ID>
        <PaymentType>VISA</PaymentType>
        <ShippingMethod>UPS GRND</ShippingMethod>
        <Order_ShipDate>12/12/02</Order_ShipDate>
        <Order_ShipCost>6.70</Order_ShipCost>
        <Order_Subtotal>59.00</Order_Subtotal>
        <Order_Tax>5.90</Order_Tax>
        <Order_Total>64.90</Order_Total>
        <Order_Status>SHIPPED</Order_Status>
        <ORDLINE>
            <Product_Code>QWERT-456</Product_Code>
            <Quantity>10</Quantity>
            <UnitPrice>2.50</UnitPrice>
            <Taxable>Y</Taxable>
        </ORDLINE>
        <ORDLINE>
            <Product_Code>TB670</Product_Code>
            <Quantity>5</Quantity>
            <UnitPrice>6.80</UnitPrice>
            <Taxable>Y</Taxable>
        </ORDLINE>
    </Order>
    <Order>
        <Order_ID>34576</Order_ID>
        <Order_Date>12/08/02</Order_Date>
        <Customer_ID>2540</Customer_ID>
        <PaymentType>AMEX</PaymentType>
        <ShippingMethod>USPS PRIORITY</ShippingMethod>
        <Order_ShipDate>12/11/02</Order_ShipDate>
        <Order_ShipCost>6.50</Order_ShipCost>
        <Order_Subtotal>12.50</Order_Subtotal>
        <Order_Tax>1.25</Order_Tax>
        <Order_Total>13.25</Order_Total>
        <Order_Status>SHIPPED</Order_Status>
        <ORDLINE>
            <Product_Code>QWERT-456</Product_Code>
            <Quantity>5</Quantity>
            <UnitPrice>2.50</UnitPrice>
            <Taxable>Y</Taxable>
        </ORDLINE>
    </Order>
</Orders>
```

Part 3: We need to store the following product inventory list in a well-formed XML document which adheres to a DTD. First, convert the table data into a well-formed XML document. Then, create the corresponding XML DTD document to which your created XML document adheres. Use Notepad or WordPad and save your documents as Part3.xml and Part3.dtd, respectively.

Product Inventory Information

ID	Name	Color	Price	Quantity	Location
001	Notepad	Yellow	$1.0	500	Bin A1
002	Floppy Disk	Black	$3.5	150	Bin C2
003	Ball Pen	Red	$1.5	200	Bin A4
004	Ball Pen	Blue	$1.5	600	Bin A5
005	Pencil	Brown	$0.5	1000	Bin B2

Resources:

http://www.w3.org/TR/REC-xml
http://www.w3schools.com/xml/default.asp
http://www.w3schools.com/xml/xml_dtd_intro.asp
http://web.archive.org/web/20050322041150/http://www.oracle.com/technology/oramag/oracle/03-may/o33xml.html

This assignment is worth up to 25 points.