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**Create XML, XML schemas , DTD for any database application and implement min 10 queries using XQuery FLOWR expression and XPath**

**sam.xsd**

<?xml version="1.0" encoding="UTF-8"?>

<!-- New XSD document created with EditiX XML Editor (http://www.editix.com) at Mon Jan 09 10:55:25 PST 2017 -->

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">

<xs:element name="Customer">

<xs:complexType>

<xs:sequence>

<xs:element ref="orders" minOccurs="0" maxOccurs="unbounded"></xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="orders">

<xs:complexType>

<xs:sequence>

<xs:element ref="custid"></xs:element>

<xs:element ref="custname"></xs:element>

<xs:element ref="itemname"></xs:element>

<xs:element ref="amount"></xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="custid" type="xs:string"></xs:element>

<xs:element name="custname" type="xs:string"></xs:element>

<xs:element name="itemname" type="xs:string"></xs:element>

<xs:element name="amount" type="xs:integer"></xs:element>

</xs:schema>

**sam.xml**

<?xml version="1.0" encoding="UTF-8"?>

<!-- New XML document created with EditiX XML Editor (http://www.editix.com) at Mon Jan 09 11:08:09 PST 2017 -->

<Customer xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="rules.xsd">

<orders>

<custid>c101</custid>

<custname>Sam</custname>

<itemname>TV</itemname>

<amount>10000</amount>

</orders>

<orders>

<custid>c102</custid>

<custname>Neena</custname>

<itemname>Laptop</itemname>

<amount>50000</amount>

</orders>

<orders>

<custid>c103</custid>

<custname>Samkit</custname>

<itemname>Fridge</itemname>

<amount>25000</amount>

</orders>

</Customer>

**Queries**

1. **Write a query using XQuery FLOWR to retrieve data :Display names of the customers**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

return $x/custname

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">XYZ</custname>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">ABC</custname>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">XYZ</custname>

1. **Write a query using XQuery FLOWR to retrieve data with where clause :Display name of the customer who bought TV item.**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

where $x/itemname="TV"

return $x/custname

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Sam</custname>

1. **Write a query using XQuery FLOWR to implement ORDER BY clause with where condition: Display the customer name (Order by) whose bought items having amount greater than 10000**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

where $x/amount>10000

order by $x/amount

return $x/custname

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Samkit</custname>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-i nstance">Neena</custname>

1. **Write a query using XQuery FLOWR to implement ORDER BY DESCENDING :**

**Display the name (Order by Descending ) of the customer who bought items having amount greater than 10000**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

where $x/amount>10000

order by $x/custname descending

return $x/custname **Output:**

<?xml version="1.0" encoding="UTF-8"?>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Samkit</custname>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Neena</custname>

1. **Write a query using XQuery FLOWR to implement ORDER BY ASCENDING :**

**Display the name (Order by Ascending ) of the customer who bought items having amount greater than 10000**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

where $x/amount>10000

order by $x/custname ascending

return $x/custname **Output:**

<?xml version="1.0" encoding="UTF-8"?>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"> Neena </custname>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"> Samkit </custname>

1. **Write a query using XQuery FLOWR to retrieve data Using IF ELSE condition:**

**Display customer name if amount is less than 15000 else display name along with name of item bought.**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

return if($x/amount <15000)

then $x/custname

else <sam>{data($x/custname)},{ data($x/itemname)} </sam>

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<custname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Sam</custname>

<sam>Neena,Laptop</sam>

<sam>Samkit,Fridge</sam>

1. **Write a query using XQuery FLOWR to retrieve data Using WHERE clause with AND condition: Display the itemname bought where custid=’c102’ and custname is ‘Neena’**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

where $x/custid='c102' and $x/custname='Neena'

return $x/itemname

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<itemname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Laptop</itemname>

1. **Write a query using XQuery FLOWR to list all the itemname in an HTML list. (add <ul> and <li> tags to the FLWOR expression) : Display itemname in HTML list**

**Answer:**

**Query:**

xquery version "1.0";

ul> {

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

order by $x/amount

return<li>{$x/itemname}</li>

}

</ul>

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<ul>

<li> <itemname xmlns:xsi="http://www.w3.org/2001/XMLSchema- instance">TV</itemname> </li>

<li><itemname xmlns:xsi="http://www.w3.org/2001/XMLSchema- instance">Fridge</itemname></li>

<li><itemname xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">Laptop</itemname></li>

</ul>

1. **Write a query using XQuery FLOWR to eliminate the title element, and show only the data inside the title element : Display Only data inside title**

**Answer:**

**Query:**

xquery version "1.0";

ul> {

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

order by $x/amount

return<li>{data($x/itemname)}</li>

}

</ul>

**Output:**

<?xml version="1.0" encoding="UTF-8"?>

<ul>

<li>TV</li>

<li>Fridge</li>

<li>Laptop</li>

</ul>

**10.Write a query using XQuery FLOWR to counts the occurrence of itemname listed for each customer in a data file: Count occurrences of itemname**

**Answer:**

**Query:**

xquery version "1.0";

for $x in doc("F:/Samkit/Practicals/adbms/order.xml") /Customer/orders

return count($x/itemname)

**Output:**:

<?xml version="1.0" encoding="UTF-8"?>1 1 1