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## ADBMS Exp7

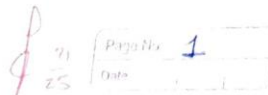
Aim: Query Execution on an XML database

### Theory:

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B1

ADBMS  
[Exp7]



Aim: Query Execution on XML Database

### Theory:

- ① XML Database is used to store huge amount of information in XML format.
- ② As the use of XML is increasing in every field it is required to have a secured place to store XML documents.
- ③ The data stored in db can be retrieved using XQuery, serialized and exported into a desired format.

④ There are 2 major types of XML databases which are:-

#### A) XML enabled

The extension provided for conversion of XML documents. It is a Relational database

#### B) Native XML

Based on the container rather than table format. It can store large amount of XML document & data

⑤ XML makes it easier to express metadata a portable, reusable format.

⑥ Also XML stores the data in plain text format.

⑦ It does this so that the data can be easily understood by its users.

- ① For this we have to make sure multiple browsers can manage XML documents just like HTML documents.
- ② XML provides a software & hardware independent way of storing, transporting & sharing data.
- ③ XML also makes it easier to expand or upgrade to new OS.

#### Conclusion:

A book catalog, consisting of information about books was initially XML.

## Code:

```
<html>
<head> <style> table, th,
td {    border: 1px solid
black;    border-
collapse:collapse;
margin: 5px;
} th, td {
padding: 5px;
} input {    margin-
bottom: 5px;
}
</style>
</head>
<body>

<button type="button" onclick="loadXMLDoc()">View
Information about the Books</button>
<br><br>

<table id="data-table"></table>

<script>
    function loadXMLDoc() {    var xmlhttp = new
XMLHttpRequest();    xmlhttp.onreadystatechange =
function() {        if (this.readyState == 4 &&
this.status == 200) {
```

```

        myFunction(this);
    }    };    xmlhttp.open("GET",
"books.xml", true);    xmlhttp.send();
} function myFunction(xml) {    var i;    var xmlDoc =
xml.responseXML;    var
table="<tr><th>Title</th><th>Author</th><th>Genre</th>
<th>Price</th><th>Publish
Date</th><th>Description</th></tr>";    var x =
xmlDoc.getElementsByTagName("book");
    for (i = 0; i <x.length; i++)
    {
        table +=
"<tr><td>" +

x[i].getElementsByTagName("title")[0].childNodes[0].n
odeValue +        "</td><td>" +

x[i].getElementsByTagName("author")[0].childNodes[0].
nodeValue +
"</td><td>" +

x[i].getElementsByTagName("genre")[0].childNodes[0].n
odeValue +        "</td><td>"+

x[i].getElementsByTagName("price")[0].childNodes[0].n

```

```

odeValue +
"</td><td>" +

x[i].getElementsByTagName("publish_date")[0].childNodes[0].nodeValue +
    "</td><td>" +

x[i].getElementsByTagName("description")[0].childNodes[0].nodeValue +
    "</td></tr>";

    }
    document.getElementById("data-table").innerHTML = table;
}

</script>

</body>
</html>

```

### XML used:

```

<?xml version="1.0"?>
<catalog>
  <book id="bk101">
    <author>Gambardella, Matthew</author>
    <title>XML Developer's Guide</title>
    <genre>Computer</genre>
    <price>44.95</price>
    <publish_date>2000-10-01</publish_date>
    <description>An in-depth look at creating applications with
XML.</description>
  </book>

```

```
<book id="bk102">  
  <author>Ralls, Kim</author>
```

```

    <title>Midnight Rain</title>
    <genre>Fantasy</genre>
    <price>5.95</price>
    <publish_date>2000-12-16</publish_date>
    <description>A former architect battles corporate zombies,
an evil sorceress, and her own childhood to become queen      of
the world.</description>
  </book>
  <book id="bk103">
    <author>Corets, Eva</author>
    <title>Maeve Ascendant</title>
    <genre>Fantasy</genre>
    <price>5.95</price>
    <publish_date>2000-11-17</publish_date>
    <description>After the collapse of a nanotechnology
society in England, the young survivors lay the      foundation
for a new society.</description>
  </book>
  <book id="bk104">
    <author>Corets, Eva</author>
    <title>Oberon's Legacy</title>
    <genre>Fantasy</genre>
    <price>5.95</price>
    <publish_date>2001-03-10</publish_date>
    <description>In post-apocalypse England, the mysterious
agent known only as Oberon helps to create a new life      for
the inhabitants of London. Sequel to Maeve
Ascendant.</description>
  </book>
  <book id="bk105">
    <author>Corets, Eva</author>
    <title>The Sundered Grail</title>
    <genre>Fantasy</genre>
    <price>5.95</price>
    <publish_date>2001-09-10</publish_date>
    <description>The two daughters of Maeve, half-sisters,
battle one another for control of England. Sequel to
Oberon's Legacy.</description>
  </book>
  <book id="bk106">
    <author>Randall, Cynthia</author>
    <title>Lover Birds</title>
    <genre>Romance</genre>
    <price>4.95</price>
    <publish_date>2000-09-02</publish_date>
    <description>When Carla meets Paul at an ornithology
conference, tempers fly as feathers get ruffled.</description>
</book>
  <book id="bk107">
    <author>Thurman, Paula</author>
    <title>Splish Splash</title>
    <genre>Romance</genre>
    <price>4.95</price>
    <publish_date>2000-11-02</publish_date>

```

```
<description>A deep sea diver finds true love twenty  
thousand leagues beneath the sea.</description>  
</book>  
<book id="bk108">
```



```
<author>Knorr, Stefan</author>
<title>Creepy Crawlies</title>
<genre>Horror</genre>
<price>4.95</price>
<publish_date>2000-12-06</publish_date>
<description>An anthology of horror stories about roaches,
centipedes, scorpions and other insects.</description>
</book>
<book id="bk109">
  <author>Kress, Peter</author>
  <title>Paradox Lost</title>
  <genre>Science Fiction</genre>
  <price>6.95</price>
  <publish_date>2000-11-02</publish_date>
  <description>After an inadvertant trip through a Heisenberg
Uncertainty Device, James Salway discovers the problems of
being quantum.</description>
</book>
<book id="bk110">
  <author>O'Brien, Tim</author>
  <title>Microsoft .NET: The Programming Bible</title>
  <genre>Computer</genre>
  <price>36.95</price>
  <publish_date>2000-12-09</publish_date>
  <description>Microsoft's .NET initiative is explored in
detail in this deep programmer's reference.</description>
</book>
<book id="bk111">
  <author>O'Brien, Tim</author>
  <title>MSXML3: A Comprehensive Guide</title>
  <genre>Computer</genre>
  <price>36.95</price>
  <publish_date>2000-12-01</publish_date>
  <description>The Microsoft MSXML3 parser is covered in
detail, with attention to XML DOM interfaces, XSLT processing,
SAX and more.</description>
</book>
<book id="bk112">
  <author>Galos, Mike</author>
  <title>Visual Studio 7: A Comprehensive Guide</title>
  <genre>Computer</genre>
  <price>49.95</price>
  <publish_date>2001-04-16</publish_date>
  <description>Microsoft Visual Studio 7 is explored in depth,
looking at how Visual Basic, Visual C++, C#, and ASP+ are
integrated into a comprehensive development
environment.</description>
</book>
</catalog>
```

## Output:

[View information about the Books](#)

Search a title

Search an author

Search a genre

Search a price

Search a Publish Date

Title	Author	Genre	Price	Publish Date	Description
XML Developer's Guide	Gambardella, Matthew	Computer	44.95	2000-10-01	An in-depth look at creating applications with XML.
Midnight Rain	Ralls, Kim	Fantasy	5.95	2000-12-16	A former architect battles corporate zombies, an evil sorceress, and her own childhood to become queen of the world.
Maeve Ascendant	Corets, Eva	Fantasy	5.95	2000-11-17	After the collapse of a nanotechnology society in England, the young survivors lay the foundation for a new society.
Oberon's Legacy	Corets, Eva	Fantasy	5.95	2001-03-10	In post-apocalypse England, the mysterious agent known only as Oberon helps to create a new life for the inhabitants of London. Sequel to Maeve Ascendant.
The Sundered Grail	Corets, Eva	Fantasy	5.95	2001-09-10	The two daughters of Maeve, half-sisters, battle one another for control of England. Sequel to Oberon's Legacy.
Lover Birds	Randall, Cynthia	Romance	4.95	2000-09-02	When Carla meets Paul at an ornithology conference, tempers fly as feathers get ruffled.
Splash Splash	Thorman, Paula	Romance	4.95	2000-11-02	A deep sea diver finds true love twenty thousand leagues beneath the sea.
Creepy Crawlies	Knorr, Stefan	Horror	4.95	2000-12-06	An anthology of horror stories about roaches, centipedes, scorpions and other insects.
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### Result

Title	Author	Genre	Price	Publish Date	Description
Midnight Rain	Ralls, Kim	Fantasy	5.95	2000-12-16	A former architect battles corporate zombies, an evil sorceress, and her own childhood to become queen of the world.

## Conclusion:

Thus, we studied and implemented Query Execution on XML database.