How do I run an XML File?

**Right-click the XML file and select "Open With."** This will display a list of programs to open the file in. Select "Notepad" (Windows) or "TextEdit" (Mac). These are the pre-installed text editors for each operating system and should already be on the list. Any basic text editors will work.

The best way to learn about anything is to try it out for yourself. Two ways you can try out the XQuery examples in this article are:

https://www.progress.com/tutorials/xquery/learn-xquery-in-10-minutes

## What is XQuery?

## XQuery is a language for finding and extracting elements and attributes from XML documents.

|  |  |
| --- | --- |
| XQuery | * XQuery is ***the*** language for querying XML data * XQuery for XML is like SQL for databases * XQuery is built on XPath expressions * XQuery is supported by all major databases * XQuery is a W3C Recommendation |

XQuery can be used to:

* Extract information to use in a Web Service
* Generate summary reports
* Transform XML data to XHTML
* Search Web documents for relevant information
* [Install Stylus Studio](http://www.stylusstudio.com/xml_download.html) -
* This is how it works in Stylus Studio:
* Select **File** > **New** > **XQuery File** ...
* Enter the query (as above) into the editing pane
* Select **File** > **Save As** ... and choose a file name
* Click the **Preview Result** button

<?xml version="1.0" encoding="UTF-8"?>  
  
<bookstore>  
  
<book category="COOKING">  
  <title lang="en">Everyday Italian</title>  
  <author>Giada De Laurentiis</author>  
  <year>2005</year>  
  <price>30.00</price>  
</book>  
  
<book category="CHILDREN">  
  <title lang="en">Harry Potter</title>  
  <author>J K. Rowling</author>  
  <year>2005</year>  
  <price>29.99</price>  
</book>  
  
<book category="WEB">  
  <title lang="en">XQuery Kick Start</title>  
  <author>James McGovern</author>  
  <author>Per Bothner</author>  
  <author>Kurt Cagle</author>  
  <author>James Linn</author>  
  <author>Vaidyanathan Nagarajan</author>  
  <year>2003</year>  
  <price>49.99</price>  
</book>  
  
<book category="WEB">  
  <title lang="en">Learning XML</title>  
  <author>Erik T. Ray</author>  
  <year>2003</year>  
  <price>39.95</price>  
</book>  
  
</bookstore>

How to Select Nodes From "books.xml"?

Functions

XQuery uses functions to extract data from XML documents.

The doc() function is used to open the "books.xml" file:

doc('C:/book.xml')

### Path Expressions

XQuery uses path expressions to navigate through elements in an XML document.

The following path expression is used to select all the title elements in the "books.xml" file:

doc('C:/book.xml')/bookstore/book/title

(/bookstore selects the bookstore element, /book selects all the book elements under the bookstore element, and /title selects all the title elements under each book element)

Predicates

XQuery uses predicates to limit the extracted data from XML documents.

The following predicate is used to select all the book elements under the bookstore element that have a price element with a value that is less than 30:

doc('C:/book.xml')/bookstore/book[price<30]

# **XQuery FLWOR Expressions**

What is FLWOR?

FLWOR (pronounced "flower") is an acronym for "For, Let, Where, Order by, Return".

* **For** - selects a sequence of nodes
* **Let** - binds a sequence to a variable
* **Where** - filters the nodes
* **Order by** - sorts the nodes
* **Return** - what to return (gets evaluated once for every node)

## How to Select Nodes From "books.xml" With FLWOR

Look at the following path expression:

doc('C:/book.xml')/bookstore/book[price>30]/title

<title lang="en">XQuery Kick Start</title><title lang="en">Learning XML</title>

The expression above will select all the title elements under the book elements that are under the bookstore element that have a price element with a value that is higher than 30.

The following FLWOR expression will select exactly the same as the path expression above:

for $x in doc('C:/book.xml')/bookstore/book  
where $x/price>30  
return $x/title

<title lang="en">XQuery Kick Start</title>  
<title lang="en">Learning XML</title>

With FLWOR you can sort the result:

for $x in doc('C:/book.xml')/bookstore/book  
where $x/price>30  
order by $x/title  
return $x/title

The **for** clause selects all book elements under the bookstore element into a variable called $x.

The **where** clause selects only book elements with a price element with a value greater than 30.

The **order by** clause defines the sort-order. Will be sort by the title element.

The **return** clause specifies what should be returned. Here it returns the title elements.

The result of the XQuery expression above will be:

<title lang="en">Learning XML</title><title lang="en">XQuery Kick Start</title>

The **at** keyword can be used to count the iteration:

for $x at $i in doc('C:/book.xml')/bookstore/book/title  
return <book>{$i}. {data($x)}</book>