

**Mastering XPath and XQuery**

**Course Number:** XML-130
**Duration:** 2 days

**Overview**

Accelebrate's XQuery training teaches attendee how to find, retrieve, and manipulate data in XML documents using XPath and XQuery.

**Prerequisites**

All attendees should understand the fundamentals of XML.

**Materials**

All XQuery training students receive comprehensive courseware.

**Software Needed on Each Student PC**

* The XML/XSLT/XQuery editing and transformation environment that your developers will be using after class.

**Objectives**

* Understand the XQuery/XPath data model
* Master the fundamentals of the XQuery/XPath language
* Use path expressions to refer to elements
* Select and filter using FLWORs
* Group combine, and join results
* Work with namespaces
* Manipulate strings of text
* Use functions and modules

**Outline**

* XQuery in Context
	+ What is XQuery?
	+ Use Cases
	+ Background and language design
	+ Easing into XQuery
* The XQuery/XPath Data Model
	+ Nodes
	+ Atomic values
	+ Sequences
* XQuery/XPath Language Basics
	+ XQuery syntax and keywords
	+ Variables
	+ Function calls
	+ Comments
	+ Comparisons
	+ Conditional expressions (if-then-else)
	+ The query prolog
* Path Expressions
	+ Axes
	+ Node tests
	+ Predicates
	+ The position() and last() functions
	+ The doc() and collection() functions
* Adding Elements and Attributes Using Constructors
	+ Direct element constructors
	+ Direct attribute constructors
	+ Computed constructors
* Selecting and Filtering Using FLWORs
	+ The for clause
	+ The let clause
	+ The where clause
	+ The return clause
	+ The order by clause
	+ Quantified expressions (some/every satisfies)
* Grouping, Combining and Joining Results
	+ Selecting distinct values
	+ Joining two documents
	+ Outer joins
	+ Combining sequences (union, except, intersect)
	+ Grouping
* Working with Namespaces
	+ Namespaces in XML
	+ Namespaces in XQuery
* Working with Text and Strings
	+ Comparing strings
	+ Matching with regular expressions
	+ Manipulating strings (concatenating, splitting, replacing)
	+ Understanding whitespace
* Functions and Modules
	+ Calling built-in functions
	+ User-defined functions
	+ Library modules
	+ Global variables
* A Closer Look at Types and Schemas
	+ The XQuery/XPath type system
	+ Constructors and casting
	+ Using schemas with XQuery
* Conclusion