

**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