



## Aspect Training

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# XQuery Introduction / Intermediate

**Duration: 2 days**

## Overview:

XQuery is a language for querying XML data and documents that is currently being developed by the W3C. This tutorial covers the basics of XQuery from a technical perspective. It provides attendees with a solid understanding of the syntax and structure of XQuery expressions. Emphasis is on practical examples and hands-on participation from the attendees.

With the XQuery, you finally have a tool that will make it much easier to search, extract and manipulate information from XML content stored in databases. Aspect Training's XQuery Introduction course not only walks you through the XQuery specification, but also teaches you how to program with this widely anticipated query language.

Aspect Training's XQuery Introduction course is for query writers who have some knowledge of XML basics, but not necessarily advanced knowledge of XML-related technologies. On this course you will also learn about XQuery's support for filtering, sorting, and grouping data, as well as how to use FLWOR expressions, XPath, and XQuery tools for extracting and combining information.

Aspect Training's XQuery Introduction course will show you how to apply all of these tools to a wide variety of data sources, and how to recombine information from multiple sources into a single final output result. Whether you're coming from SQL, XSLT, or starting from scratch, this carefully paced course is for you.

## Prerequisites:

A working knowledge of XML is required for this course.

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## Topics:

### 1 - The Need for XQuery

Why Not SQL?

XSLT and XPath as Query Languages

The Structure of XQuery

Assignments with let

Iterations with for

Returning Results

Conditional Logic

Defining Functions

### 2 - Extensions and Modular XQuery

Extending XQuery with Libraries

Enhancing XQuery with Pragmas and Extensions

Importing Modules

Invoking External Functions

Using Library Modules Effectively

### **3 - XPathXQuery Applications**

Viewing XML

Creating an XQuery Pipeline

HTML: A Regional Weather Report

Making the Table More Sophisticated

Parameterized XQuery

SVG: Graphing from XQuery

Syndication with RSS

Building an XQuery Syndication Engine

### **4 - Working with the XPath 2.0 Data Model**

XML Infosets

Node Values and Types

Types and Type Systems

Schemas and Complex Types

Validation Produces Type Annotations

Sequence Types

Static Typing

### **5 - Understanding XQuery Semantics**

XQuery Semantics Introduction

Processing Model for XQuery

Differences Between XQuery and XQuery Core

XQuery Data Model

Schemas and Types

Functions

Notation

Expression of Semantics in XQuery

Type Level

Function Semantics

### **6 - XQuery and Databases**

Relational Database Concepts

A Relational-to-Object Database: Concept Mapping

SQL Concepts

Relational Technology

Oracle 9i XQuery Support

IBM DB2 XQuery Support

GoXML DB XQuery Support

## **7 - Generating XML and HTML Using XQuery**

Tools for Generating Web Pages

A Photo Album Application

Generating the Overview Page

Generating the Picture Pages

Comparing XSLT and XQuery

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