## **Contents**

About the Authors	xi xiii
Introduction	xiv
Chapter 1: Introduction to the Extensible Markup Language (XML)	1
W3C and XML	2
Basic XML Terminology	6
Rules of XML	
Document Type Definition (DTD)	
CDATA and PCDATA	
XML Schemas	
XML Encoding and Unicode	
Namespaces	
XML Parsers	
Microsoft XML Parser (MSXML)	
Uses and Benefits of XML	
XML and Web Browser Support	
XML Editors	
Useful Web Links	
Summary	
Chapter 2: Addressing XML Parts Using XPath	41
XPath Expression	42
XPath Data Model	44
Location Path	
Functions	
Abbreviated Syntax	
Useful Web Links	
Summary	67

Chapter 3: The Extensible Stylesheet Language Transformation (XSLT)69
Language Transformation (ASLI)
Motivation for XSLT70
Support of XSLT in MSXML372
A First Look at XSLT
XSLT Fundamentals
Client-Side versus Server-Side XSLT Transformation
Useful Web Links
Summary103
Chapter 4: The Document Object Model (DOM)107
Introduction to DOM
XML DOM Parsers
Support of DOM in MSXML3
Representing XML Document as a Tree
Creating a DOM Tree of an XML Document in Memory
Saving a DOM Tree
Fundamental APIs for Processing a DOM Tree
Client-Side DOM Programming-Shopping Cart
Server-Side DOM Programming—Shopping Cart
Summary
Julillaly
Chapter 5: Support of XML in ActiveX Data
Objects (ADO) 2.1 and Above
Universal Data Access
The ADO Object Model
Connection Object
Recordset Object
Command Object
Record Object
Stream Object
Error Handling
Case Study: Updating Book Prices
Using Three-Tier Architecture
Useful Web Links
Summary

Chapter 6: XML Support in SQL Server 2000197
Additional Software Installation and Configuration
into XML Data
the OPENXML Provider
Persisting Changes Using Updategram
Useful Web Links
Summary
Chapter 7: Simple API for XML (SAX)269
An Alternative to DOM
SAX in MSXML3
Error Handling in SAX
Using SAX
When Do You Use SAX?
Summary
Chapter 8: XML Schemas291
XML Schema and XDR Schema
First Look at XML Schema293
XML Schema Data Types300
Groupings310
Linking Schemas and Redefining Definitions
Documenting the Schema Using <annotation></annotation>
Tools for Validating XML Schemas
Summary

Chapter 9: The Wireless Markup Language (WML)319
Architecture of WAP
Chapter 10: Simple Object Access Protocol (SOAP) and Web Services
Introduction to SOAP  Web Services
Appendix A: Installing Microsoft XML Tools393
Installing IE Tools for Validating XML Documents
Appendix B: Document Object Model (DOM)  Level 1 Core Interfaces
Understanding Basic Terms in the DOM

Basic Elements in XDR Schema	417
General Layout	
Specification of the Content Model	419
Data Types	424
Annotations	427