

Chapter 1: Concepts and Terminology

SGML	1
SGML Document Components	1
SGML: How it is Used	2
HTML	3
HTML: Evolution	3
XML: What is it	4
XML versus SGML	4
XML versus HTML	4
XML: Purpose and Function	5
XML Format	6
XML Development Goals	7
XML Specifications	8
XML Features	9
XML Architecture	10
Data Structure Namespaces	11
Data Delivery, Manipulation	12
Parsing XML	12
Manipulating and Editing Data Using the Document Object Model	12
Displaying XML-based Data in HTML	13
XSL: Extensible Stylesheet Language	14
Augmenting HTML	15
XML: Transforming and Querying	16
Well-formedness	17
Validity	18
DTDs: Document Type Definitions	18
Schemas	18
Parsers	19

Chapter 2: XML Application

XML Document Creation	1
XML File: Viewing in a Web Browser	2
Document Map	3
Prolog	4
XML Declaration	4
Encoding Declaration	5
Standalone Declaration	5
Processing Instructions	6
Style Sheet Processing Instructions	7
DOCTYPE Declaration	8
Comments	10
Textual Content	10
Elements	11
Assigning Meaning to XML Tags	11
Naming Conventions	12
Document: XML Declaration and Root Element	13
Organization of the XML Data	15
Namespaces	16
Entities	17
Character Entities	18

Chapter 5: Serial Access with the SAX

Purpose and Function	1
SAX Interfaces and Classes	2
XMLReader	3
XMLReaderFactory	4
ContentHandler	5
Locator	6
DTDHandler	7
ErrorHandler	8
SAXException	8
Echoing an XML File with the SAX Parser	9
Importing Classes	10
I/O: Setup	11
ContentHandler Interface	12
Parser: Setting Up	13
Writing the Output	14
Spacing the Output	15
Handling Content Events	16
SAX Program: Complete	18
Identifying the Events	21
Event Handlers: Adding	24
Identifying the Document's Location	24
Handling Errors with the Nonvalidating Parser	26
Handling a SAXParseException	27
Handling a SAXException	28
SAXParseException Handler - Improving	30
Handling a ParserConfigurationException	31
Validating Parser	32
Configuring the Factory	32
Environment Variable - Changing	33
Experimenting with Validation Errors	34
Error Handling in the Validating Parser	35

Chapter 6: DOM: Document Object Model

Purpose and Function	1
DOM Evolution	2
DOM Modules	3
Trees	6
Twelve Types	7
Document Nodes	8
XML-RPC Request Document	8
Element Nodes	9
Attribute Nodes	12
Leaf Nodes	13
Text Nodes	13
Comment Nodes	13
Processing Instruction Nodes	14
CDATA Section Nodes	14
Entity Reference Nodes	15
Document Type Nodes	16
Non-tree Nodes	17

Predefined Character Entities	18
Numbered Character Entities	18
Mixed-Content Entities	19
CDATA Sections	20
Processing Instructions	21

Chapter 3: XML Syntax and Well-formedness

XML Syntax	1
XML Elements - Closing Tag	2
XML - Case Sensitivity	2
XML Elements - Proper Nesting	2
XML Documents - Root Tag	3
Attribute Values - Quotation Marks	3
XML - White Space	4
XML - CR / LF is Converted to LF	4
Entity References	5
CDATA	6
Elements	7
Element Names	7
Empty Elements	8
Attributes	8
Well-formed Documents	9
Valid Documents	10
XML DTD	10
XML Schema	10
Errors will Stop Processing	11
XML Files: Viewing with Microsoft Internet Explorer	11
Processing Instruction	13

Chapter 4: DTD Validity

DTD: Document Type Definitions	1
DTD: Purpose	1
Document Type Declarations	2
Validating Against a DTD	2
Validation Parsers	6
Listing the Elements	8
Choices	13
Children with Parentheses	14
Random Orders	15
Dissimilar Elements - List	15
Mixed Content	16
Empty Elements	17
Sharing DTDs Among Documents	18
DTDs at Remote URLs	18
Public DTDs	19
Internal and External DTD Subsets	20

Entity Nodes	17
Notation Nodes	18
Document Fragment Nodes	19
Node Properties	20

Chapter 7: Parsing with DOM

DOM Parser: Parsing Documents	1
Well-Formedness: Checking Documents	2
JAXP DocumentBuilder and DocumentBuilderFactory	3
Program that Uses JAXP to Check Documents for well-formedness	4
JAXP: Choosing Parsers	6
DocumentBuilderFactory - Configuring	7
Coalescing	7
Expand Entity References	7
Ignore Comments	8
Ignore Element Content Whitespace	8
Namespace Aware	9
Validating	10
JAXP - Check Documents for Well-formedness	11
Parser-specific Attributes	13

Chapter 8: Node Interface

Purpose and Function	1
Node Interface	1
Node Types	3
Node Properties	4
Class for Inspecting Node Properties	5
Navigating the Tree	7
Walking the Tree with the Node Interface	7
Modifying the Tree	9
Utility Methods	10
NodeList Interface	12
JAXP Serialization	14
JAXP for Both Reading and Writing an XML Document	15

Chapter 9: Creating XML Documents with DOM

DOMImplementation	1
Locating a DOMImplementation	1
Implementation Specific Class	2
JAXP DocumentBuilder	3
DOM3 DOMImplementationRegistry	4
DOMImplementationRegistry Class	4
DOMImplementationSource Interface	6
Document Interface as an Abstract Factory	7
Document Interface	7
Building an SVG Document in Memory Using DOM	10

Document Interface as a Node Type	12
Getter Methods	12
Document Object: Properties	14
Finding Elements	16

Chapter 10: DOM Traversal Module

Purpose and Function	1
NodeIterator	2
NodeIterator Interface	2
Constructing NodeIterators with DocumentTraversal	4
DocumentTraversal Factory Interface	4
NodeIterator for Extracting All the Comments from a Document	6
Liveness	8
Filtering by Node Type	9
NodeIterator for Retrieving the Complete Text Content of an Element	9
TreeWalker	10
TreeWalker Interface	10
TreeWalker: Navigating a Sub-tree	12

Chapter 11: XPATH

Purpose and Function	1
Queries	2
XPath Data Model	4
XPath Expanded Names and String-values	5
Location Paths	6
Axes	7
Node Tests	8
Predicates	9
Compound Location Paths	11
Absolute Location Paths	12
Abbreviated Location Paths	14
Combining Location Paths	15
Expressions	16
Literals	17
Operators	18
Functions	19
Node-set Functions	19
Boolean Functions	20
String Functions	20
Number Functions	22