

## Oracle10g XML Fundamentals

### Course Summary

#### Description

This is an excellent course for programmers who are new to XML that will be implementing XML in an Oracle10g environment. Attendees will learn the fundamentals of XML and how to implement XML in an Oracle environment. Students will learn how to create XML documents, transform XML using XSL, validating XML documents, Document Object Model (DOM), Simple API for XML (SAX) and XML Namespaces. Using XPath expressions and how to use XPath expressions in XSL to access parts of XML documents. Leveraging Oracle features in XML DB on how to store, search and retrieve XML documents are discussed. Oracle XSQL will be used to generate XML. Oracle XML DB features such as XQuery, XMLQuery, XMLTable, insertChildXML, appendChildXML, insertXMLbefore, and deleteXML are covered.

#### Topics

- Benefits of XML technology
- Role of XML in database environments
- XML and data transformations
- The XML document structure
- Creating an XML document
- Understanding a well-formed XML document
- Validating XML documents
- XML and HTTP
- XSL and XSLT
- Presentation style
- XML fundamentals
- The purpose of Namespaces
- Syntax for Namespaces
- Namespaces to Elements and Attributes
- What is a Document Type Definition (DTD)
- Developing a DTD
- Validating XML using DTD
- Internal DTD vs. external DTD
- XML schemas
- DTDs versus Schemas
- Listing XML schema data types
- Creating an XML schema
- Validating XML using XML Schemas
- W3C XML Schemas
- Elements
- Simple types
- Built-in types
- Named types
- Complex types
- Describing XPath
- Using XPath expressions
- Using XPath functions
- Location path
- Transforming XML using XSLT
- Describing XSLT
- Key XSLT elements
- XSL transformations
- XSL Formatting Objects
- Creating templates
- Sorting and filtering an XML document
- Stylesheets
- Code generators
- DOM parsers
- SAX parsers
- Developing flexible, N-tiered XML applications
- The XML DB architecture
- The Oracle XML Type
- XMLType member functions
- Modifying XML data in Oracle
- Querying XML data
- XMLType functions: ExistsNode and Extract
- XPath
- XSQL pages
- SQL/XML (SQLX)
- XML type views
- Transforming XML using SQL
- XMLQuery and XMLTable
- DBMS\_XMLGEN, SYS\_XMLGEN and SYS\_XMLAGG
- DBMS\_XMLDOM, DBMS\_XMLPARSER
- DBMS\_XSLPROCESSOR
- Creating Schema-Based tables
- DBMS\_XMLSCHEMA
- insertChildXML, appendChildXML, insertXMLbefore, and deleteXML
- XML DB access protocols
- XMLElement
- XML to PL/SQL object conversion
- Using SQLX to generate XML
- DOM and SAX parsing and XSLT processing with PL/SQL and Java
- Foldering and security with the new XML DB Repository
- Versioning XML in Oracle
- Index and search XML data with Oracle Text.
- Oracle Text management
- XML\_SECTION\_GROUP sections
- Contains operator
- Indexing XML
- CTX views
- Publishing XML using the XSQL Pages
- Using URLs to generate and access XML data
- SOAP, Web Services and Advanced Queueing
- XML namespaces and XPath support
- XML Namespace syntax
- XML Namespace to elements and attributes
- XMLType views
- XML repository
- JDBC support for the XML Type Class
- Oracle's PL/SQL and Java XDKs
- The Oracle XML SQL Utility (XSU)

#### Prerequisites

Students should have experience in developing database applications. SQL programming experience is required.

#### Duration

Five days