XML Fundamentals

This XML Fundamentals training introduces you to the basics of XML. In this 2 day hands on course, you will learn the central XML technologies, including writing well formed and valid XML, creating Document Type Definitions (DTDs) and XML schema documents and using XPath and XQuery.

Learn To:

- Create well-formed and valid XML documents.
- Use XML Namespaces in an XML document to resolve name ambiguities in XML documents.
- Create Document Type Definition and XML schema documents to validate XML documents.
- Use XPath expressions and functions to find and select nodes in XML documents.
- Transform XML documents by using stylesheets and XPath expressions.
- Use Oracle JDeveloper to view, create, edit, and test XML and other XML-related documents.
- Use XQuery to query, generate, and transform XML content.
- Identify the features and benefits of Oracle XML DB

XML schema

This course covers the components of an XML schema, how to create and XML schema document and how to validate XML documents using XML schemas. Validating documents using Document Type Definitions (DTDs) are discussed as well.

Benefits To You

Additionally, you'll be introduced to the support for XML offered in various Oracle products, like the Oracle XML DB and Oracle JDeveloper. Use the XQuery XML query language, which is built on XPath expressions, to query data from both XML files and relational databases. Review how to use XQuery to generate and transform XML content. You'll learn how to use the XML concepts while exploring XML Namespaces that are used to apply uniqueness to elements.

Audience

- Administrator

- Database Administrator
- Developer
- Systems Administrator

Objectives

- Learn the basics of XML and create well-formed and valid XML documents
- Learn about XML namespaces
- Create document type definitions (DTDs) to validate XML documents
- Create XML schema documents (XSDs) to validate XML documents
- Learn to use the XPath language, XPath expressions, and XPath functions to find and select nodes in XML documents
- Discover the support for XML offered in various Oracle products such as Oracle JDeveloper and Oracle XML DB
- Use JDeveloper to view, create, and edit XML and other XML-related documents
- Use JDeveloper to test XPath expressions and to create and execute XQuery files
- Use Extensible Stylesheet Language (XSL) Transformations (XSLT) to transform one XML document into another XML document
- Use the XQuery XML query language, which is built on XPath expressions, to query, generate, and transform XML content
- Learn about the XML features in the Oracle database and explain the architecture of the Oracle XML DB components and the benefits of such components
- Describe the Oracle XML DB support for XQuery

Topics

- Introduction
    - Course Objectives
    - Course Goals
    - Database schemas used in this course
    - The Purchase Order XML schema purchase orderxsd used in the XML DB Course
    - Appendices Used in This Course
    - Class Account Information
    - Course Environment
    - Entering SQL Statements Using
- Introducing the XML Document
    - Extensible Markup Language
    - Advantages of Using XML
    - XML Standards
    - Document Object Model
    - Oracle XML Support
    - Using XML in Oracle JDeveloper
    - Building XML Applications with Oracle Technology
    - Creating an Application and Project in JDeveloper
- Validating XML with a Document Type Definitions (DTDs)
    - What Is a Document Type Definition?
    - Why Validate an XML Document?
    - General DTD Rules
    - The Contents of a DTD
    - Referencing the DTD
    - Element, Attribute, and Entities Declarations
    - Complete DTD: Example
    - Validating XML Against a DTD

- Modularizing XML with Namespaces
  - What Is an XML Namespace?
  - Why Use XML Namespaces
  - Declaring XML Namespaces
  - XML Namespace prefixes
  - Example of XML Namespace Declarations
  - Scope of XML Namespace Declarations
  - Invoking the ShowXmlNS Tool
- Validating XML Documents
  - What is an XML Schema?
  - The Benefits of XML Schemas
  - XML Schema Versus DTD
  - Validating an XML Document with an XML Schema Document
  - Referencing an XML Schema with the schemaLocation Attribute
  - Components of an XML Schema
  - Creating an XML Schema Document in JDeveloper
  - Creating an XML Document from an XML Schema
- Navigating XML Documents by Using XPath
  - What Is XML Path Language?
  - The XPath Model
  - XPath Expressions
  - The Location Path Expression
  - Location Steps in XPath Expressions
  - XPath Axes and Node Test Types
  - XPath Functions
  - Testing XPath Expressions
- Transforming XML by Using XSL Transformations
  - What Is XSL?
  - XSL Transformations
  - The XSLT Stylesheet
  - Using an XSLT Stylesheet with an XML Document
  - Viewing the Transformed Document
  - Creating and Applying Template Rules
  - Conditional Processing with and
  - Using Modes
- Working With XQuery
  - What is XQuery?
  - Applications of XQuery
  - XQuery Terminology and Data Model
  - Conversion of XML into a Query Data Model
  - XQuery Syntax Rules
  - XQuery Support in JDeveloper
  - XQuery Expressions, Functions, and Operators
  - Using FLWOR Expressions
- Introduction to Oracle XML DB
  - What Is Oracle XML DB?
  - Oracle XML DB Benefits
  - When to Use Oracle XML DB?
  - How Is Oracle XML DB Implemented?
  - Oracle XML DB: Features
  - Using the XMLType
  - XMLType Storage Models
  - XML Schema Support in Oracle Database 12c