XML Fundamentals Ed 1.1

Duration: 2 Days

What you will learn

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

Application Developers

Business Intelligence Developer

Database Administrators

Developer

Forms Developer

Java Developers

Support Engineer

System Analysts

Related Training

Required Prerequisites

Knowledge of SQL

Suggested Prerequisites

Basic experience with writing HTML documents

Familiarity with Oracle JDeveloper

Familiarity with SQL*Plus

Course 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

Course 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