Introduction to XML (TT4300)

Category: Software Development & Programming | **Vendor:** Trivera Tech

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Classroom

Course Overview

The Extensible Markup Language (XML) is a standard that is enabling a revolution in web applications and business to business interactions. XML is the basis for Wireless Markup Language (WML), Voice Markup Language (VoiceML), Simple Object Access Protocol (SOAP), Web Services, and numerous industry initiatives such as ACORD (insurance), PXML (proposal/RFP) and OTA (travel). Introduction to XML is a three-day, hands-on course geared for software developers who need to understand what XML is and how to use in with today's systems and architectures. This course covers the topics from tags to architectures. The course is a balanced mixture of theory and practical labs designed to take students from a quick review of the basic fundamentals of XML through to the related advanced technologies. The students walk through the different standards in a structured manner to enable them to master the concepts and ideas, which are reinforced in the lab exercises. The course starts with a quick review of the fundamentals of XML before covering XML Schema in detail. It then moves on to the XPath and XSLT covering advanced topics in both. Finally, XML and Web Services security mechanisms and issues are addressed.

About This Course

The Extensible Markup Language (XML) is a standard that is enabling a revolution in web applications and business to business interactions. XML is the basis for Wireless Markup Language (WML), Voice Markup Language (VoiceML), Simple Object Access Protocol (SOAP), Web Services, and numerous industry initiatives such as ACORD (insurance), PXML (proposal/RFP) and OTA (travel). Introduction to XML is a three-day, hands-on course geared for software developers who need to understand what XML is and how to use in with today's systems and architectures. This course covers the topics from tags to architectures. The course is a balanced mixture of theory and practical labs designed to take students from a quick review of the basic fundamentals of XML through to the related advanced technologies. The students walk through the different standards in a structured manner to enable them to master the concepts and ideas, which are reinforced in the lab exercises. The course starts with a quick review of the fundamentals of XML before covering XML Schema in detail. It then moves on to the XPath and XSLT covering advanced topics in both. Finally, XML and Web Services security mechanisms and issues are addressed.

Who Should Attend

This is an introductory-level XML training course, designed for those needing an introduction to concepts and technologies associated with XML and its related recommendations. Previous experience or knowledge of HTML is helpful but not essential.

Prerequisites & Entry Requirements

General Prerequisites:

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Learning Outcomes

Upon successful completion of this course, participants will be able to:

This course is an intensive, hands-on introduction to XML, XPath, and XSLT. The course is a balanced mixture of theory and practical labs designed to take students from the basic fundamentals of XML through to the related advanced technologies. The students walk through the different standards in a structured manner to enable them to master the concepts and ideas, which are reinforced in the lab exercises. The course starts with the fundamentals of XML, including coverage of DTDs and XML Schema. It then moves on to the XPath and XSLT standards, and how to use them to transform XML documents into other documents such as HTML documents or other XML documents. This course provides indoctrination in the practical use of W3C standards (including XSL and XML Schema) and of implementing tools and technologies. This course is programming language independent, making it useful for Java, .NET, C++, and any other programming orientation. Graduates will hit the ground running, applying XML to projects at both an architectural as well as a line by line coding level. We can easily adapt this course to industry and client specific needs.In addition to valuable knowledge and working examples, students receive a copy of the 'Xtensil' product. This unique software was developed to assist in implementing, testing, and fielding XML applications. Xtensil is used as both a teaching aid and a straightforward, basic, fully functional XML toolkit that students can use on Windows and Linux platforms.
Working in a hands-on learning environment student will learn to:
Write well-formed XML documents
Model business requirements using XML
Handle XML reserved characters
Validate an XML document with a DTD and with a Schema
Centralize data and markup definition with entities
Create DTDs and Schemas using XML tools
Generate XML documents from databases
Write XSL templates to transform XML documents into HTML
Integrate XML, XSL and the DOM to implement a complete solution

Detailed Course Outline

XML Content

- Introduction to XML
- XML Mechanics

XML Structure

- Namespaces
- Structure Using Schemas

XML Formatting

- CSS and Rendering XML
- XSL Transformations
- XSLT and XPath
- XPath 2.0 and XSLT 2.0 Overview
- XSL FO (Formatting Objects)

Applying XML

- XML Interoperability
- XML Performance Improvements
- Web Services Overview
- XML Applications

, Session: XML Content

Lesson: Introduction to XML

XML Separates Structure, Content and Format

Content: XML Document Syntax Rules

Structure: DTD or XML Schema

Formatting: XSLT Transformation to HTML

Lesson: XML Mechanics

XML Document Structure

Rules for Well-Formed XML

Content as MarkUp

Namespaces Associate Alias with a URI

Exercise: Well-Formed XML Documents

Session: XML Structure

Lesson: Namespaces

XML Namespaces

Name Collisions

Namespace Scope

Namespaces Best Practices

Exercise: Working with Namespaces

Lesson: Structure Using Schemas

Document Type Definition (DTD)¦

W3C XML Schemas

Elements, Attributes, and Types

Restricting Simple Types: Facets

Complex Types

Attribute Definitions

Derivation by Extension

Using XML Schema with Namespaces

Exercise: Create a Simple Schema

Exercise: Schema Development and Use

Exercise: Extending the Schema

Exercise: Using Namespaces and Schemas

Exercise: Managing Large Schema (Optional)

Session: XML Formatting

Lesson: CSS and Rendering XML

Cascading Style Sheets and XML

XML/CSS Processing Flow

Exercise: CSS and Rendering XML

Lesson: XSL Transformations

XPath Describes Locations Within XML

XSLT is Rule-Based Transformation Language

XSL is Oriented Towards Formatting

Exercise: XSLT and Transforming XML

Lesson: XSLT and XPath

XPath Data Model

Location Paths

Additional Filtering

XPath Operators and Functions

XSLT Stylesheet Structure

Templates Are The Rules

Conflict Resolution for Templates

Calling Templates

Looping, Sorting and Conditional Processing Constructs

Exercise: Working with XPath

Exercise: XSLT Development and Use

Lesson: Overview of XPath/XSLT 2.0/3.0 (Optional)

XPath 2.0 Improvements

XPath 2.0 and XQuery 1.0

XSLT 2.0 Improvements

XPath 3.0/3.1 Features

XSLT 3.0 Features

Exercise: Transforming XML €œ XSLT 2.0 (Optional)

Lesson: XSL FO (Formatting Objects)

XSL Family Working Together

Apache's FOP: Rendering XML

Page Types Can Be Conditional

Content Flows Into Page Regions

Exercise: Working with XSL-FO

Session: Applying XML

Lesson: XML Interoperability

XML From a Data Perspective

XML/Database Interfacing

Challenges to Mapping XML

Lesson: XML Performance Improvements

Best Practices

Organization of Best Practices

Exercise: Best Practices Review

Lesson: XML Processing Security

XML Parser Coercion

XML Attacks: Structure

XML Attacks: Injection

Safe XML Processing

Exercise: Safe XML Processing

Exercise: Dynamic Loading Using XSLT

Lesson: XML Applications

W3C Activities

Benefits of XML

Drawbacks of XML

Crossing Boundaries

Challenges to Integration

Additional Course Details

Nexus Humans Introduction to XML (TT4300) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Introduction to XML (TT4300) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Introduction to XML (TT4300)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Introduction to XML (TT4300) course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Introduction to XML (TT4300) training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Introduction to XML (TT4300)?

Yes, we provide corporate training, dedicated training, and closed classes for Introduction to XML (TT4300). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: XML

Q: Why choose Nexus Human for Introduction to XML (TT4300)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Introduction to XML (TT4300) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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