

## Introduction to XML

3 Days

### **COURSE OVERVIEW**

This course provides a comprehensive introduction to Extensible Markup Language (XML). XML is a new technology and is a powerful language used to encapsulate data into XML files. XML is particularly useful for integrating and passing data between Business-to-Business applications or between disparate systems.

This course covers the complimentary technologies that are used with XML, such as XSL and CSS for producing content as well as Schemas and DTDs for validation.

This course equips attendees with a practical understanding of its origin, the many uses of XML in the marketplace and the various development tools available.

Throughout this course, extensive hands-on exercises, performed under the expert tuition of an experienced instructor, provide delegates with practical experience.

### **TARGET AUDIENCE**

All web developers or application developers who need to know about XML.

Systems managers and consultants should also be aware of XML, its associated technologies and the benefits that it can produce for organisations.

### **PREREQUISITES**

Attendees should have a good knowledge of HTML before attending this course. Ideally, delegates should have attended the Introduction to HTML course.

### **COURSE OBJECTIVES**

By the end of the course attendees will be able to:

- Develop applications and solutions using Extensible Markup Language (XML)
- Understand the need for XML and its uses.
- Write well-formed XML documents and understand how XML documents are created.
- Use Document Type Definitions (DTD's) to validate their XML documents
- Have an understanding of parsing and validating XML documents.
- Use Cascading Style Sheets with XML documents to generate HTML documents.
- Use XML Schemas to validate XML documents
- Bind XML content in HTML pages
- Design templates to present information (content) in a uniform way using XSL.
- Be able to use various XML tools and utilities.
- Understand the uses of SOAP.

## **COURSE CONTENT**

### **Introduction**

- What is XML?
- Background and History of XML
- XML versus HTML
- The uses and applications of XML.

### **Composing XML Documents**

- Syntax and composition.
- XML Spy
- Defining structure
- Valid and Well Formed documents.
- Parsing and validating XML documents
- Namespaces and their uses

### **Data Binding**

- Creating a data island
- Table data binding
- Single-record data binding
- Using Paging
- Hierarchical record sets

### **Document Type Definitions (DTD's)**

- Internal and External DTD's
- Document Type Declaration
- Element Type Declaration
- Attribute List Declaration
- General Entities
- Parameter Entities
- Notations

### **XML Schemas**

- The Rules of XML Schemas
- XML Schema Tags
- Simple Data Types
- Using Patterns
- Useful Functions
- Allowing Choices of Elements
- Handling Attributes
- Handling Empty Elements

### **XSL Transformation**

- What is Transformation.
- When is it needed.
- Cascading Style Sheets and XML
- Extensible Stylesheet Language (XSL)
- XSL Syntax and composition.
- Defining Simple Types and Complex Types
- Using SAXON to transform XML documents
- Transforming an XML document into an HTML document using XSL.
- Transforming XML documents into XML documents with a different structure.
- Transforming element based to attribute based XML (and vice versa)

### **The Document Object Model**

- Syntax of DOM

- The DOM Structure
- Manipulating XML documents using the Document Object Model
- Useful Properties for all Node Types
- NodeList Objects

### **SOAP**

- Advantages of SOAP
- The SOAP Specification
- HTTP
- SOAP Request Document
- SOAP Response Document