

# Introduction to XML

Course code: INTXM

The course is intended for those who want to learn the basic features of XML and its related technologies. The course will introduce the concepts such as namespaces, XML Schema, XML document validation, transformation, search tree, and learn to use basic tools for working with XML documents.

## Who the course is for

The course is designed for everyone who wants to become familiar with basic concepts of XML and its related technologies.

## What we teach you

- Create well formed XML document.
- XML validation using XSD or DTD.
- The ability to read DTD and XSD declaration.

## Required skills

- The ability to edit markup text.
- Previous experience with HTML is a great advantage.

## Teaching methods

Professional explanation with practical samples and examples.

## Teaching materials

Powerpoint handouts and module printouts

## Course syllabus

### Getting started

- XML application areas.
- History of XML and HTML, SGML markup languages.
- The structure of an XML application.
- Overview of XML editors.
- Overview of XML parsers, DOM, SAX libraries.

### The structured of XML

- Basic terminology: opening, closing tag, attributes.
- XML entity.
- Model of XML document, parent, child, sibling relationships.
- XML node types: element, attribute, text, comments, processing instructions.
- XML and character sets, Windows 1250, ISO 8859-2, UTF-8, UTF-16
- Well formed document

### Design of XML document

- Creating data dictionary.
- Valid characters in XML names, naming convention.
- Best practices.

### Document Type Definition

- Internal and external DTD.
- Instructions ELEMENT, ATTLIST.
- The sequence of child elements, alternative content.
- Multiple child element occurrence.
- Mixed content.
- A default attribute value, enumeration.

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## XML Namespace

- Function of XML namespace and unique identifiers.
- Mixing XML languages.
- Web languages XHTML, SVG, MathML, CML.

## XML Schema

- Simple vs. complex data types.
- Restrictions and extensions.
- Ways of organizing child elements.
- Global vs. local declaration.
- Methods of designing XML schemas.

## Presenting XML content

- XML and CSS styles.
- XSL transformations, and XPath.

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