Course : XML Implementation, Overview

Practical course - 4d - 28h00 - Ref. PXM
Price : 2200 € E.T.

The need to share and exchange information between users and applications has accelerated the use of XML technologies. This course will show you how to take advantage of these technologies. You will learn how to design your XML data, how to distribute and publish them, how to use them via your applications, Web services and databases.

Prerequisites
Basic Knowledge in programming, databases and Internet architecture.

Practical details
Hands-on work
The hands-on work will be performed in the XML-Spy environment.

Course schedule

1 Industrial XML

- Review of structured languages: SGML, HTML, XML and XHTML. The issues. Why XML is indispensable ?
- XML advantages and disadvantages.
- Overview: XML editors, technologies, SAX, DOM, JAXB...

2 XML parsers

- Market offers. The role of parsers.
- API parsers. Java (JAXP), .Net, Flash parsers.
- Ajax and reading data in HTML pages.

Hands-on work
Utilising various parsers.

3 Validating documents

- Structure and components of an XML document.
- A well-structured document and a valid document.
- Validation models. Syntax and use.
- DTD. XML Schema. XSD schemas: structure, data typing, composition tools. Modelling. Implementation.
- Namespaces. Role, integrating, sharing, creating them.

4 XSLT transformation

- Challenges of the XSLT language on XML transformation. Constructing trees, re-structuring, generating multi-formats: XHT

5 Publishing documents

- Raw display via the navigators.
- Formatting with CSS style sheets.
- XHTML's role in accessibility. Technical hints.
- XPATH for navigating in XML data.
- XSL-T. Transforming data into web formats.
- The XSL-FO language for object formatting. Conversion to paper-type formats PDF, RTF, etc.

Hands-on work
Manipulating XSL-T and XSL-FO.

6 Message and XML exchanges

- DOM and the standardised programming interface.
- Applications servers: architecture in .NET and JEE.
- Flash: FLEX, XML exchanges and Web services.
- Transferring and serialising messages: Rest, XML-RPC, SOAP, WSDL, UDDI. Defining Web Services.

Hands-on work
Adapting a JavaScript application using XML documents. Interrogating a Web Service.

7 XML and databases

- Storing XML documents. RDBMS to native XML databases. XML interrogation languages: XPath, XQuery, XLink, XPointer, SQL e

8 Security of XML exchanges

- The different security protocols: HTTPS, XML Signature (Xml Dsig): digital signature, XML encryption, XML access control

9 Graphics interfaces and office system

- Microsoft's XAML language. SMIL: Web animations. XForms, InfoPath: electronic form. Blogs and RSS, ATOM. SVG: vector sta