

A photograph of a modern office environment. In the foreground, the back of a person's head and shoulder is visible, looking towards a group of employees. The employees are seated at desks with laptops, some looking at their screens and others looking towards the camera. In the background, there are two large monitors on the wall. The top monitor shows a person working at a desk, and the bottom monitor displays a code editor with syntax-highlighted text. The overall atmosphere is professional and collaborative.

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C- 41, Behind Nirula's Hotel  
Sector 2, Noida - 201301

+91-120-3058446  
+91-120-3058447  
+9999146988 (SMS)

[www.miracleindia.com](http://www.miracleindia.com)  
[workshop@miracleindia.com](mailto:workshop@miracleindia.com)

## **Advanced Core XML Concepts**

Internal vs. External Subset  
Using Parameter Entities  
General Entities  
Conditional Sections  
Character References  
Unparsed External Entities  
Processing Instructions  
Special Attribute Types  
Namespaces in XML  
Default Namespace

## **XML Schemas**

Schema Overview  
A Minimal Schema  
Associating Unqualified XML with a Schema  
Element Declarations  
Attribute Declarations  
Complex Types  
Simple and Built-in Types  
Derivation of Simple Types  
Choices  
Named Types and Anonymous Types  
Mixed Content

## **Advanced XML Schemas**

Associating Unqualified XML with a Schema  
Associating Qualified XML with a Schema  
Extending Simple Types  
Adding Restrictions  
Understanding Facets  
Attribute Groups  
include and redefine  
Deriving Types by Extension  
Substitution Groups  
Allowing Any Content  
Uniqueness  
keys & keyrefs  
Documenting Schemas

## **XPath Syntax**

The Document Data Model  
Expressions and Location Paths  
Location Steps  
Specifying Axes  
Node Tests  
Predicates

Types  
Working with Node-Sets  
Type Conversions  
String Functions

### **XSL Transformations**

What is XSL?  
Modular Style-sheet Strategies  
Namespace Aliasing  
Complex Expressions  
Template Application Hierarchy  
Modes  
Calling Templates by Name  
Constructing Elements  
Outputting Text  
Numbering  
Copying Elements  
Output Methods  
Variables and Parameters

### **XSL Formatting Objects**

What is XSL?  
XSL-FO Overview  
Types of Objects  
Defining Page Masters  
Setting Up the Flow  
Block-Level vs. Inline-Level Objects  
Lists  
Tables  
Out-of-Line Objects  
Implementation Issues

### **XML Internationalization**

Localization Concerns  
Unicode and XML  
Text Declarations  
Character Sets  
Character References  
xml:lang

### **Effective Document Design**

Design Goals  
Intended Audience  
Document Types  
Choosing a Validation Method  
Incorporating Namespaces  
Modular Document Design  
Planning for Extensibility

### **Basic SOAP**

SOAP Overview  
The SOAP Envelope

SOAP Over HTTP

A SOAP Server

A SOAP Client

Complex Data Types

The Deployment Descriptor

Complex Data Types: Client Code

**Advanced XSLT [Elements, Functions]**

The Structure of XSLT Stylesheets Reconsidered

Importing and Including Stylesheets

Variables and Parameters

Creating Links & cross references

Extending XSLT [Extension Elements & Extension Functions]

Output Options

Copying XML Directly to the Output Tree

Using Other Advanced XSLT Elements

Patterns

**The Built-in XSLT Functions**

General Purpose Functions

The document() Function

**XPath Axes and Location Paths**

The Current Context Reconsidered

XPath Axes and Unabbreviated XPath Syntax

**Server-Side XSLT Programming with ASP.Net, XML DOM, and ADO.Net**

Using XSLT with C# and the XML DOM

Transforming XML Obtained from a Database