

Introduction to XML
Author Name: G. Sreenivasulu
Department: CSE
Web Technologies

Session Objectives

At the end of this session, the learner will be able to:

- ✚ Define What is XML
- ✚ Detail the Anatomy of XML Document
- ✚ Create an XML Document
- ✚ Compare with HTML and XML
- ✚ Explain the Specifications of XML
- ✚ Identify how XML can be used to store and transport Data between applications

Teaching Learning Material

- ✚ White Board and Markers
- ✚ Presentation Slides
- ✚ LCD Projector

Session Plan

Time (in min)	Content	Learning Aid and Methodology	Faculty Approach	Typical Student Activity	Learning Outcomes (Blooms + Gardeners)
10	Define XML	QA Brainstorming	Facilitating Explains,	Listens, participates	Understand Intra Personal Inter personal Logical
10	Anatomy of XML	Analogy PPT	Explains Questions Facilitates briefs	Listens absorbs	Understand Logical Intra Personal
15	Program on XML	PPT	Explains Facilitates briefs	listens, Relates	Understand Apply Intrapersonal
5	Compare & Contrast HTML and XML	Discussion	Explains Facilitates Briefs Tabulates	Listens Compares	Understand Inter-personal Intra Personal Analyze
5	Specifications	QUIZ	Explains Facilitates briefs	Participates debates, compares, understands	Understand Interpersonal Intrapersonal Debate

Session Inputs

Define XML:



Extensible Markup Language (XML), is widely used to facilitate applications to exchange data across applications running on various platforms. Why do we need markup languages

Suggested Activity: QA and Brainstorming

Learners have familiarity with Hyper Text Markup Language (HTML). Learners will be asked few questions in groups and they do brainstorming on Markup Languages and come up with the possible solutions.

Sample Questions intended during the brainstorming:

1. What is Markup?
2. What is Markup Language?
3. Ask them to recollect few HTML tags

Expected Answers:

- The text placed between two tags of an element
- A language consisting tags and markup which is parsed
- HTML has all predefined tags; XML has both container and non container tags.



Extensible Markup Language (XML) is a markup language is a set of specifications. Unlike HTML which has predefined elements, XML elements are user defined. XML elements are case-sensitive; Every start tag must have a Closing tag. Start and end tag names must be same in case and content

Anatomy of XML:



After knowing what XML is, now we will see the structure of XML document to know various sections the document may contain. Those sections will be detailed.

Suggested Activity: Analogy

Learners will be formed to groups based on the rows they are sitting. Now each group will be asked to tell about various parts of the novel they last read. They will also be asked to tell whether they have noticed any structure followed for writing the novel. What major sections they have observed in the novel. Write all those options on the board.



The anatomy of XML has three parts. Prologue, body, epilogue

Program of XML:

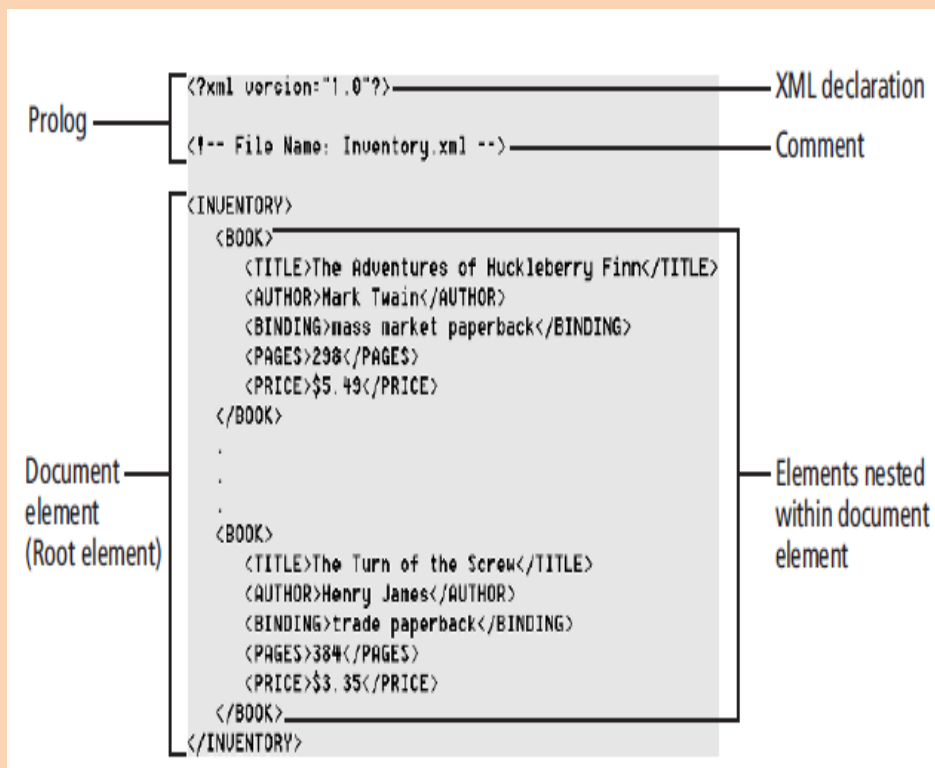


Having learnt anatomy now the user will be introduced to the syntax of XML.

Suggested Activity: PPT

A sample program of XML is shown to the learners and they will be asked to identify them the three parts discussed earlier.

Sample pictures





Announcement

Every XML program starts with prolog (XML declaration) and will be followed by XML body

Compare to XML with HTML:



Being familiar with the syntaxes of both HTML and XML , let us list various differences we have noticed in their syntaxes

Suggested Activity: Group Discussion

The learners are divided in to two groups as HTML and XML group. The Faculty will facilitate the groups to discuss about various features.

Few inputs faculty will provide here are

1. Are the tags predefined
2. Is the syntax case-sensitive
3. Do you need to have a start and end tag in every element

Expected Answers:

1. HTML tags are predefined, XML tags are user defined
2. Syntax of XML is case sensitive
3. Every open tag should have corresponding closing tag.



XML has no predefined tags, XML syntax is case sensitive. Tags of the XML are user defined.

Specifications



It is now important review the specifications, which we have been following for writing an XML program. Also to conclude that XML is not a Language rather it is set of specifications.

Suggested Activity: QUIZ

To summarize the specifications of XML a Question answer session will be conducted. The answers from learners will be written on the black board like rules. This gives us the set of specifications XML follows.

1. Which is the first line in every XML program?
2. Is it possible to write our own tags (Elements)
3. Can you use different cases to start and end tags
4. Have you noticed that there is one element that encloses all other elements

Expected Answers:

1. First line in every XML program is XML specification
2. All the tags are user defined
3. Case and content of each tag must be same
4. There will one root element and all the other elements are enclosed in it.



XML is not a Language but a set of specifications. The specifications are provided by world wide web consortium (W3c). A document satisfying minimum rules of XML is called well-formed XML document

Summary

In this session, we learnt to:

- ✚ We defined XML,
- ✚ Structure of XML (Anatomy) document.
- ✚ How to write an XML program
- ✚ Differences between HTML and XML
- ✚ Listed the specifications of XML.

Assignment

1. Write an XML to store information about books in your library.

References

- # Learning XML by Erik T. Ray O'Reilly
- # XML step by step, second edition, Michael j. Young, Microsoft Press, 2002
- # <http://www.w3.org/TR/xml/>
- # <http://www.xmlfiles.com>
- # [http://www.w3schools.com\](http://www.w3schools.com)
- # www.quackit.com/xml/tutorial/
- # www.learn-xml-tutorial.com/