The XML Prolog

This line is called the XML **prolog**:

<?xml version="1.0" encoding="UTF-8**"**?>

The XML prolog is optional. If it exists, it must come first in the document.

XML documents can contain international characters, like Norwegian øæå or French êèé.

To avoid errors, you should specify the encoding used, or save your XML files as UTF-8.

UTF-8 is the default character encoding for XML documents.

Character encoding can be studied in our [Character Set Tutorial](https://www.w3schools.com/charsets/default.asp).

## XML Tags are Case Sensitive

## XML Attribute Values Must Always be Quoted

Solving the Name Conflict Using a Prefix

Name conflicts in XML can easily be avoided using a name prefix.

This XML carries information about an HTML table, and a piece of furniture:

<h:table>  
  <h:tr>  
    <h:td>Apples</h:td>  
    <h:td>Bananas</h:td>  
  </h:tr>  
</h:table>  
  
<f:table>  
  <f:name>African Coffee Table</f:name>  
  <f:width>80</f:width>  
  <f:length>120</f:length>  
</f:table>

In the example above, there will be no conflict because the two <table> elements have different names.

In the example above:

The xmlns attribute in the first <table> element gives the h: prefix a qualified namespace.

The xmlns attribute in the second <table> element gives the f: prefix a qualified namespace.

When a namespace is defined for an element, all child elements with the same prefix are associated with the same namespace.

Namespaces can also be declared in the XML root element:

<root xmlns:h="http://www.w3.org/TR/html4/"  
xmlns:f="https://www.w3schools.com/furniture">  
  
<h:table>  
  <h:tr>  
    <h:td>Apples</h:td>  
    <h:td>Bananas</h:td>  
  </h:tr>  
</h:table>  
  
<f:table>  
  <f:name>African Coffee Table</f:name>  
  <f:width>80</f:width>  
  <f:length>120</f:length>  
</f:table>  
  
</root>

**Note:** The namespace URI is not used by the parser to look up information.

The purpose of using an URI is to give the namespace a unique name.

However, companies often use the namespace as a pointer to a web page containing namespace information.

Uniform Resource Identifier (URI)

A **Uniform Resource Identifier** (URI) is a string of characters which identifies an Internet Resource.

The most common URI is the **Uniform Resource Locator** (URL) which identifies an Internet domain address. Another, not so common type of URI is the **Uniform Resource Name** (URN).

Default Namespaces

Defining a default namespace for an element saves us from using prefixes in all the child elements. It has the following syntax:

xmlns="*namespaceURI*"

This XML carries HTML table information:

<table xmlns="http://www.w3.org/TR/html4/">  
  <tr>  
    <td>Apples</td>  
    <td>Bananas</td>  
  </tr>  
</table>

This XML carries information about a piece of furniture:

<table xmlns="https://www.w3schools.com/furniture">  
  <name>African Coffee Table</name>  
  <width>80</width>  
  <length>120</length>  
</table>

Namespaces in Real Use

XSLT is a language that can be used to transform XML documents into other formats.

The XML document below, is a document used to transform XML into HTML.

The namespace "http://www.w3.org/1999/XSL/Transform" identifies XSLT elements inside an HTML document:

<?xml version="1.0" encoding="UTF-8**"**?>  
  
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">  
  
<xsl:template match="/">  
<html>  
<body>  
  <h2>My CD Collection</h2>  
  <table border="1">  
    <tr>  
      <th style="text-align:left">Title</th>  
      <th style="text-align:left">Artist</th>  
    </tr>  
    <xsl:for-each select="catalog/cd">  
    <tr>  
      <td><xsl:value-of select="title"/></td>  
      <td><xsl:value-of select="artist"/></td>  
    </tr>  
    </xsl:for-each>  
  </table>  
</body>  
</html>  
</xsl:template>  
  
</xsl:stylesheet>