

# **XML Namespaces**

# XML Namespaces

- XML Namespaces provide a method to avoid element name conflicts.

# Name Conflicts

First.xml

```
<table>
  <tr>
    <td>Apples</td>
    <td>Bananas</td>
  </tr>
</table>
```

Second.xml

```
<table>
  <name>African Coffee Table</name>
  <width>80</width>
  <length>120</length>
</table>
```

- If these XML fragments were added together, there would be a name conflict
- Both contain a <table> element, but the elements have different content and meaning
- A user or an XML application will not know how to handle these differences.

# Solving the Name Conflict Using a Prefix

```
<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>
```

# XML Namespaces - The xmlns Attribute

- When using prefixes in XML, a **namespace** for the prefix must be defined.
- The namespace can be defined by an **xmlns** attribute in the start tag of an element.
- The namespace declaration has the following syntax:

*xmlns:prefix="URI"*

# Note

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

# 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 **Universal Resource Name** (URN).

# XML Namespaces – Example 1

```
<root>

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

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

</root>
```



# XML Namespaces – Example 2

```
<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>
```

# Default Namespaces

- Defining a default namespace for an element saves us from using prefixes in all the child elements.

```
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>
```

# Default Namespaces

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>
```

# References

- [https://www.w3schools.com/xml/xml\\_namespaces.asp](https://www.w3schools.com/xml/xml_namespaces.asp)